The New Zealand Ecolabelling Trust

Proposed Licence Criteria for

C&D Waste Services

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Specification change history

Minor clarifications, corrections or technical changes made since the specification was last reviewed and issued in *[TBC: expected September 2019]*.

Date	Version	Change

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1 Introduction

Environmental Choice New Zealand (ECNZ) is an environmental labelling programme which has been created to help businesses and consumers find products and services that ease the burden on the environment. The programme results from a New Zealand Government initiative and has been established to improve the quality of the environment by minimising the adverse environmental impacts generated by the production, distribution, use and disposal of products, and the delivery of services. The programme is managed by the New Zealand Ecolabelling Trust (the Trust).

ECNZ operates to the ISO 14024 standard "Environmental labels and declarations - Guiding principles" and the Trust is a member of the Global Ecolabelling Network (GEN) an international network of national programmes also operating to the ISO 14024 standard.

ISO 14024 requires environmental labelling specifications to include criteria that are objective, attainable and verifiable. It requires that interested parties have an opportunity to participate and have their comments considered. It also requires that environmental criteria be set, based on an evaluation of the environmental impacts during the actual product or service life cycle, to differentiate product and services on the basis of preferable environmental performance.

The life cycle approach is used to identify and understand environmental issues (adverse or beneficial impacts) across the whole life of a product or service (within a defined product or service category). This information is evaluated to identify the most significant issues and from those to identify the issues on which it is possible to differentiate environmentally preferable products or services from others available in the New Zealand market. Criteria are then set on these significant and differentiating issues. These must be set in a form and at a level that does differentiate environmentally preferable products or services, is attainable by potential ECNZ licence applicants and is able to be measured and verified. As a result of this approach, criteria may not be included in an ECNZ specification on all aspects of the life cycle of a product or service. If stages of a product or service life cycle are found not to differentiate environmentally preferable products or services, or to have insufficient data available to allow objective benchmarking in New Zealand, those stages will not generally be included in criteria in the specification. For some issues however, criteria may be set to require monitoring and reporting, to inform future reviews of specifications.

The Trust is pleased to publish this proposed specification for C&D Waste Services (where C&D stands for construction and demolition). This specification is being proposed to recognise waste service providers who reliably demonstrate great practices in C&D waste minimisation and management, and therefore deliver substantial environmental benefits.

This proposed specification sets out the requirements that C&D Waste Services will be required to meet in order to be licensed to use the Environmental Choice New Zealand Label. The specification is split into modules of criteria that differentiate environmentally preferable waste services. There are common criteria applicable for all waste services, then specific criteria for three distinct service types in the C&D waste industry; waste recovery service providers, construction waste generators, and demolition waste generators. The specification also defines the means to be used to demonstrate and verify conformance with each of the criteria.

This proposed specification has been prepared based on: an overview level life cycle assessment, relevant information from other ECNZ specifications, publicly available information, industry guidelines, and feedback from the market and service providers.

Once finalised, this specification will be valid for a period of five years. Twelve months before the expiry date (or at an earlier date if required), the Trust will initiate a further review process for the specification.

Notes:

This is the first version of the ECNZ C&D Waste Services specification. Through a feasibility study, the Trust found there was an appetite for independent verification of C&D Waste Services, to both raise the profile of good C&D Waste Services and recognise what good performance looks like.

Making submissions:

The Trust invites comments from interested parties on this proposed specification. This proposed specification includes a number of these shaded text boxes. These include notes and some specific questions to assist readers to understand and provide comment on the proposed requirements.

This proposed specification has been prepared based on preliminary feedback from waste service providers and industry bodies, current market and selected local government priorities in the waste sector, a high level life cycle assessment, relevant information from other ECNZ specifications, and information readily available from service providers.

The Trust is keen to receive comments about:

- any other information that may be relevant;
- how applicable and relevant the proposed criteria are to differentiate environmentally preferable C&D Waste Services in the New Zealand market; and
- how achievable and practical the requirements are, including the requirements for verification.

2 Background

The C&D industry is one of the largest waste producing industries in the country, however there is limited official national level information on the C&D waste generated in New Zealand. In 2014, the Building Research Association of New Zealand (BRANZ) estimated that C&D waste may represent up to 50% of all waste generated in New Zealand, 20% of all waste going to Class 1 landfills, and 80% of all waste going to Class 3 and 4 landfills[1]. For the purpose of this specification, C&D waste is the non-hazardous material generated by construction or demolition activities, including site preparation.

The 2016 Joint Waste Assessment for Tauranga City Council and Western Bay of Plenty District Council stated that C&D waste was the third largest contributor to the waste stream in the region, and that it was increasing in volume, with little being recovered or recycled[2]. In 2018, Auckland Council released the region's Waste Management and Minimisation Plan (WMMP) in which it defined C&D waste as the largest single waste stream, at around 40% of total weight going to landfill, not including the greater quantities of rubble and concrete ending up in cleanfill and managed fill sites[3]. Within the WMMP, Auckland Council outlined C&D waste as a priority commercial waste stream. Auckland Council's 'Low Carbon Auckland' plan presents total landfill waste reduction targets of 30% by 2020, 60% by 2030, and 'zero waste' by 2040[4]. To achieve these targets Auckland Council has recognised the need to address the C&D waste being generated.

In a whole-of-life context, one of the most significant environmental issues associated with C&D waste is simply the amount of waste that is disposed, rather than put to a beneficial use/reuse. This represents an inefficient use of resources as well as filling up valuable landfill space. This ECNZ specification includes criteria that promote reuse and recovery over disposal, and it requires reuse of those materials that can be readily reused.

In order to justify additional cost of good waste management practices, procurers and service users need confidence that good practices are indeed being followed. This specification includes criteria for transparent waste inventories and tracking, which are intended to provide that confidence.

C&D waste can contain components that can have adverse effects on the environment and people. Discharges that contain toxic or ecotoxic substances may occur throughout the life cycle of the waste materials during handling, storage, and processing and at final disposal location. This specification includes criteria for environmentally safe disposal of any residual C&D waste that cannot be reused or recovered.

Good C&D waste management presents many opportunities for waste minimisation and resource recovery. Diverting C&D waste from landfill has environmental, financial, and social benefits[5], and means that valuable space in engineered sanitary landfills (Class 1) or managed fills (Class 2 or 3) is not taken up by inert materials that could be used beneficially elsewhere. Therefore waste minimisation, including the continuum of avoiding waste creation to maximising recovery and reuse of waste, is perhaps the most important area of potential for environmental benefit. This specification includes criteria that require demonstration of good waste minimisation practices,

[1] BRANZ, 2014, REBRI guides introduction - https://www.branz.co.nz/cms_display.php?st=1&sn=113
[2] Eunomia research & consulting, 2016, Joint Waste Assessment for TCC and WBOP - https://www.tauranga.govt.nz/Portals/0/data/council/plans/reserve_management/files/joint_waste_assessment.pdf
[3] Auckland Council, 2018, Waste Management and Minimisation Plan - https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/environmental-plans-strategies/Pages/waste-management-minimisation-plan.aspx
[4] Auckland Council, 2014, Low Carbon Auckland - https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/topic-based-plans-strategies/environmental-plans-strategies/docslowcarboncopy/low-carbon-strategic-action-plan-full.pdf
[5] BRANZ, 2014, Benefits of Reducing Waste - https://www.branz.co.nz/cms_display.php?sn=113&st=1&pg=12516

including implementing the waste recovery hierarchy that prioritises reuse and recovery over disposal.

The effectiveness of good C&D waste management practices is dependent on coordination and good communication between waste generators and waste recovery service providers. Good intentions can be undermined by inadequate training and communication about waste management. Therefore, this specification includes criteria that require training and communication on site and between waste service providers.

The Trust's feasibility study for this specification found an appetite for independent verification of C&D Waste Services, to both raise the profile of good C&D Waste Services and recognise what good performance looks like. There are a range of non-statutory standards, codes, and programmes relevant to C&D waste-related services, and therefore potential for collaboration and alignment with industry leaders like the BRANZ and the New Zealand Green Building Council (NZGBC). BRANZ's Resource Efficiency in the Building and Related Industries guides (REBRI Guides) have great guidance for collection, transport, sorting, storage, processing, and recovery of C&D waste[6]; good practice examples described in the REBRI Guides are referenced throughout this specification. The NZGBC provides Green Star and Home Star, which are internationally-recognised rating systems for the design, construction and operation of buildings, fitouts, and communities[7]. This ECNZ specification includes criteria that require measurement and demonstrated waste diversion, thereby providing a pathway for third party verification of C&D Waste Services, and a means of demonstrating credits in the waste and innovation categories of the Green Star tools.

C&D waste is often generated and managed in project work carried out under commercial contracts, often awarded on the basis of competitive tendering processes. Hence there is is a strong opportunity to provide guidance to assist decision makers when procuring these services. This ECNZ specification, and having ECNZ-licensed service providers in the market, is expected to assist tender assessors to make demonstrably environmentally preferable contracting and procurement decisions.

The purpose of this specification is to recognise service providers who reliably demonstrate great practices in C&D waste management. An understanding of what great practice looks like in the industry has been developed through research, feasibility studies, and conversations with industry.

The following service category criteria will produce environmental benefits through C&D Waste Services by encouraging differentiators such as clear planning for waste minimisation, a management hierarchy including segregation and protection of mateirals to preserve the value of waste, ongoing measurement and transparent reporting on C&D waste, and generating awareness around waste minimisation and management through good communication, training, and education.

Questions

Q1. Do you think there other important considerations that differentiate environmentally preferable C&D Waste Services in New Zealand that we have missed? If so, please comment on what, and explain why.

Q2. Is there anything in the background that you disagree with? If so, please comment on what, and explain why.

Q3. Are any of the "differentiators" we've identified actually standard practice (therefore they do not actually differentiate the best)?

[6] BRANZ, 2019, REBRI homepage - https://www.branz.co.nz/REBRI
[7] NZGBC, 2019, Green Star - https://www.nzgbc.org.nz/GreenStar

Q4. Are there other things that differentiate the environmentally preferable choice that specifically apply to:

a. Waste recovery services?
b. Construction waste generators?
c. Demolition waste generators?

3 Interpretation

C&D means construction and demolition. It includes building fitouts.

C&D waste means the non-hazardous material generated by construction or demolition activities, including site preparation.Using the New Zealand Ministry for the Environment waste classifications and Waste Management Intsitute of New Zealand (WasteMINZ) definitions. This specification includes the following types of waste:

- concrete, bricks, tiles, and ceramics
- wood, glass and plastic
- bituminous mixtures
- metals and alloys
- insulation materials
- asbestos-containing materials
- gypsum-based construction material
- soil and stones.

This specification does not cover:

- wastes containing other hazardous materials such as polychlorinated biphenyls (PCBs) and mercury.
- excavated soil from contaminated sites.

Note: soil and stones are included in the scope of the specification because topsoil is routinely stripped from construction sites prior to works starting, and there are resource recovery opportunities if works are planned to avoid disposal of topsoil. Soil contaminated with hazardous substances is not included in the scope of this specification.

Construction waste generators means entities that generate construction waste, for example, construction contractors.

Deconstruction means the process in which the material of a building or structure is extracted so that it remains intact and can be reused.

Demolition waste generators means entities that generate demolition waste, for example, entities contracted to carry out demolition, deconstruction, or removal works.

Disposed means the material is sent to a landfill and will not be reused or recovered in any way.

Diversion rate means the amount of waste that is diverted from landfill or cleanfill, usually calculated by: $Diversion\ rate = \frac{Amount\ of\ C\&D\ waste\ diverted}{Total\ amount\ of\ C\&D\ waste\ including\ any\ diverted}$

Diverted means recovered or salvaged C&D waste material that it does not end up disposed.

GEN means Global Ecolabelling Network.

ISO means International Organisation for Standardisation.

Label means the Environmental Choice New Zealand Label.

People means the relevant people to the task at hand, this could include employees, sub contractors, or volunteers, whoever the licence holder relies upon to ensure the task is done correctly.

Project means the specific piece of C&D work, contract, or site at which the licensed service is applied.

Project-specific collection plan means an approach or strategy to collect all recoverable or salvageable waste materials on a site, including who is responsible for what.

Plan means an approach or strategy that has been agreed upon by all relevant service providers involved (unless specified as a formal written document).

Recovered means a construction waste material that has been saved from being disposed, and can be reused or recycled.

Recycled means a waste material is converted into a different form or object with value.

Relocation means the material, or building, is kept intact and moved to a new location for use.

Residual waste materials means the waste materials that are not able to be relocated, recovered or salvaged for reuse, or recycled, and therefore are destined to be disposed.

Reuse means the waste material is used again in the same form.

Salvaged means a demolition waste material that has been saved from being disposed, and can be reused or recycled.

Segregation means the waste materials are organised in distinct material types and kept apart from other material types.

Waste Management Plan (WMP) means a written programme to achieve and sustain efficient and effective minimisation and management of waste including policies, practices, planning activities, responsibilities and resources that affect the organisation's waste management performance.

Waste material inventory means a list of all C&D waste materials for the project (identity and amount), and their final destination.

Waste priority hierarchy means the preference for maintaining the value of waste, by prioritising as follows (highest to lowest priority): *relocate for reuse → recover or salvage for reuse → recover or salvage for recycle → recover or salvage for energy → dispose.*

Waste recovery service providers includes entities that pick up waste from construction or demolition sites (often also providing skip bins or other containers that are left on site), and/or process waste from construction and demolition activities, and/or dispose of waate from construction and demolition activities.

Notes & Questions

Term definitions are outlined in this section to ensure consistent key phrase understanding and to define standard terms in line with other ECNZ specifications.

Q5. Do you disagree with any of the definitions? If so, please comment on which, and explain what you would propose as an alternative and why.

Q6. Do you think there are any another terms that need to be defined? If so, please explain what they are, the definitions you propose, and why?

Q7. Do you agree with the waste classifications provided in the definition of C&D waste (refer interpretation section)? If not, please explain why not, and what you would propose as an alternative.

4 Category definition

4.1 Services covered

This specification covers C&D Waste Services offered by:

1 C&D waste recovery service providers (removal and recovery of either construction waste or demolition waste or both)

2 Construction waste generators

3 Demolition waste generators

For clarity, the licence will not apply to a company, rather to the particular type of service offered, which could be contract-specific.

4.2 Structure of specification

This specification contains common criteria that all C&D Waste Services seeking a licence under this specification must meet, and three licence-type specific modules, one for each of the service-types defined above.

To be licensed to use the Label, the C&D waste service must meet all of the common criteria set out in section 5, and the criteria of the module under which it is seeking a licence (sections 6, 7, 8).

Notes & Questions

The Trust is proposing to split the criteria into three modules: waste recovery services, construction waste generators, and demolition waste generators.

Q8. Do you agree with the three service modules identified, or do you think we have missed an important C&D waste service? If so, please explain what service and why it should be included.

5 Common criteria for all C&D Waste Services

5.1 Planning

Criteria

a The licence holder must have a policy that includes commitments to:

i. minimise the amount of C&D waste generated for the project.

ii. implement the *waste priority hierarchy: relocate for reuse → recover or salvage for reuse → recover or salvage for recycle → recover or salvage for energy → dispose.*

iii. early engagement and proactive and responsive communication and collaboration with other waste service providers and waste generators on the project.

b The licence holder must develop a waste management plan (WMP) for each project that uses the ECNZ-licensed service, which must clearly set out:

i. how C&D waste will be minimised for the project;

ii. how the *waste priority hierarchy* is to be implemented;

iii. where each waste stream will go and who is collecting what, in the format of a waste material inventory; and

iv. how waste will be segregated to preserve value, including at what location this occurs.

Explanation

The requirements in 5.1(b) are for all licence holders. There are also additional WMP requirements for construction waste generators under 7.1, and demolition waste generators under 8.1.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by:

- a copy of the policy that includes the requirements in 5.1(a)
- a copy of the WMP template and example WMPs for projects using the ECNZ-licensed service. The BRANZ REBRI online guidelines provide advice on how to assess different waste streams and the possibilities for material reuse and recycling, which may be helpful during C&D waste planning[8]. The REBRI guidelines also provide clear directions on how to develop a WMP[9], and a demolition waste plan[10].

Explanatory notes

For 5.1(a)(iii), 'early' engagement means engagement during the planning or design phases of the project, before the construction, deconstruction, or demolition works commence.

Notes & Questions

A *waste priority hierarchy* is commonly used to describe the order of preference for different waste management options[11]. The hierarchy proposed for this specification to define the order of

[8] BRANZ, 2014, Assessing Waste Streams - https://www.branz.co.nz/cms_display.php?st=1&sn=105
[9] BRANZ, 2014, Develop a Waste Management Plan - https://www.branz.co.nz/cms_display.php?sn=106&st=1&pg=12526
[10] BRANZ, 2014, , Deconstruction plan - https://www.branz.co.nz/cms_display.php?sn=106&st=1&pg=12649#decplan
[11] Zero Waste NZ, 2010, The Waste Hierarchy - http://zerowaste.co.nz/assets/The-Waste-Hierarchy.pdf

preference for C&D waste management options is: *relocate for reuse → recover or salvage for reuse → recover or salvage for recycle → recover or salvage for energy → dispose.*

Q9. Do you agree with the *waste priority hierarchy* proposed? If not, please comment on how you think it should be defined instead.

Q10. Do you agree with the requirement to commit to implementing the *waste priority hierarchy*? If not, please comment on why not, and provide another way of how this prioritisation could be implemented.

Early engagement between waste generators and waste service providers has been identified in preliminary feedback to the Trust as critical to good outcomes in the recovery of C&D waste. A commitment to waste minimisation in the early stages of a project is more likely to endure throughout the project[12]. Initial feedback from industry indicated that the earlier the C&D waste service provider is engaged and consulted, the better the opportunity to identify and realise environmental benefits, identify recoverable materials, plan how to recover them, and programme the required recovery. Therefore, the Trust is proposing to include criteria on early engagement between waste generators and waste service providers.

Q11. Do you agree with the requirement for a policy committing to early and ongoing engagement between the waste generator and the waste service provider? If not, please explain why not and provide an example of how this differentiator could be verified instead.

Decisions made about C&D waste reduction during the planning phases are more likely to endure throughout the project, and a WMP presents a good format to document these decisions and intentions. BRANZ REBRI defines a WMP as the written record of what must be done to achieve the goals set for managing C&D waste[13]. The REBRI guides also give detailed recommendations on what should be covered in a WMP, as well as a WMP template. A WMP is a good way to prioritise waste management throughout a project, as well as educate those who may not be so familiar with material recovery from C&D waste.

The Trust proposes that the WMP includes consideration of how C&D waste will be minimised, how the *waste priority hierarchy* will be implemented, identifying pathways for each waste stream, assigning the collection of each waste stream to a particular C&D waste service, and the sorting and segregation of waste required. Criterion 5.1(b)(iv) recognises that there are different places where the segregation of waste can be undertaken effectively, and so allows for innovation and different approaches to carrying out sorting and segregation. For example, sorting may be done on the waste generator's site or on a site operated by the waste recovery service provider.

Note that there are additional requirements for the WMP in the waste generator modules.

Q12. Do you agree with the requirement for a WMP? If not, please explain why not and what you would suggest as an alternative to verify that good planning has occurred.

Q13. Do you agree with the four required inclusions for the WMP presented as 5.1(b) i, ii, iii, and iv? If not, please explain which you don't agree with and why.

[12] BRANZ, 2014, Waste Reduction – Construction REBRI guide

[13] BRANZ, 2014, Develop a Waste Management Plan - https://www.branz.co.nz/cms_display.php?sn=106&st=1&pg=12526

5.2 Practice: measurement, transparency, and waste priority hierarchy

Criteria

a The licence holder must measure the quantity, and report the destination, of all C&D waste in the waste material inventory for every project completed as part of the ECNZ-licensed service. This includes all waste recovered/salvaged and relocated, reused, recycled, and disposed to managed fill or landfill. For C&D waste that is recovered/salvaged or reused, the inventory must clearly identify "within project" or "off site", and if off-site, the location must be reported.

b The licence holder must demonstrate:

i. recovery and reuse of waste materials where this is claimed, both for "within project" and "off site";

ii. sale of waste materials where this is claimed;

iii. a pathway to market for off-site recovery/salvage or reuse, e.g. a recycled building components yard/retailer, or other beneficial off-site reuse.

c Before deeming a waste material to be "residual waste", the licence holder must:

i. advertise the availability of the material; and

ii. make arrangements for the collection of the material, which includes providing a secure and accessible location for collection of the material, and maintainig control of the material until it is collected.

d The licence holder must demonstrate that any residual waste material has been disposed of at an appropriately consented facility.

e The licence holder must demonstrate that opportunities for continuous improvement (for example, increasing recovery of C&D waste from each project) are reviewed after each project completed as part of the ECNZ-licensed service, and implemented, where appropriate.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by:

· a copy of the waste material inventory for each project completed as part of the ECNZ-licensed service. The BRANZ REBRI online guidelines provide advice on how to effectively track resources in an effort to reduce the amount of waste material produced (regardless of whether it is reused, recycled, or landfilled)[14]

· evidence of material recovery, reuse, or sale, and documentation outlining the pathway to market for example:

- before and after photos of where the material came from, and where it has been reused or recycled
- evidence of sale (e.g. to retail or wholesaler) could be used as evidence if materials are not used on site
- contracts, receipts, logs, or dockets demonstrating the chain of waste management
- tools such as CivilShare may be used to make materials available to the market, and past listings can be used as evidence of advertisement

[14] BRANZ, 2014, Resource Tracking - https://www.branz.co.nz/cms_display.php?st=1&sn=107&pg=12540

- demonstration of how materials were made available, before deeming them to be residual, including evidence of advertising the waste materials (e.g. CivilShare listing, community notice board advertisement), arrangements made for collection of the material, and photos of the secure location made available for collection.
- documentation that confirms any residual waste material disposal facility used was appropriately consented.
- demonstration of how the process for continuous improvement review occurs and evidence of implementation of continuous improvement learnings.

Notes & Questions

These criteria, collectively, are intended to promote a *waste priority hierarchy* of relocate, recover or salvage for reuse, recycle, recover energy and finally, if absolutely necessary, safe disposal.

A waste material inventory helps keep track of the types and quantities of materials to be recovered or salvaged for reuse, recycling, energy recovery, or disposal on a site. It provides a transparent, verifiable record that waste planning has occurred, and that the licence holder has identified available markets and destinations for all materials. The BRANZ REBRI guidelines recommend setting up a system to document transfer of the waste materials from the building site to their destination. The Trust proposes that the licence holder uses a waste material inventory as part of the transfer documentation record. Recording the final destination of each material in the inventory keeps all the information about waste material in the same place, for ease of reporting, transparency for verification, and will highlight continuous improvement opportunities. Therefore, the Trust has proposed the requirement of a waste material inventory to manage and track all C&D waste materials on every project completed as part of the ECNZ-licensed service.

Q14. Do you agree with the requirement to keep an inventory of the identity, measured quantity, and destination of all C&D waste materials? If not, please explain why not, and what you would suggest as an alternative to verify C&D waste diversion rates.

Q15. Do you agree with the requirement to demonstrate the recovery and reuse or sale of waste materials where it has been claimed, or otherwise demonstrating an alternative pathway to market? If not, please comment on why not, and what you would propose as an alternative to provide verification of claims about waste recovery and reuse.

For this specification, residual waste materials have been defined as C&D waste materials that are 'not able to be relocated, recovered or salvaged for reuse, or recycled, and therefore are destined to be disposed.' Providing the opportunity for third parties (e.g., other industry members, community groups, public) to take the residual waste materials away for free or for a small fee, provides a final opportunity to divert these materials from landfill.

Increased awareness around waste in general had led to increased prevalence, capacity and capability in material exchange services and technology. For example, Auckland's North Shore Resource Centres allow donation of items or materials, 'with life still in them', that could be used within an educational institute or community group project[15]. For C&D waste, the 'CivilShare' application provides an online marketplace to enable users to buy, sell, share, swap, and hire materials and resources, including C&D waste materials that would otherwise be destined for

[15] North Shore Resource Centre, 2013, https://www.northshoreresourcecentre.org.nz/

disposal[16]. The BRANZ REBRI guidelines also outline different available markets for waste materials[17].

The Trust is proposing criteria that promote the *waste priority hierarchy*, and allow for innovation in finding ways to reuse or recycle waste, before allowing residual C&D waste to be disposed to landfill.

Q16. Do you agree with the requirement to advertise residual waste materials? If not, please comment on why not, and what you would propose as an alternative to promote consideration of innovative reuse/recovery options for residual waste, before resorting to landfill disposal.

The Trust recognises that on most projects there will be some residual waste that cannot be recovered (e.g., due to safety concerns) and therefore must be disposed of. The Trust is aware of the possibility that waste that is not recovered might end up in "temporary stockpiles" for an indefinite period, which merely shifts the environmental burden. To avoid this unintended consequence, the Trust proposes that if any residual waste has to be disposed, it must be disposed of at a consented facility that is authorised to take the particular type of waste.

Q17. Do you agree with the requirement that the licence holder must demonstrate any residual waste, that cannot be recovered, has been disposed at a consented facility? If not, please comment on why not.

The Trust recognises that the opportunities for implementing good practice in the C&D waste industry are constantly evolving. The Trust does not want to prescribe actions that must be taken where there is a strong likelihood that better practices may become available in time. The Trust does not want to include criteria that will stifle innovation or lead to perverse outcomes of less-preferable practices. A requirement for project-by-project review of what worked well, what didn't work well, and what changes (if any) are to be implemented, is intended to recognise that good performers will be looking for ways to improve, and to promote continuous improvement. The Trust considers that the information provided to demonstrate that opportunities for continuous improvement have been reviewed and implemented will also help inform future revisions of this specification.

Q18. Do you agree with the requirement to review opportunities for implementation of continuous improvement, and to document that the review has occurred? If not, please comment on why not, and what you would suggest as an alternative.

[16] Civil Share, 2019, http://civilshare.co.nz/

[17] BRANZ, 2014, Know Your Markets - https://www.branz.co.nz/cms_display.php?st=1&sn=105&pg=12520

5.3 Communication and social

Criteria

a The licence holder must:

i. train its people, and all relevant contractors/volunteers involved on the project, about where waste material goes, and document the training and awareness-raising (e.g., induction, tool box talks);

ii. have and run a programme that promotes input from site personnel for continuous improvement, and offers incentives for good ideas (e.g., innovation awards/recognition); and

iii. have a community engagement plan that includes, at a minimum, information on where waste from the project will go (e.g., signs).

b The licence holder must demonstrate an intention to expand the offering of ECNZ-licensed services. For example: number of projects using ECNZ-licensed service; application of ECNZ-licensed services to small jobs (not just large); net worth of projects or number of sites where the licence holder has provided ECNZ-licensed services.

c Annually, the licence holder shall provide a short report to the Trust, which includes:

i. types of services carried out under the licence;

ii. number of projects completed using the ECNZ-licensed services;

iii. landfill diversion rate achieved for each project;

iv. comparison of (i) to (iii) to previous year; and

v. changes in the service offered in the previous 12 months that were driven by continuous improvement.

Explanation

5.3(c) sets out the common elements for the annual reports required from all licence holders. Each licence holder will have additional requirements under Modules 1, 2, and/or 3. Only a single, combined annual report is required from each licence holder.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by:

- evidence of waste management training, e.g., photos of the training happening, training documents or hand outs, programme documentation
- evidence of the employee incentive programme, e.g., awards presented, ideas implemented.
- evidence of a community engagement plan, e.g., photos of publicly visible signage, feedback from the community or people involved in the project
- evidence of the intention to expand ECNZ offering, e.g., future targets on ECNZ service expansion, documentation around continuous improvement in this area
- a copy of the short annual report that includes criteria listed in 5.3(c).

Notes & Questions

The Trust proposes criterion 5.3 (a) to encourage licence holders to educate and generate awareness of the preferable C&D Waste Services they are providing.

Based on preliminary feedback, the Trust recognises that people who work on a site everyday are most likely to understand where exactly the project could improve its waste management practices, provided they are aware of what to look for. People are more likely to adopt sustainable and responsible waste practices if they are educated about waste management, understand the problem at large, and what they can do to help. Hence the Trust proposes to include a requirement for training in good waste management practices (5.3(a)(i)) and encourage innovation through incentivisation and recognition (5.3(a)(ii)).

Q19. Do you agree with the requirement to provide C&D waste education to all relevant people on the project? If not, please comment on why not.

Q20. Do you agree with the requirement to offer an incentive-based programme to encourage innovation and continuous improvement in good C&D waste management? If not, please comment on why not, and what you would suggest as an alternative.

Preliminary feedback the Trust received whilst developing this specification indicated concern that public scepticism about the ultimate fate of C&D waste could erode the confidence of service procurers to invest in environmentally preferable C&D Waste Services. Providing transparency and clarity to the public and interested parties about the ultimate fate of C&D waste from each project will help build confidence that ECNZ-licensed services really are the environmentally preferable choice.

Engaging the external community helps spread education and awareness around sustainable waste practices, and can help build the profile of a project with good waste management within the local community.

Q21. Do you agree with the requirement for a community engagement/communications plan to raise awareness of the good waste management practices being used on each project, including destinations for C&D waste? If not, please comment on why not and what you would propose as an alternative.

Preliminary feedback showed that raising awareness of the avaialability of good waste management practices is an important part of creating a market driver for those services. The Trust proposes the criterion in 5.3(b) to demonstrate expansion of the environmentally preferable (i.e., ECNZ-licensed) services offered as one way of driving this change.

Q22. Do you agree with the requirement to demonstrate an intention to expand the offering of ECNZ-licensed services? If not, please comment on why not.

The Trust proposes an annual report as the simplest way to provide verification to the Trust that the five main measures in these common criteria (Section 5) are consistently met by the ECNZ-licensedservices. The Trust recognises that an annual report is necessarily “after the fact” but is necessary to provide confidence in these critical areas. The information required in the annual report is also intended to inform future revisions of this specification.

Q23. Do you agree that a short annual report is the most efficient way to provide verification to The Trust that the ECNZ-licensed services continue to meet the specification? If not, please explain why, and what would you suggest as an alternative?

Common Criteria - Notes & Questions

The common criteria have been split into three sections: planning, practice (measurement, transparency, waste priority hierarchy), and communication.

The Trust understands that there are many different ways in which commercial C&D waste service providers differentiate their services. This specification is not intended to set criteria around all of these. The Trust has sought to identify the most important differentiators and to set criteria around them. Preliminary feedback to the Trust was consistent in highlighting the important differentiators for good environmental outcomes are good planning, measurement and transparency, preserving the value of materials (waste priority hierarchy) and communication.

The Trust has intentionally limited the number of criteria to focus on those that will have the most impact and provide the most significant differentiation of good practice. The Trust particularly welcomes feedback if submitters feel (a) any of the proposed criteria are not necessary to include in the specification at this time, or (b) there are important criteria missing.

The Trust regularly reviews ECNZ specifications, to update them so they continue to differentiate environmentally preferable services and products. For some ECNZ specifications, the Trust has determined the time is not right for a particular criterion to be set (e.g., not enough information to set a limit or ban, not currently achieveable in the New Zealand market), but has flagged an intention to monitor industry, technology, and market progress, with a view to setting new criteria in the future. The Trust welcomes feedback from submitters on whether any of the proposed criteria might be best left to a future revision of the specification.

Q24. Do you agree that the common criteria proposed will differentiate good practice? If not, which criteria do you think will not differentiate good practice, and why? What would you propose as alternative(s)?

Q25. Do you think we are missing important criteria for all C&D Waste Services to meet? If yes, please describe the criteria you believe are missing and why they should be included at this time.

Q26. Do you think that any of the proposed criteria are unachievable? (i.e. is the bar too high?) If so, please comment on the reasons why you think they are unachievable, and what you would propose as an alternative.

Q27. Do you think the proposed criteria are achievable by everyone? (i.e. is the bar too low?) If so please describe the way(s) in which you think the criteria should be made more stringent.

Q28. Do think the criteria provide enough certainty without stifling innovation? If no, please describe how you would change the criteria to encourage innovation.

6 Module 1: Waste recovery services

6.1 Planning

Criteria

a The licence holder must agree a project-specific collection plan for segregation and collection of C&D waste in collaboration with the waste generator.

b The licence holder must either provide systems to protect the quality and integrity of materials on project sites, or use such systems provided by the waste generator, if such systems are part of the agreed collection plan under 6.1(a).

Explanation

For 6.1(b), systems may include, for example, covered bins or segregation areas, training of relevant people, regular visual inspections, containers and sheltered areas provided for materials.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by:

- evidence of the plan agreed upon with the waste generator, e.g., requirements included in contract documents, a copy of agreed responsibilities, a service schedule. Segregation may include, for example, covered bins at pre-agreed locations, with appropriate signage.
- evidence of the system used on site to protect material, e.g., photos of the systems in use onsite, and/or documentation of the measures in place to protect materials. The BRANZ REBRI online guidelines provide good-practice advice on waste separation and storage onsite[18].

Notes & Questions

6.1(a) is intended encourage effective communication between the waste generator and the waste recovery service provider. For construction projects, potential sources of waste should be identified early to reduce the waste output. For demolition projects, identifying everything that is able to be salvaged and communicating this to the team who will be deconstructing, maximises the material that can be salvaged (diverted from landfill).

Q29. Do you agree a project-specific collection plan should be agreed between the waste recovery service provider and the waste generator? If not, please comment on why not.

Safe temporary storage of recovered materials helps maximise diversion from landfill, by minimising contamination and damage[19]. Contamination or damage can dramatically decrease the quality, and therefore the value, of the waste material for future reuse, recycling, or collection, and may lead to material having to be disposed to landfill, rather than being effectively recovered. Therefore the Trust proposes criterion 6.1 (b) to ensure the protection of materials is considered and adequately planned for to ultimately reduce the amount of waste material sent to landfill.

Q30. Do you agree with the requirement to provide material protection systems onsite? If not, please comment on why not, and what you would suggest as an alternative.

[18] BRANZ, 2014, Waste Separation and Storage - https://www.branz.co.nz/cms_display.php?st=1&sn=107&pg=12656
[19] BRANZ, 2014, Waste Separation and Storage - https://www.branz.co.nz/cms_display.php?st=1&sn=107&pg=12656

6.2 Practice

Criteria

a The licence holder must ensure there is effective signage communicating all C&D waste segregation systems, bins, or designated collection areas on project sites.

b If the licence holder provides multiple bins to promote onsite sorting, all bins must be clearly labelled.

c The licence holder must provide training and/or effective information to the waste generator(s) on each project to encourage higher levels of waste recovery.

Explanation

For 6.2(a), the signage may be provided by the waste generator, however it is the waste recovery service provider's responsibility to ensure it is effective and to agree to using it.

For 6.2(c), training may include, for example, explanations of why sorting and segregation matters, why bins must be kept closed and project-specific features of the waste management plan.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by:

- evidence of the segregation system signage onsite, for example: photos of segregation system signage (e.g. bin labelling) during use. The BRANZ REBRI online guidelines provide good-practice advice on waste collection labelling[20].
- evidence of the training and/or effective information provided to the waste generator, for example: photos of the training happening, training documents or hand outs, programme documentation, and/or feedback from the people involved.

Notes & Questions

Safe pre-collection storage of recovered materials helps maximise diversion from landfill, by minimising contamination and damage[21]. Safe storage (pre-collection) to reduce contamination requires the segregation of waste material types. If the segregation systems in place are clearly labelled and easy to understand, people are more likely to use them correctly, and therefore maximise effective waste material recovery. The BRANZ REBRI guidelines provide advice on waste material collection system labelling, and encourage the use of clear signage for all storage areas and containers to avoid cross-contamination (for example, getting plastics dirty, spilling paint or adhesives onto timber, or mixing different qualities of plasterboard or timber)[22].

Q31. Do you agree the waste recovery service provider should provide signage for all bins and segregation areas if there is not already adequate signage in place? If not, please comment on why not and what you would propose as an alternative.

Preliminary feedback provided to the Trust highlighted that a major barrier to the uptake of good C&D waste practices is the lack of education and awareness about what happens to waste and how its value can be maintained or lost. The Trust is proposing the criterion for waste recovery

[20] BRANZ, 2014, Waste Separation and Storage - https://www.branz.co.nz/cms_display.php?sn=107&st=1&pg=12656#label
[21] BRANZ, 2014, Waste Separation and Storage - https://www.branz.co.nz/cms_display.php?st=1&sn=107&pg=12656
[22] BRANZ, 2014, Waste Separation and Storage - https://www.branz.co.nz/cms_display.php?sn=107&st=1&pg=12656#label

service providers to provide eduction to waste generators to help promote further understanding and awareness around what good C&D waste recovery looks like. People are more likely to adopt good waste practices if they are educated about waste management, understand the problem at large, and how their own actions can contribute to good outcomes.

Q32. Do you agree with the requirement to provide training to waste generators on a project-specific basis? If not, do you have alternative ideas on how to best generate awareness and education within the community?

6.3 Demonstrated waste diversion

Criteria

The licence holder must measure, document, and report all C&D waste managed for every project completed as part of the ECNZ-licensed service.

Explanation

Reporting the rate of waste diversion from landfill for each project completed as part of the ECNZ-licensed service should be included in the annual report required under common criterion 5.3(c).

Reporting should be aligned with the proposed National Waste Data framework in tonnes (or converted to tonnes from cubic metres using the Ministry for the Environment's Waste Levy calcaultions) linked to Solid Waste Protocol mateirals categories.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported bythe final measurements and record of all C&D waste managed on every project completed as part of the ECNZ-licensed service, including: the waste recovered, the waste sent to landfill, and the corresponding diversion rate.

Notes & Questions

The transparency and confidence in the final destination of C&D waste was identified as a key issue following preliminary consultation and feedback from the C&D waste industry. It was highlighted that the procurer of an ECNZ-licensed C&D waste service needs to be confident that C&D waste materials are reused or recycled where claimed. Ultimately, the waste recovery service is responsible for ensuring the reuse, recovery, or safe disposal of the C&D waste materials. The Trust therefore proposes the requirement to measure, document, and report all C&D waste, to ensure transparency, and provide verification to the Trust that the licence holder is consistently achieving diversion or salvage rates. Recording the final C&D waste measurements will highlight continuous improvement opportunities for the licence holder. This information is also intended to inform future revisions of this specification, and allow the Trust to understand how C&D waste industry capability is changing.

Q33. Do you agree that the waste recovery service provider must measure and document all C&D waste recovered on a project-specific basis? If not, please comment on why not.

7 Module 2: Construction waste generators

For a Construction Waste Generator to hold an Environmental Choice licence for a project, all criteria in Section 5 and Section 7 must be met. Some requirements of Section 7 may be met by engaging Environmental Choice licensed Waste Recovery Service Providers.

7.1 Planning

Criteria

a The WMP prepared under 5.1(b) must support diversion of at least 80% of construction waste from landfill, for every project completed as part of the ECNZ-licensed service.

b The licence holder must ensure there are systems in place to maintain the quality and protect the value of recovered construction waste until collection.

c The licence holder must agree to a project-specific collection plan for the segregation and collection of construction waste in collaboration with its waste recovery service provider(s).

Explanation

7.1(a) has been included to align with the NZGBC's Green Star rating tool, which awards 2 points for 80% diversion from landfill.

For 7.1(b), systems may include, for example, covered bins or segregation areas, training of relevant people, regular visual inspections, containers and sheltered areas provided for materials.

Use of an ECNZ-licensed waste recovery service provider will demonstrate conformance with 7.1(c).

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by:

- a copy of the WMP, that states the required 80% diversion rate from landfill
- evidence of systems in place to protect the quality of construction waste materials, for example: marked-up site plans, or procurement receipts of bins or containers. The BRANZ REBRI online guidelines provide good-practice advice on waste separation and storage onsite[23]
- evidence of the plan agreed upon with the waste recovery service provider, for example; requirements included in contract documents, and/or a copy of the agreed responsibilities and the service schedule.

Notes & Questions

The 80% diversion of construction waste from landfill target has been set following preliminary consultation and feedback from the C&D waste industry. Preliminary feedback to the Trust consistently noted that 90% diversion is not yet possible in New Zealand. This will be reviewed in future revisions of the specification, as market capacity and industry capability increases.

The 80% diversion rate proposed at 7.1(a) is aligned with the mid-point C&D waste diversion target in the NZGBC's Green Star - Design & As Built NZ[24] rating tool. In the Green Star rating tool,

[23] BRANZ, 2014, Waste Separation and Storage - https://www.branz.co.nz/cms_display.php?st=1&sn=107&pg=12656
[24] NZGBC, 2019, Green Star - Design & As Built NZ - https://www.nzgbc.org.nz/Category?Action=View&Category_id=335

1 point is awarded for projects that demonstrate 70% diversion, 2 points are awarded for 80% diversion, and 3 points are awarded for 90% diversion.

7.1(a) is specifically written to require the diversion rate be achieved on each project completed as part of the ECNZ-licensed service. Preliminary feedback received by the Trust indicated that it was important for customers and procurers to have confidence that the C&D waste generated on their project was managed in an environmentally preferable way.

Q34. Do you agree with the target of 80% diversion of C&D waste from landfill for each project? If you do not think this is possible or appropriate, please explain why not, and what you would suggest as an alternative.

Safe storage of recovered materials before collection helps maximise the waste material diverted from landfill, by minimising contamination and damage[25]. Contamination or damage can dramatically decrease the quality, and therefore the value, of the waste material. Therefore the Trust proposes criteria 7.1(b) to ensure materials are protected until they are collected, ultimately to maximise the value of waste and reduce the amount of waste material sent to landfill.

Q35. Do you agree with the requirement to ensure protection of construction waste materials before collection? If not, please comment on why not.

The Trust has proposed the requirement of a project-specific collection plan to encourage effective communication between the waste generator and the recovery service. Early engagement and planning are the best ways to ensure that maximum material volumes are recovered. Preliminary feedback received by the Trust indicated that good outcomes were possible when potential sources of material waste and the timing/project schedule for when those waste types will be generated (e.g., timber, plasterboard, plastic waste) are identified early and corresponding targets can be created to reduce the waste output.

Q36. Do you agree with the requirement of a project-specific collection plan? If not, please comment on why not.

7.2 Practice

Criteria

a The licence holder must ensure construction waste bins and segregation areas on the project site have clear, effective signage.

b The licence holder must ensure recovered construction waste materials are protected on site to preserve integrity and quality for reuse or recycling.

Explanation

These criteria are intended to maximise waste recovery.

7.2(a) can be demonstrated by engaging an ECNZ-licensed waste recovery service provider, provided the waste recovery service provider's signage and segregation plan is followed.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by:

[25] BRANZ, 2014, Waste Separation and Storage - https://www.branz.co.nz/cms_display.php?st=1&sn=107&pg=12656

- evidence that an ECNZ-licensed waste recovery service has been used or evidence of the segregation system signage in action onsite, e.g., photos of segregation system signage (e.g. bin labelling) during use. The BRANZ REBRI online guidelines provide good-practice advice on waste collection labelling[26].
- evidence of the system used on site to protect material, e.g., photos of the systems in use onsite, and/or documentation of the measures in place to protect materials. The BRANZ REBRI online guidelines provide good-practice advice on waste separation and storage onsite[27].

Notes & Questions

If segregation systems in place are clearly labelled and easy to understand, people are more likely to use them correctly, and therefore maximise effective waste material recovery. The BRANZ REBRI guidelines provide good-practice advice on how to manage construction site waste to maximise the amount of material that can be recovered.[28].

Q37. Do you agree with the requirement to ensure bins and segregation areas have effective signage? If not, please comment on why not.

Safe storage of construction waste materials prior to collection helps maximise the value of the waste material, and provides opportunities for other uses of the material.

Q38. Do you agree with the requirement to ensure construction waste materials are protected on site? If not, please comment on why not.

7.3 Demonstrated waste diversion

Criteria

a The licence holder must demonstrate it has achieved the diversion rate target set in the WMP required in 7.1(a).

b The licence holder must measure and document all construction waste generated on every project completed as part of the ECNZ-licensed service.

c The licence holder must document and report the diversion rate achieved for project completed as part of the ECNZ-licensed service.

Explanation

The criteria in 7.3(b) and 7.3(c) could be met by using ECNZ-licensed C&D waste recovery service(s) that meet all requirements of Module 1. The Construction Waste Generator licence holder must demonstrate that all waste is accounted for, which may require information from more than one waste recovery service provider.

Annual reporting for 7.3 (c) is required by 5.3(c). Only one, combined annual report is required.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by:

[26] BRANZ, 2014, Waste Separation and Storage - https://www.branz.co.nz/cms_display.php?sn=107&st=1&pg=12656#label
[27] BRANZ, 2014, Waste Separation and Storage - https://www.branz.co.nz/cms_display.php?st=1&sn=107&pg=12656
[28] BRANZ, 2014, Waste Separation and Storage - https://www.branz.co.nz/cms_display.php?sn=107&st=1&pg=12656#label

- the final measurements and record of all construction waste generated and recovered on the licensed-service project, including: the waste recovered, the waste sent to landfill, and the corresponding diversion rate (as evidence that the 80% diversion rate was achieved).

Notes & Questions

The transparency of a C&D waste service, and the corresponding confidence in their C&D waste management practices, were identified as key issues following preliminary consultation and feedback from the C&D waste industry. The diversion rate target was set based on what is currently achievable in the New Zealand market.

The Trust proposes the requirement to demonstrate that the required diversion rate was met for all projects under the ECNZ-licensed service, to provide verification to the Trust that the Construction Waste Generator is consistently achieving the diversion rate. This information will also help inform future revisions of this specification, and allow the Trust to understand how the C&D waste industry capability is changing.

Q39. Do you agree with the requirement to provide evidence of the diversion rate for every project completed as part of the ECNZ-licensed service? If not, please comment on why not.

The criterion in 7.3(c) is required in the annual report (5.3(c)) and could be met by an ECNZ-licensed C&D waste recovery service(s). These criteria are included here to ensure that the measurements and diversion rates of all projects are recorded, even if the licence-holder does not involve an ECNZ-licensed C&D waste recovery service provider. The Trust proposes these criteria to ensure transparency, and that all C&D waste is accounted for. The information required in the annual report is also intended to inform future revisions of this specification.

Q40. Do you agree with the requirement to provide the measurements and diversion rates of all C&D waste generated under the licensed-service? If not, please comment on why not.

8 Module 3: Demolition waste generators

For a Demolition Waste Generator to hold an Environmental Choice licence for a project, all criteria in Section 5 and Section 8 must be met. Some requirements of Section 8 may be met by engaging Environmental Choice licensed Waste Recovery Service Providers.

8.1 Planning

Criteria

a The WMP prepared under 5.1(b) must include a target of more than 50% of C&D waste materials to be salvaged for reuse.

b The WMP prepared under 5.1(b) must have a documented procedure for how the *waste priority hierarchy* will be implemented:

c The licence holder must plan to maintain the quality and protect the value of salvaged materials stored for collection.

d The licence holder must agree to a project-specific collection plan for the segregation and collection of demolition waste in collaboration with the waste recovery service provider.

Explanation

For 8.1(b), the *waste priority hierarchy* means the preference for maintaining the value of demolition waste, by prioritising as follows (highest to lowerst priority): *relocate for reuse* → *salvage for reuse* → *salvage for recycle* → *salvage for energy* → *dispose*. "Salvage for reuse" includes, for example, doors, windows, weatherboards, flooring. "Salvage for recycling" includes, for example, framing for re-processing, concrete for aggregate.

For 8.1(c), systems may include, for example, covered bins or segregation areas, training of relevant people, regular visual inspections, containers and sheltered areas provided for materials.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by:

- a copy of the WMP, that states the required target of 50% salvage rate from demolition waste materials. The BRANZ REBRI online guidelines provide good-practice advice on planning for deconstruction, including developing a deconstruction plan that aims to maximise resourse recovery[29]
- a copy of the documented procedure that priorisies the relocation of demolition waste.
- evidence of systems in place to protect the quality of demolition waste materials, for example: marked-up site plans, or procurement receipts of bins or containers. The BRANZ REBRI online guidelines provide good-practice advice on waste separation and storage onsite[30]
- evidence of the plan agreed upon with the waste recovery service provider, for example; requirements included in contract documents, and/or a copy of the agreed responsibilities and the service schedule.

[29] BRANZ, 2014, Deconstruction plan - https://www.branz.co.nz/cms_display.php?sn=106&st=1&pg=12649#decplan
[30] BRANZ, 2014, Waste Separation and Storage - https://www.branz.co.nz/cms_display.php?st=1&sn=107&pg=12656

Notes & Questions

In the long term, design for deconstruction is a key solution to reducing waste at the end of a building's life[31]. However in the shorter term, reducing building waste can be achieved by focusing on deconstruction rather than demolition. The *waste priority hierarchy* is proposed for this specification to define the order of preference for C&D waste management options: relocation > recover or salvage for reuse > recycle > recover energy > dispose. The hierarchy sets out the most favoured option, relocation, to the least favoured option, disposal.

Relocation maximises material and resource recovery. Deconstruction & salvaging waste materials is for reuse of the material in the same physical form. Recycling is a conversion of the material into another form or object with value. Energy recovery is converting the material into energy. Disposal is when the material cannot be reused or recovered in any way, and therefore is sent to a landfill or alternative end of life facility. The ability to salvage materials from buildings being demolished can be limited by contamination and/or the presence of hazardous.

Q41. Do you agree with the requirement for a documented procedure that demonstrates the *waste priority hierarchy* is implemented? If not, please comment on why not, and what you would propose as an alternative.

The 50% salvage rate of demolition waste from landfill has been set following preliminary consultation and feedback from the C&D waste industry. That feedback suggested that higher salvage rates are not yet possible in New Zealand. The Trust seeks further input on this proposed target during the notification period. In particular, what is the threshold that is achieveable by some but not by all (differentiates good practice). This will be reviewed in future revisions of the specification, as market capacity, technology, and industry capability matures.

Q42. Is 50% the right threshold to differentiate good performance? Achievable, but not achievable by all? If not, please comment the percentage you think it should be, and explain why.

Safe storage of salvaged materials prior to collection helps preserve the value of the materials, creating more opportunities for future reuse, recycling, or collection. If the waste material is damaged or contaminated, it may need to be disposed to landfill, rather than being effectively reused. Preliminary feedback to the Trust showed that salvage opportunities are often severely limited by programme constraints, which are most effectively reduced by good forward planning.

Q43. Do you agree that maintaining the quality and protecting the value of salvaged demolition waste materials stored for collection should be part of the WMP? If not, please comment on why not.

The Trust has proposed the requirement of a site-specific collection plan to encourage effective communication between the waste generator and the recovery service. Early engagement and planning are the best ways to ensure that maximum material volumes are recovered. For demolition projects, by identifying everything that is able to be salvaged and communicating this to the team who will be deconstructing, maximises the material that can be salavaged (diverted from landfill).

Q44. Do you agree with the requirement for a project-specific collection plan? If not, please comment on why not.

[31] BRANZ, 2014, Waste Reduction – Demolition guide
https://www.branz.co.nz/cms_show_download.php?id=e5e1e163144a4334a1b2002c8e37710bbe62ab1f

8.2 Practice

Criteria

a The licence holder must ensure that bins and segregation areas on the project site have clear, effective signage.

b The licence holder must ensure salvaged demolition waste materials are protected on site to preserve integrity and quality for reuse or recycling.

Explanation

8.2(a) could be met by using ECNZ-licensed C&D waste recovery services.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by:

- evidence of the segregation system signage in action onsite, for example: photos of segregation system signage (e.g. bin labelling) during use. The BRANZ REBRI online guidelines provide good-practice advice on waste collection labelling[32].

Notes & Questions

Safe storage of recovered materials helps preserve their value. There is potential for hazardous substances to be present in demolition waste. Safe storage to reduce contamination requires the segregation of waste material types. If the segregation systems in place are clearly labelled and easy to understand, people are more likely to use them correctly, and therefore maximise effective waste material recovery. The BRANZ REBRI guidelines provide good-practice advice on waste material collection system labelling, encouraging the use of clear signage. The Trust proposes these criteria to require the protection of demolition waste material, and ultimately to reduce the amount of material sent to landfill.

Q45. Do you agree with the requirement to ensure bins and segregation areas have effective signage? If not, please comment on why not.

Q46. Do you agree with the requirement to ensure demolition waste materials are protected on site? If not, please comment on why not.

[32] BRANZ, 2014, Waste Separation and Storage - https://www.branz.co.nz/cms_display.php?sn=107&st=1&pg=12656#label

8.3 Demonstrated waste diversion

Criteria

For every project completed as part of the ECNZ-licensed service, the licence holder must:

a demonstrate it has achieved the salvage rate target set in the WMP in 8.1(a).

b measure and document all demolition waste generated.

c document and report the salvage rate achieved.

d ensure that all concrete demolition waste is reused.

Explanation

The criteria in 8.3(b) and 8.3(c) could be met by using ECNZ-licensed C&D waste recovery services that meet all requirements of Module 1. The Demolition Waste Generator licence holder must demonstrate that all waste is accounted for, which may require information from more than one waste recovery service provider.

Concrete demolition waste that is contaminated (for example, with asbestos) is excluded from 8.3(d).

Annual reporting for these criteria is required by 5.3(c). Only one, combined annual report is required.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant company. This statement shall be supported by:

- evidence that the salvage rate was met for all projects completed under the licence
- the final measurements and record of all demolition waste generated by the licensed-service, including: the waste material salvaged, the waste sent to landfill, and the corresponding actual diversion rates
- evidence showing that all concrete waste generated was reused, including: the concrete accounted for in the WMP waste material inventory, the documented amount of concrete sold on for reuse, and evidence of the sale of concrete for reuse.

Notes & Questions

The transparency of a C&D waste service, and the corresponding confidence in their C&D waste management practices, were identified as key issues following preliminary consultation and feedback from the C&D waste industry. The criterion 8.3(a) has been set to require all licensed-sevices to meet a minimum salvage rate. The Trust proposes the requirement to demonstrate that the required salvage rate is met for all projects under the ECNZ-licensedservice to ensure transparency, and provide verification to the Trust that the Demolition Waste Generator is consistently achieving the salvage rate. This information will also help inform future revisions of this specification, and allow the Trust to understand how the C&D waste industry capability is changing.

Q47. Do you agree with the requirement to provide evidence of the salvage rate for each project using the licensed-service? If not, please comment on why not.

Reporting on the criteria in 8.3(c) is required in the annual report (5.3(c)) and could be met by an ECNZ-licensed C&D waste recovery service(s). Criteria 8.3(b) and 8.3(c) are to ensure that the measurements and salvage rates of all licensed-service projects are recorded, even if the licence-holder does not involve an ECNZ-licensed C&D waste recovery service. The Trust proposes these criteria to ensure transparency, and that all demolition waste is accounted for. The information required in the annual report is also intended to inform future revisions of this specification.

Q48. Do you agree with the requirement to provide the measurements and salvage rates of all waste generated under the licensed-service? If not, please comment on why not.

Crushed concrete can be readily reused within New Zealand as drainage material or aggregate[33]. Crushed concrete aggregate can be used in many applications where natural aggregate is used[34]. The Specification for Basecourse Aggregate 18 (TNZ M/4:2006) issued by New Zealand Transport Agency (NZTA), was amended in 2005 and 2006 to provide for use of recycled crushed concrete (RCC) and aggregate/reclaimed glass blended basecourse for use on state highways and other heavily trafficked roadways.

Preliminary feedback received by the Trust is that reuse of all demolition concrete is achievable throughtout New Zealand, and differentiates good practice.

Q49. Do you agree with the requirement that all concrete demolition waste must be reused? If not, please comment on why not.

[33] ATLAS Concrete, 2018, Recycled concrete - https://atlasconcrete.co.nz/quarry-products/crushed-concrete-recycled-concrete/

[34] BRANZ, 2014, What Materials Can Be Recycled - https://www.branz.co.nz/cms_display.php?st=1&sn=105&pg=12643

9 Requirements and notes for licence holders

Monitoring Compliance

Prior to granting a licence, the Trust will prepare a plan for monitoring ongoing compliance with these requirements. This plan will reflect the number and type of services covered by the licence and the level of sampling appropriate to provide confidence in ongoing compliance with criteria. This plan will be discussed with the licence applicant and when agreed will be a condition of the licence.

As part of the plan, the Trust will require access to relevant quality control and service delivery records and the right of access to service facilities. Relevant records may include formal quality management or environmental management system documentation (for example, ISO 9001 or ISO 14001 or similar).

The monitoring plan will require the licence holder to advise the Trust immediately of any non-compliance with any requirements of this specification which may occur during the term of the licence. If a non-compliance occurs, the licence may be suspended or terminated as stipulated in the Licence Conditions. The licensee may appeal any such suspension.

The Trust will maintain the confidentiality of identified confidential information provided and accessed during verification and monitoring of licences.

Using the ECNZ Label

Wherever it appears, the Label must be accompanied by the words 'C&D Waste Services' and by the licence number eg 'licence No1234'.

The Label must be reproduced in accordance with the ECNZ programme's key line art for reproduction of the Label and the Licence Conditions.

Any advertising must conform to the relevant requirements in this specification, in the Licence Conditions and in the key line art.

Failure to meet these requirements for using the ECNZ Label and advertising could result in the Licence being withdrawn.