



External Research Report  
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Report ER12

# Construction Waste REBRI Certification

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Project LR0471

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CHRISTCHURCH CITY COUNCIL

CONSTRUCTION WASTE REBRI CERTIFICATION  
RESEARCH PROJECT:

2014/15 Building Research Levy Investment  
Programme External Research Report

True North Consulting

1st September 2015

## Introduction

This research project arose as a result of the Christchurch City Council's Construction Waste Industry Engagement Project undertaken in September 2014.

The objective of the Construction Waste Industry Engagement project was for an "increased level of consistent engagement of commercial construction companies in construction waste diversion".

The project included:

1. Meeting with senior management representatives from agreed commercial construction companies regarding Christchurch City Council's Target Sustainability construction waste reduction projects and targets and facilitating a process to get them to implement a construction waste management policy and 'Measure to Manage' (M2M) waste reduction initiatives at each of their construction sites.
2. Meeting with senior management representatives from agreed waste collection companies to discuss how they can and will assist commercial construction companies with diverting construction waste from landfill and clean fill and provide M2M waste reduction initiatives at each of their construction sites including transparent waste collection data and processes that are potentially auditable.

The Construction Waste Industry Engagement project recommendations included (*excerpts from project final report*):

- Certification of Waste Companies

"There is an apparently growing distrust of waste management companies and suspicion that they are not doing what they say they will in terms of diversion. Whether real or not, this could act to fundamentally undermine any other efforts and provide construction companies with an excuse not to further engage in recycling.

To combat this Christchurch City Council should consider how best to support or enact accreditation of waste collection companies or particular waste streams. An official endorsement of either a company, or particular waste streams they handle, would build market confidence in the outcomes for recycling efforts and encourage further engagement. Such endorsement would need to be supported by auditing to ensure the accuracy of accreditation.

This concept has been discussed with Waste Management, who are of the view that the industry 'would never do this by itself' because of the implications it may have for some operators. A programme like this would best be supported with information provided directly to construction companies on a regular basis as to which companies are accredited, and for which waste streams, and the final end use for recycled waste.

This type of accreditation is considered to be a higher priority than directly engaging with or endorsing construction companies in terms of waste diversion as any activity 'at the coal face' may be undermined by a lack of confidence in waste contractors".
- Acknowledgement/Endorsement of Responsible Construction Companies

"In order to work more successfully 'up the chain' in construction companies and provide a driver for waste diversion (where there is a current perception that no driver exists) Christchurch City Council should consider supporting or enacting some form of official accreditation for construction companies that meet agreed waste diversion criteria.

There is a strong pull from construction companies for such an accreditation. Most companies that are currently diverting would like to be recognised, and some considering diversion acknowledge that such endorsement may encourage them to take it more seriously. The extremely competitive nature of the market may allow those that achieve such endorsement to enjoy a competitive advantage, particularly with larger projects and government funded building projects. Any such scheme would need to begin with clear and objective criteria that is well connected with commercial realities and takes into account challenging factors such as tight site space.

It is considered vital to a successful overall strategy to increase waste diversion through on-site sorting that both 'ends' of the process be validated and endorsed – construction companies and waste collectors. This will better facilitate creation of an overall industry norm of waste diversion on site".

Key feedback from the construction and waste collection companies that were engaged in this engagement project focused on the need for accreditation or certification. The clear feedback from these companies was that certification would improve transparency and confidence in relation to waste minimisation in the construction sector and stimulate further activity in this space. While the research done was in a Canterbury context, most of the firms involved with the project operate on a nationwide basis and considered the need to consider accreditation as being of national, rather than merely regional, significance and relevance.

Those engaged during the project included:

- Calder Stewart Limited
- Armitage Williams
- Naylor Love
- Fletcher Construction
- Hawkins
- Ganellen
- Arrow
- Southbase
- Leighs
- Higgs
- Waste Management
- Envirowaste / Mastagard

Quick Skips In addition, Auckland Council was contacted in relation to this project and they have confirmed, through informal consultation, that this was an area of interest to them.

## **Project Scope**

The overall desired outcome of this project was to develop a sustainable programme for providing certification to responsible waste companies and construction companies so as to aid engagement and better performance in terms of resource efficiency and waste minimisation/management.

Certification of demolition-related companies was not considered as part of this project, particularly due to the legal difficulties and risks inherent in demolition processes.

The expected outcome of this project was a fully designed and pilot-tested specification and approach for a nationwide REBRI-based waste certification programme for waste collection companies and construction companies.

This research fits under the Sustainability theme within the research strategy for the construction industry – Building a Better New Zealand (BBNZ). The question within BBNZ that this project will contribute answer to is “What tools are needed in order to help industry better understand and benefit from sustainability from a whole of life perspective.”

The project also links into construction waste and recycling initiatives through the Christchurch City Council's Target Sustainability services and the online REBRI tools.

The project outcomes will be passed onto New Zealand councils, construction companies and waste collection companies.

## **Project Process**

The project commenced on the basis that waste collection service providers and construction companies that were consulted, through the Construction Waste Industry Engagement Project, had indicated that some form of external validation of their waste minimisation efforts would both have value to them, as well as potentially lifting the performance of other companies and improving construction waste diversion from landfill and cleanfill.

Based on the feedback from industry operators, it was considered critical to the success of this project that any programme developed to offer the external validation:

- Is grounded in commercial reality and demonstrated a robust understanding of the realities of undertaking construction and managing construction waste
- Sets a standard that the majority of operators could meet without major disruption to current activities
- Is considered a ‘value-add’ service, rather than another layer of compliance
- Is inexpensive
- Is required by at least some building owners/developers (with particular reference to Christchurch City Council) to provide an incentive to construction companies to ensure they are involved

With these factors in mind, and with funding from Christchurch City Council, BRANZ and WasteMINZ a process was initiated to design and pilot a programme that would provide certification to both construction companies and waste collection service providers based on responsible waste management practices. In early discussions the term ‘accreditation’ was used to describe this process, but it was later determined that in fact ‘certification’ is the more appropriate term to describe this process.

REBRI (Resource Efficiency in the Building and Related Industries) as a collection of resources that already provides advice on effectively managing waste from construction sites was determined to be a useful brand to attach to this process. It was determined, in conjunction with BRANZ that the resources currently available on the REBRI website could be adapted and modified to support a certification programme if this was deemed to be feasible.

Thus this project was subsequently referred to as the Construction Waste REBRI Certification Research Project, and the concept being tested and evaluated became known as ‘REBRI Certification’.

A working group was formed to develop the certification specification, pilot programme and conduct the feasibility evaluation. This team consisted of:

- Kevin Crutchley, Christchurch City Council
- Lynda Amitrano, BRANZ
- Fraser Scott, True North Consulting

True North Consulting was tasked with managing the project and liaising with construction companies and waste collection service providers to ensure the project criteria and objectives were fulfilled.

The project sought to:

- Develop a draft certification specification for consultation purposes
- Undertake stakeholder consultation meetings with senior representatives from Christchurch construction companies and waste collection service providers
- Finalise certification specification
- Develop and evaluate delivery options, including engagement with potential delivery partners
- Determine 'base case feasibility' of certification specification and delivery option
- Submit certification specification for peer review by an appropriate third party
- Develop a pilot with a potential delivery organisation and determine evaluation criteria
- Pilot the certification process with a limited number of waste collection service providers and construction companies
- Undertake final evaluation and make recommendations

The first stage of this process involved creating specifications for construction companies and waste collection service providers outlining what they would be required to do in order to achieve certification. These specifications were drafted based on initial consultations with these companies then further meetings were held with key stakeholders in order to seek feedback on and refine the specifications.

This process provided a way to both reassure commercial operators that any programme would be both reasonable and useful, as well as providing opportunities to add genuine value to the industry.

For example, one waste collection service provider noted that a major barrier to effective diversion of recyclable materials is contamination of recycling receptacles. The company had provided feedback on this to a number of construction company clients, and some had advised that any attempt to charge for contaminated recyclables would result in the company "going to the competition". Recognising the challenge to effective waste management this practice presents, the specification was amended to include a requirement that waste collection companies provide such feedback to construction companies and a corresponding requirement that construction companies act on the feedback provided. This delivers genuine value to waste collection service providers.

The final specification for **construction companies** is as follows:

A REBRI Certified Construction Company must adhere to several key requirements for every building construction site. The Company will provide reasonable documentary evidence to demonstrate it has adhered to these requirements including supporting documentation and photographs were required.

- The Company must ensure all waste collection services for each building construction site are provided by a REBRI Certified Construction Waste Collection Service Provider ("the Provider").
- The Company must produce, prior to construction, and implement a Waste Management Plan that includes:
  - An overall construction waste reduction target. Performance against this target must be monitored and reported (at least monthly) to the Construction Company senior management team and reported, or at least offered, to the building client. The target set must be appropriate for the site and the method of construction and a justification for the target must be provided as part of the plan.
  - Targets for individual construction waste streams and corrective actions to be taken when results fall behind targets. Weight based reporting of all waste streams that leave a building construction site must be received from the Provider and monitored as above.
  - The outlets for each waste stream as advised by the Provider, and which waste streams will be separately sorted and put in separate receptacles.
- Document how progress towards achieving targets will be monitored and reported (at least monthly) to the Company senior management team and client.
- A corrective action process to ensure that when results fall behind targets appropriate action is taken.
- Where, due to a lack of space or access or because a particular job is very small in volume, the use of multiple waste receptacles to keep waste streams separate is not practicable, this must be recorded in the Waste Management Plan, along with a detailed justification for this conclusion. This must then be sighted and signed by a member of the Company senior management team.
- The Company must ensure all relevant staff and subcontractors are trained and supported to separate waste into the appropriate receptacles as required by the Waste Management Plan, and that failures in this regard are promptly and effectively addressed and corrective action taken.
- Waste stream contamination feedback must be received from the Provider and appropriate corrective actions taken.
- The Company must publicise both the possession of REBRI Certification and a commitment to waste minimisation on the Company's website and through other appropriate communications material.



The final specification for **waste collection service providers** is as follows:

A REBRI Certified Construction Waste Collection Service Provider must adhere to, and provide reasonable documentary evidence to demonstrate it has adhered to, three key requirements:

1. Provide comprehensive, accurate and up to date information on service offerings to all building construction clients, including:
  - Information on where all construction waste streams are sent and specifically noting those that are and are not being diverted from landfill and cleanfill.
  - The full range of relevant construction waste receptacles that are available, specifically highlighting those that are suitable for building construction sites with limited access or space for waste receptacles.
  - Signage available to identify different receptacles for different waste streams.
  - Standard service delivery options that are available, including specific strategies for building construction sites with limited access or space for waste receptacles.

This information should be provided in a simple and graphical format easily accessible to all building construction clients and BRANZ. Updates outlining any changes that occur need to be promptly available, drawing specific attention to changes being made.

Where a waste stream outlet diverting waste from landfill and cleanfill ceases to operate or accept waste, specific attention must also be drawn to this and the action being taken. The latest version of all the above information should be clearly available on the Provider's website.

All reasonable steps must be taken to ensure that this information is communicated to the appropriate people (such as Project Managers) within the client organisations.

Where a waste stream outlet diverting waste from landfill and cleanfill ceases to operate or accept waste, the Provider must take all reasonable action to identify an alternative diversion option for that waste stream. In general the Provider must make all reasonable endeavours to find diversion options for construction waste streams.

2. Accurately weigh and track all waste streams that leave a building construction site through the Provider, and:
  - Provide at least monthly weight-based reporting of all waste streams to REBRI Certified Building Construction Companies (and at least offer such reporting for non-certified building construction companies) for each building construction site from the pouring of building foundations to the completion of the building project. Waste stream tracking is expected per building construction site, not per receptacle collection.
  - Provide regular feedback to building construction companies on waste contamination levels. This includes contamination in source separated waste streams where:
    1. non-reusable and non-recyclable materials are in receptacles for reusable materials
    2. non-reusable and non-recyclable materials are in receptacles for recyclable materials
    3. reusable and recyclable materials are in waste sent to landfill receptacles
    4. reusable and recyclable materials are in cleanfill receptacles

- Provide at least quarterly weight-based reporting of all construction waste streams (showing only the total weights for each waste stream) for all building construction company projects undertaken during the previous quarter to the REBRI Certification Delivery Provider for the purposes of auditing.
3. The Provider must publicise both the possession of REBRI Certification and a commitment to waste minimisation on the Provider's website and through other appropriate communications material.

Once the specification was developed an invitation was made to three providers considered to be capable of delivering a certification programme to the construction industry to provide a proposal as to how they would structure and deploy a certification programme, which could be tested and refined as part of this pilot project.

Invitations were made to:

- Enviro-Mark Solutions
- BRANZ
- Telarc

Potential providers were asked to prepare a proposal outlining:

1. A broad process plan describing how a certification service would be undertaken, with reference to initial certification processes, audits, and procedures following non-compliant behaviour.
2. A statement of capability describing the types of personnel that would be involved in programme delivery and their level of qualification to undertake certification and audits of the kind required in the Specification.
3. An indication as to whether the necessary personnel and infrastructure to deliver a service of this kind on a national basis are in place, or the process required to have personnel or infrastructure in place.
4. An overview of experience in the construction and/or waste sectors and experience in these with auditing or certification programmes.
5. An indication of the price that might be charged to programme participants. This price is not expected to be definitive or binding, but rather a realistic estimate.
6. An indication of timeframes in which a certification pilot could be undertaken with a small number of participants in Christchurch, and a broader regional and national implementation plan if the programme is launched successfully.
7. A statement of perceived risks or limitations in delivery of the proposed certification programme.
8. Any comments or concerns about the Specification provided.

To avoid conflicts of interest these proposals were evaluated by Kevin Crutchley and Fraser Scott and a determination was made that BRANZ would be invited to participate in the certification pilot and consider being the delivery partner if the process was deemed to be feasible.

BRANZ and True North Consulting then developed a range of documents for the pilot process including:

- Briefing documents, pre-audit checklists and programme application forms for construction companies and waste collection service providers
- A template for a suggested construction site waste management plan for use by construction companies
- Documents for corrective actions required to be implemented by construction companies and waste collection service providers
- A complaints process to determine how any complaints from construction companies and waste collection service providers will be handled
- A certifier personell description for internal use within BRANZ outlining the requirements for anyone undertaking certifications

These were independently reviewed.

It was determined that the certification process would be piloted with three construction companies and two waste collection service providers, as follows:

- Hawkins
- Southbase
- Naylor Love
- Waste Management
- Envirowaste / Mastagard

In order to give legitimacy to the pilot and to recognise the contribution of pilot participants, it was determined that, subject to meeting the necessary certification criteria the pilot participants would be certified under the programme. This would occur once the pilot has been completed and provided the pilot showed the programme could be delivered successfully and is formally rolled out.

The pilot certification process was undertaken as follows:

- Pilot checklists, application forms and briefing documents were sent to participants requesting them to have paperwork and other evidence of systems being in place as required
- Meetings were conducted by BRANZ, with True North Consulting observing and asking questions of participants where appropriate
- Participants were advised as to what other documents or information would be required and instructed to send this directly to BRANZ

It is worth noting that the pilot is only able to test the process of initially certifying participants, rather than the full process. The process has been designed so that when companies are initially certified most of the process focuses on detailing the systems in place and providing evidence of processes. It is not until the end of the first year of certification that construction site audits are undertaken and construction site waste management plans are validated against the initial information provided.

The pilot process was evaluated against the following criteria, which were developed prior to the certification pilot commencing.

In order for the REBRI Certification pilot to be considered successful the service should:

1. **Prompt behaviour change** that will give rise to a demonstrable increase in the diversion of construction waste from being sent to landfill and cleanfill. It is expected that some existing behaviours will need to change or be applied more consistently to achieve diversion beyond current levels.
2. **Be widely accepted by both construction companies and waste collection service providers**, including key industry players. The service will not achieve desired results if it is seen as 'niche'.
3. **Deliver value to participants**. The service will not be sustainable if it is seen as a pure compliance issue or a 'grudge purchase'.
4. **Be financially sustainable and self-funding for the certification delivery partner**. The service needs to be delivered profitably to ensure sustainability and should not require external funding.
5. **Be seen as affordable by participants**. The service should not be considered overly expensive or overpriced by participants.
6. **Be delivered in a high quality, consistent, independent and professional manner**. Participants must have confidence in the capability of the service provider and feel the decisions made are impartial and fair.
7. **Require a minimum of compliance and unproductive effort**. Participants should primarily be asked to enact simple and valuable processes and procedures that assist in the delivery of good services.
8. **Be based on clear criteria and processes with predictable outcomes**. Participants should easily understand what is expected of them and not be surprised at audit results.
9. **Be pragmatic and grounded in industry realities**. The service must show an informed understanding of the realities of the industry in order to maintain credibility.
10. **Be likely to be supported as a contractual requirement for a significant number of influential organisations that procure building projects**. The service must be of a nature and character likely to be acceptable to local and central government organisations.
11. **Have a nationwide impact and focus**. The service and certification service provider must have the potential to roll the service out to at least the main centres in New Zealand.

## Pilot Outcomes and Next Steps

The certification pilots were evaluated with reference to the evaluation criteria provided to BRANZ and the following conclusions were reached:

1. **Behaviour change:** While it is always difficult to predict how companies will act, the process that has been designed is transparent. It requires that both construction companies and waste collection service providers take all reasonable steps to recycle waste materials that can be recycled. In the case of waste collection service providers, this includes finding outlets for potentially recyclable waste materials. The certification programme is designed to not require 'huge leaps' in behaviour change but to set a standard for the industry in terms of efforts to divert waste from landfill and cleanfill. It also provides a real incentive for them to do so. Behaviour change can be expected in that pilot participants have indicated they would do whatever practically necessary to ensure they maintain certification.
2. **Wide acceptability:** The service has been designed to 'level the playing field' for the construction sector and provide a waste minimisation baseline that all construction companies and construction waste collection companies can and should achieve. It is not designed to be highly aspirational. All of the pilot participants indicated that they themselves would participate in the certification programmes and said that they would expect the vast majority of industry players to participate. It is concluded that the programme has been designed in such a way so broad acceptability is very likely.
3. **Delivering value:** All of the pilot participants recognised the value of the programme and felt that having an external requirement for them to pursue sustainability would be useful at all levels of the organisation. One of the construction companies noted that the threat that 'we may lose council work if we don't recycle' would be extremely useful in managing staff and subcontractors on site. They noted external drivers are more powerful than internal ones. One of the waste collection service providers commented that they had taken the opportunity of the pilot to review their internal systems. In doing so they had identified that one of their trucks had faulty scales and had not weighed waste correctly for at least a week. In response a new daily checking system was initiated for all trucks. The company noted that this illustrated the value of someone external 'checking up on you' that everything is working as it should.
4. **Financially sustainable:** While the project team has not been directly privy to BRANZ's business case for service delivery, Lynda Amitrano has advised that BRANZ considers the service to be financially sustainable for them and no external funding is contemplated or expected.
5. **Affordability:** BRANZ has not yet finalised its pricing model, but indications are that participants will pay approximately \$1,500 p.a. for certification. This is within the range considered acceptable by participants during consultation.
6. **Professional delivery:** BRANZ is considered a very suitable certification delivery provider due to the industry and auditing expertise of its personnel.
7. **Minimum effort:** Pilot participants felt that the paperwork requirements for certification were reasonable and, for a number, required only small amendments to existing systems.
8. **Clear criteria:** It was acknowledged by BRANZ that more work is required to clearly articulate the process to programme participants. The documents prepared lacked

detail in some regards, but this was merely a function of preparation time; once the relevant aspects of the programme were explained verbally to participants, ambiguity was removed. BRANZ are currently in the process of finalising documentation.

9. **Grounded in reality:** Positive feedback was received from all pilot participants in this regard, noting that a number of aspects of the programme clearly reflected the realities of construction. This included the ability to set waste diversion targets for each individual construction site based on its design (rather than a blanket waste diversion percentage target for all construction sites) and the recognition that some construction sites had limited available space to allow for multiple waste collection receptacles.
10. **Owner support:** Christchurch City Council has confirmed its intention to make REBRI Certification a requirement for council-funded building construction projects. Christchurch City Council will also work with BRANZ to promote the use of REBRI Certification to other building developers in Christchurch. Initial feedback suggests such support is likely given the acceptability and simplicity of the programme. A representative from a major Christchurch and national project management company, upon hearing about the potential availability of REBRI Certification from Christchurch City Council, said he would include REBRI Certification as a requirement for a major development in the Christchurch CBD.
11. **Nationwide impact:** BRANZ has confirmed that its business plan for rollout of the REBRI Certification programme is based on a staged nationwide rollout, starting in Christchurch, then Auckland before the remaining larger city areas are targeted.

Following the certification pilot BRANZ has confirmed that, subject to final acceptance of the business case by senior management, it intends to launch the REBRI Certification programme in October 2015. The launch strategy will include Christchurch City Council presenting this project at the WasteMINZ Conference in October 2015.

The focus will be establishing the certification programme initially in Christchurch, with a view to launching in Auckland in the first half of 2016, subject to business case acceptance.

In summary the project outcome is a success, resulting in the development of a REBRI Certification specification and certification delivery process. This pilot is being used by BRANZ to develop a business plan that proposes the REBRI certification programme be rolled-out nationally by BRANZ.





CHRISTCHURCH CITY COUNCIL

**CONSTRUCTION WASTE REBRI CERTIFICATION RESEARCH  
PROJECT: 2014/15 BUILDING RESEARCH LEVY INVESTMENT  
PROGRAMME EXTERNAL RESEARCH REPORT**

**ADDENDUM: RESIDENTIAL CONSTRUCTION CERTIFICATION**

TRUE NORTH CONSULTING  
4 APRIL, 2016

## 1. INTRODUCTION

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This research project arose as a result of the Christchurch City Council's Construction Waste Industry Engagement Project undertaken in September 2014. The objective of this project was for an “increased level of consistent engagement of commercial construction companies in construction waste diversion”.

As a result of this project a specification for a REBRI-branded certification programme was created and piloted in Christchurch with a number of waste collection service providers and construction companies. BRANZ was selected as the certification service provider and participated in the service pilot. The pilot was considered successful and a recommendation made to progress the service to a full roll-out.

In March, 2016 BRANZ announced their intention to begin a roll-out of the service, commencing in Christchurch.

The feasibility study and pilot project was completed under budget so Christchurch City Council (CCC) sought and received permission from BRANZ to utilise remaining funds to determine the feasibility of extending the service to residential volume builders. True North Consulting (TNC) was engaged to complete this work, which involved meeting with representatives from four key Christchurch residential volume builders to discuss the REBRI Certification specifications and gauge the willingness of the residential construction sector to participate in such a certification programme.

The building companies engaged with were:

- Horncastle Homes
- Jennian Homes
- Benchmark Homes
- Mike Greer Homes

This report contains a brief overview of the discussions from these meetings and findings in relation to the feasibility of extending the REBRI Certification programme to volume residential builders.

## 2. PROJECT PROCESS

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In order to fully assess the feasibility of REBRI Certification for residential construction companies the following steps were planned:

1. Develop a draft certification specification for consultation purposes and undertake stakeholder consultation meetings.
2. Finalise the certification specification and determine the “base case feasibility” of residential certification.
3. Prepare certification documents and confirm with BRANZ.
4. Develop a pilot/s with BRANZ and confirm evaluation criteria.



5. Pilot the certification process with at least two of the four construction companies noted above.
6. Undertake a final evaluation and make recommendations.

In fact, only the first step was undertaken as subsequent steps were found to be unnecessary given the result of the consultation meetings.

### 3. CONSULTATION FINDINGS

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After the review of the specifications utilised for the commercial construction REBRI Certification, it was determined that – at least initially – no change would be required to these specifications for the residential construction feasibility study.

The specifications utilised for consultation purposes were as follows:

#### *Construction Companies*

A REBRI Certified Construction Company (“Company”) must adhere to several key requirements for every building construction site. The Company will provide reasonable documentary evidence to demonstrate it has adhered to these requirements including supporting documentation and photographs were required.

- The Company must ensure all waste collection services for each building construction site are provided by a REBRI Certified Construction Waste Collection Service Provider (“the Provider”).
- The Company must produce, prior to construction, and implement a Waste Management Plan that includes:
  - An overall construction waste reduction target. Performance against this target must be monitored and reported (at least monthly) to the Construction Company senior management team and reported, or at least offered, to the building client. The target set must be appropriate for the site and the method of construction and a justification for the target must be provided as part of the plan.
  - Targets for individual construction waste streams and corrective actions to be taken when results fall behind targets. Weight based reporting of all waste streams that leave a building construction site must be received from the Provider and monitored as above.
  - The outlets for each waste stream as advised by the Provider, and which waste streams will be separately sorted and put in separate receptacles.
- The Company must document how progress towards achieving targets will be monitored and reported (at least monthly) to the Company senior management team and client.
- The Company must produce a corrective action process to ensure that when results fall behind targets appropriate action is taken.

- Where, due to a lack of space or access or because a particular job is very small in volume, the use of multiple waste receptacles to keep waste streams separate is not practicable, this must be recorded in the Waste Management Plan, along with a detailed justification for this conclusion. This must then be sighted and signed by a member of the Company senior management team.
- The Company must ensure all relevant staff and subcontractors are trained and supported to separate waste into the appropriate receptacles as required by the Waste Management Plan, and that failures in this regard are promptly and effectively addressed and corrective action taken.
- Waste stream contamination feedback must be received from the Provider and appropriate corrective actions taken.
- The Company must publicise both the possession of REBRI Certification and a commitment to waste minimisation on the Company's website and through other appropriate communications material.

### *Waste Collection Service Providers*

A REBRI Certified Construction Waste Collection Service Provider ("Provider") must adhere to, and provide reasonable documentary evidence to demonstrate it has adhered to, three key requirements:

1. Provide comprehensive, accurate and up to date information on service offerings to all building construction clients, including:
  - Information on where all construction waste streams are sent and specifically noting those that are and are not being diverted from landfill and cleanfill.
  - The full range of relevant construction waste receptacles that are available, specifically highlighting those that are suitable for building construction sites with limited access or space for waste receptacles.
  - Signage available to identify different receptacles for different waste streams.
  - Standard service delivery options that are available, including specific strategies for building construction sites with limited access or space for waste receptacles.

This information should be provided in a simple and graphical format easily accessible to all building construction clients and BRANZ. Updates outlining any changes that occur need to be promptly available, drawing specific attention to changes being made.

Where a waste stream outlet diverting waste from landfill and cleanfill ceases to operate or accept waste, specific attention must also be drawn to this and the action being taken. The latest version of all the above information should be clearly available on the Provider's website.

All reasonable steps must be taken to ensure that this information is communicated to the appropriate people (such as Project Managers) within the client organisations.

Where a waste stream outlet diverting waste from landfill and cleanfill ceases to operate or accept waste, the Provider must take all reasonable action to identify an alternative

diversion option for that waste stream. In general, the Provider must make all reasonable endeavours to find diversion options for construction waste streams.

2. Accurately weigh and track all waste streams that leave a building construction site through the Provider, and:
  - Provide at least monthly weight-based reporting of all waste streams to REBRI Certified Building Construction Companies (and at least offer such reporting for non-certified building construction companies) for each building construction site from the pouring of building foundations to the completion of the building project. Waste stream tracking is expected per building construction site, not per receptacle collection. An exact 'mass balance' from the waste collection depot whereby incoming and outgoing waste stream weights match exactly is not expected.
  - Provide regular feedback to building construction companies on waste contamination levels. This includes contamination whereby reusable or recyclable waste is disposed of in general waste receptacles and vice versa.
  - Provide quarterly weight-based reporting of all construction waste streams (showing only the total weights for each waste stream) for all building construction company projects undertaken during the previous quarter to the REBRI Certification Delivery Partner for the purposes of auditing.
3. The Provider must publicise both the possession of REBRI Certification and a commitment to waste minimisation on the Provider's website and through other appropriate communications material.

#### *Consultation Overview – Horncastle Homes*

- Dayle Sutherland, General Manager.
- Horncastle Homes (HH) have already endeavoured to do this kind of waste management, on a 100 home project near Christchurch. It worked well in this large context with good subcontractor buy-in, but they have been unable to make it work on smaller sites.
- They have also tried using flexibins for waste, but this has not worked well in terms of waste falling out of the flexibins, and they also believe it causes a health and safety hazard in terms of tripping.
- The key problem for HH with separate bins on site is that they consider it adds time and money – both of which they can't afford.
- Where they are doing a significant number of homes next to each other and all at once, they will look to separate waste streams, but they don't believe it is feasible to do this otherwise.
- Costs increase in using this method because the waste contractor is picking up a larger number of smaller bins. HH are also unsure of the environmental impact of this as a result of there being more truck movements and associated diesel usage.

- HH note that building sites are getting smaller and smaller – based on planning changes. This adds to the problem of getting multiple bins on a site. Basic sites that used to be 600m<sup>2</sup> are now 450m<sup>2</sup>. Planning changes also now allow building closer to boundaries, which further restricts space for bins. HH estimate that at least 60% of sites would be too small for multiple bins. The requirement for temporary fencing on sites also impedes access to bins.
- HH feel that doing a site waste management plan for every site would be overkill – most of these would look identical.
- HH believe the REBRI Certification programme would only happen if CCC made this a compulsory requirement – building companies are not going to embrace this voluntarily. HH also feel that CCC should subsidise waste companies to pick up recyclables.
- HH do not do much public sector work, so a requirement to have certification for public sector tenders would not motivate them.
- HH would see not benefit to themselves in participating in certification.
- HH feel that application of the certification programme to multiple-unit projects might possibly work.

#### *Consultation Overview – Jennian Homes*

- Amanda van der Kley, Operations Manager
- Jennian Homes (JH) have looked at different options to separate waste with EnviroWaste, but the key challenges have been cost, time and subcontractor management.
- Their experience says that when you have a number of small bins these often end up too full and piles of waste form around them, or they are too large and end up being picked up only partly full. Having many small-volume waste streams is a hard problem to solve for them.
- They have also tried larger bins with separate compartments, but found that some compartments fill up quickly, and some don't, echoing the problem above.
- Supervisors are only on site occasionally, so enforcing rules with subcontractors is virtually impossible.
- JH would estimate that 50 – 60% of sites currently could not take more than one bin.
- Scaffolding is now quite a major issue as it takes up 1.5m of space all around the building.
- Overall site space is a major issue and sites are only getting smaller. Even on multi-residential sites, they are struggling to fit more than one skip safely and with ease of access.
- They are focusing instead on getting suppliers to take waste away. They have had a reasonably positive response from their efforts to do this.
- They are motivated by a desire to reduce waste, but doing so adds cost and they are already seen as more expensive than other builders.
- Overall they would like to support certification, but do not think they could make it work. From JH's view it would need to be mandatory for it to work, and ideally part of the building consent cost. Otherwise they consider they would lose work as a result of higher costs.
- JH do not do any public sector work, so this would not be a motivating factor for them.

### *Consultation Overview – Benchmark Homes*

- Zac Berry, General Manager
- The major concern Benchmark Homes (BH) would have with certification is site space. At least 25% of home builds currently on their books have no room for even a single skip. Adding additional bins would simply not be seen as a feasible option.
- On most builds the only space available is where the driveway will go.
- The lack of space is also seen as exacerbating health and safety issues. If additional bins were placed where there wasn't really room for them, this could create a hazard and, for them, health and safety is far higher a concern than waste management.
- BH are always keen to recycle and to look for opportunities to reduce costs, but don't think this would save money – instead believing it would be more expensive – and they simply would not commit to doing so through certification.
- They believe certification may get more traction if the branding was well recognised nationally as indicating environmental friendliness, but that this would only have value if a few do it – not all builders.
- BH also believe that, as the 'building boom' is coming to an end, builders will be looking to cut costs, not do anything that will add costs.
- BH have done work for the Ministry of Education before, but have not done so for some years. Such projects are no longer of interest so this wouldn't be a motivating factor for them.
- Overall, BH believe they could not support certification.

### *Consultation Overview – Mike Greer Homes*

- Richard McEwan, Chief Executive
- Mike Greer Homes (MGH) believes doing a site plan for all homes is not sensible – it would be largely the same for each home.
- MGH are very focused on outsourcing as much as possible so believe that it is the job of the waste company to sort waste – not them.
- They also feel they cannot force subcontractors to comply with separation rules.
- Sites have become smaller as builders focus on affordability of homes for buyers. It is not uncommon now for sites to be 300 or 400m<sup>2</sup>. In addition, the buildings are closer to the boundary and hard against the road frontage. This makes siting bins very difficult.
- MGH are finding that 30 – 40% of sites are too tight for even a single skip and that contemplating multiple bins would be out of the question.
- Waste is a low priority for MGH just as health and safety once was. Health and safety is now a major focus because of regulation. It is likely that waste will only become a major focus as a result of regulation also.
- MGH notes that, for all builders, margins have been tightly squeezed and that source separating waste would add considerable cost and time, something that consumers would not pay extra for.

- MGH does a lot of Housing New Zealand work, but says that if certification was made a requirement, they – like others – would significantly lift costs and believe that the requirement would be abandoned, much as Green Star currently is in many commercial builds.
- Overall MGH says they would not support certification. They believe it makes sense in a commercial environment where waste streams are substantial and site managers are always present, but that this does not translate into the residential building sector.

#### 4. CONCLUSIONS AND RECOMMENDATIONS

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The feedback from the residential building companies consulted is remarkably consistent in considering that REBRI Certification would be impractical for residential volume builders. The key reasons for this are:

- Sites are too small to support multiple waste collection bins
- Moving to a multiple bin scenario would increase waste costs based on the fact that residential building sites have multiple, small-volume waste streams
- Sites do not have sufficient supervision to ensure compliance with source separation requirements

These opinions from senior management representatives of residential building companies in Christchurch are compelling. Commercial construction sites deal with similar numbers of waste streams, but the volumes on a single site are much larger, so the impact of having multiple receptacles is far less. Site space is also far less of an issue. Commercial construction companies typically consider 20 – 30% of sites as being ‘tight’ for the purposes of waste management. This is a far lower proportion than that reported by residential building companies.

Based on the consistent and reasonable feedback received, the low motivation impact of requiring certification for public sector construction work and the unanimous rejection of certification as a concept by the companies consulted **it is recommended that REBRI certification of residential construction companies not be pursued at this time, and such certification is not considered feasible at this time.**

#### 5. CONTACT DETAILS

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