



The New Zealand Ecolabelling Trust

Proposed revised licence criteria for Plaster and plasterboard products

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Specification change history

Minor clarifications, corrections or technical changes made since the specification was last reviewed and issued in XXX.

Date	Version	Change

Draft

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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 and maximising the beneficial 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 – Type I environmental labelling – Principles and procedures" 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, (such as energy and waste) criteria may be set to require monitoring and reporting. These criteria are designed to generate information for future reviews of specifications.

[The Trust is pleased to publish this proposed revised specification for plaster and plasterboard products. The specification has been published to take account of substances and processes harmful to the environment, energy and waste management, packaging, appropriate use, and efficacy of the products.](#)

This [proposed revised specification](#) sets out the requirements that **plaster and plasterboard** products will be required to meet in order to be licensed to use the ECNZ Label. The requirements include environmental criteria and product characteristics. The specification also defines the testing and other means to be used to demonstrate and verify conformance with the environmental criteria and product characteristics.

This [proposed revised specification](#) has been prepared based on an overview level life cycle assessment, information from specifications for similar products from other GEN-member labelling programmes, relevant information from other ECNZ specifications, publicly available information, and information provided by current licensees.

Once finalised, this specification is 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.

ABOUT THIS PROPOSED REVISION:

The current EC-19-15 specification was last fully reviewed in 2013, with minor technical changes made in August 2015 to Clause 5.10 d) on cardboard packaging (5.13 d) in this version). The Trust is now proposing to expand the gypsum plasterboard product specification to include plaster products, including dry-bagged non-cement-based plasters, as well as wet-applied plaster products for decorative purposes.

A number of GEN-member eco-labels are considering including criteria on social issues in their eco-labelling specifications. GEN-members believe that environmentally preferable products should also be socially responsible. There are many social issues within the supply chain and product life cycle from raw material harvesting, to processing, and the end user. Social issues of concern during manufacturing of a typical product include fair pay, child labour, workers' rights and employer's responsibilities, community impacts, training, education, and health and safety. Emphasizing social aspects within the specification aligns ECNZ with the global trend of merging both environmentally and socially acceptable practice when developing and producing products within the market. Criteria in this specification are marked with  where they relate to a social issue, and with  where they relate to an environmental issue. Some criteria are marked with both a  and  which denotes the criteria cover both environmental and socially acceptable practices.

MAKING SUBMISSIONS:

The Trust invites comments from interested parties on this proposed revised specification. This proposed specification revision 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 requirements and proposed changes.

Where changes to the current requirements are proposed in this specification, they are shown as either ~~red strikeout~~ (for text proposed to be deleted) or in red and underlined (for proposed new text).

This proposed specification has been prepared based on an overview level life cycle assessment, information from specifications for similar products from other GEN-member labelling programmes, relevant information from other ECNZ specifications and information made available by some current licensees.

The Trust is keen to receive comments about:

- any other information that may be relevant;
- how applicable and relevant the information and requirements included in the proposed revised specification are to differentiate environmentally preferable plaster and plasterboard products in the New Zealand market; and
- how achievable and practical the requirements are, including the requirements for testing (including test methods) and verification.

2 Background

Notes:

The background text below is from EC-19-15 *gypsum plasterboard products*. A revised background will be included in the final specification. It will contain relevant background information for the inclusion of plaster products covered by this specification.

The raw gypsum is imported from mines in Australia and transported by boat to New Zealand. Plasterboard is also imported as finished product from Australia and Asia for sale in the New Zealand market.

The top five producers of gypsum are Iran, China, Thailand, the US and Spain. Gypsum extraction is usually via open cast mines. The rate at which natural gypsum reserves are exploited in Europe and North America is slowing due to the rise in consumption of synthetic gypsum¹.

Synthetic gypsum are generally waste/by-products from other industries such as flue gas desulphurisation (FGD) gypsum (from coal fired power plants), phosphogypsum (from phosphoric acid production for fertiliser and detergents), titanogypsum (from titanium dioxide pigment production), fluorogypsum (from production of hydrofluoric acid) and citrogypsum (from production of citric acid for the food, pharmaceutical and detergent industries). Approximately 45 % of the gypsum used by US manufacturers in 2010 was synthetic varieties and FGD gypsum provided approximately 44 % of the gypsum used by the European plaster industry in 2007³.

FGD gypsum has a higher purity (gypsum content of 90%) than most natural gypsum (80%)⁴. This means that lower quality natural gypsum can be blended with higher purity FGD gypsum, allowing material that would not have been mined in the past to be classified as exploitable reserves⁶. Change in energy policies, such as an increase in use in low-sulphur coal, renewable power sources or gas, has the potential to increase supplies of FGD gypsum⁵. Titanogypsum is actually produced in greater quantities than FGD gypsum⁵, however, the use of phosphogypsum is limited in the plasterboard industry as it contains undesirable impurities, a different gypsum crystal shape, fluctuating quality and may have high levels of natural radioactivity from the phosphoric rock. Titanogypsum comes from the sulphate process of titanium dioxide production but only about half of gypsum produced is "white gypsum" which can be used to produce gypsum plasterboard. Citrogypsum is inherently very impure and requires further processing to be used by the gypsum industry. Although no significant quantities of useable synthetic gypsum are produced in New Zealand, some of these synthetic gypsums may be present in plasterboards manufactured overseas and imported and sold in New Zealand.

The European Commission Green Public Procurement criteria for Wall Panels⁶ states that the key impacts of wall panels arise from the energy consumed during manufacture, natural resource consumption, and disposal impacts when products reach the end of their useful lives, as well as

¹ http://eurogypsum.org/_Uploads/dbsAttachedFiles/livingwithgypsum.pdf

² <http://www.gypsumsustainability.org/recycled.html>

³ Green Public Procurement – Wall Panels Technical Background Report, European Commission, June 2010.

⁴ http://eurogypsum.org/_Uploads/dbsAttachedFiles/whatisgypsum.pdf

⁵ Plasterboard Sustainability Action Plan, DEFRA, October 2010.

⁶ http://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm

waste arising during installation. It concludes that the area with the largest opportunity for an impact is waste management: minimisation, recycling and diversion from landfill. Recycling used gypsum plasterboard waste for the manufacture of new products will reduce the amount of plasterboard entering the waste stream. It will also help conserve resources and reduce demand for virgin materials, in turn reducing impacts of mining and related processing.

Gypsum products are one of the few construction materials where “closed-loop” recycling is possible. The process of dehydrating, crushing, rehydrating and reforming gypsum can be repeated almost indefinitely, meaning waste product can be recycled into the same product instead of being downcycled, e.g. similar to waste concrete and bricks used for aggregate⁶. The association for European manufacturers of gypsum products (Eurogypsum) reports that increased recycling of gypsum product waste from construction sites is occurring in Europe, where it is crushed and re-introduced in a controlled blend to the plasterboard manufacturing processes. Only a small quantity of demolition waste plasterboard is currently recycled due to its contamination with other materials⁶. The Gypsum Association in the US and Canada similarly report an increase in recycling of construction waste⁴. Benefits of recycling waste plasterboard back into new plasterboard products should be weighed against impacts of transporting waste back to a plasterboard manufacturer, which may involve considerable distance.

Where recycling waste plasterboard back into production is not viable (e.g. transporting long distances from the waste generating site to the production factory), other alternative landfill should be considered. These may include application as a fertilizer or soil conditioner, or use in cement manufacture. Disposal in compost can cause a release of gypsum that has been painted or treated in some way during installation, or if not composting is not managed correctly, result in hydrogen sulphide being produced. This has the potential to lower the pH conditions in the compost and cause odour. Plasterboard containing FGD gypsum or fly ash fillers may contain high concentrations of heavy metals which also make it unsuitable for composting.

In New Zealand approximately 2.4% weight of all waste to landfills⁷ and 80 % of all waste to cleanfills is construction and demolition waste. Studies conducted in 2000, through the REBRI (“Resource Efficiency in Residential and Related Industry”) programme and Massey University, run by the Auckland Regional Council in association with the Building Research Association of New Zealand (BRANZ) have highlighted the viability of the sorting and reprocessing construction and demolition waste such as gypsum plasterboard. More recent trials to collect and recycle plasterboard construction and demolition waste in Christchurch⁸ have also had some success. The waste board was added to cement or used as a soil conditioner. However, landfilling is relatively inexpensive in New Zealand, so creating a widespread thriving plasterboard recycling business may prove challenging.

Life Cycle Assessment (LCA) studies in the UK⁹ and US¹⁰ highlight the environmental impacts of plasterboard due to energy used in the production process (from mining, through to manufacturing). Energy management requirements have been included in this specification to encourage energy efficiency and reduce overall energy use. Waste management initiatives during production and

⁷ <http://www.level.org.nz/material-use/minising-waste>

⁸ <http://www.wasteminz.org.nz/wp-content/uploads/Commercialising-waste-turning-waste-plasterboard-in-Christchurch-into-a-valuable-resource-paper.pdf>

⁹ Life Cycle Assessment of Plasterboard. Technical Report. WRAP, 2012

¹⁰ Life Cycle Assessment Summary. Gypsum Association, January 2013

installation will reduce impacts on landfills as well as reducing the overall energy needed to manufacture new boards.

Additives used to manufacture gypsum plasterboard may be hazardous to human health or the environment. These additives may include glass fibre and vermiculite to enhance fire resistance; foaming agents to decrease the density of the plaster; plastercisers to reduce drying time; wax emulsion or silicone to decrease water absorption of wet area boards; coal fly ash as a filler or reactant for wet area boards; boric acid to prevent the boards from over-drying during production; starch to promote bonding between the gypsum core and the paper liners; ground gypsum dehydrate as an accelerator to decrease drying time; and sugar to increase the potency of the accelerator.

Based on a review of currently available information, the product category will produce environmental benefits by reducing the amount of waste product entering the waste stream; minimising potential for contaminants in soil; reducing hazardous substances used; and promoting energy efficiency. As information and technology change, product category requirements will be reviewed, updated and possibly amended.

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3 Interpretation

 (Social Responsibility) means a criterion or sub-clause within the ECNZ specification which addresses a social concern.

 (Environmental Responsibility) means a criterion or sub-clause within the ECNZ specification which addresses an environmental concern.

AS/NZS means Australian/New Zealand Standard.

CFC means Chlorofluorocarbons.

Chemical Oxygen Demand (COD) means the mass concentration of oxygen equivalent to the amount of dichromate consumed by dissolved and suspended matter when a water sample is treated with that oxidant under defined conditions.

DID means Detergent Ingredient Database, developed by the EU and Nordic Swan ecolabelling authorities. Available from http://ec.europa.eu/environment/ecolabel/documents/did_list/didlist_part_a_en.pdf

Disposal means the final (or more than short-term, (i.e. > 6 months) deposit of waste into or onto land set apart for that purpose.

Diverted material means anything that is no longer required for its original purpose and which would normally be disposed of or discarded.

Energy management programme means a program to achieve and sustain efficient and effective use of energy including policies, practices, planning activities, responsibilities and resources that affect the organisation's performance for achieving the objectives and targets of the Energy Policy.

Fibre-reinforced Gypsum Board means a gypsum board composed of fibres dispersed through the panel.

Flue Gas Desulphurisation (FGD) gypsum is an alternative to natural gypsum that comes from the FDG plant of the power station industry. means gypsum from flue gas desulphurisation.

Gypsum means hydrous calcium sulphate (CaSO₄.2H₂O)

ISO means International Organisation for Standardisation.

Label means the ECNZ Label.

Plaster is a building material used for coating, protecting, and decorating internal walls and ceilings. The most common types of plaster are a composition of natural or synthetic materials such as lime, clay, gypsum or sand, that is applied over the top of structures such as plasterboard or concrete to form a smooth hard surface when dried¹¹. It can be purchased in a dry-bagged form which requires mixing with water, or in a pre-mixed form which can be directly applied to the interior wall.

Plasterboard means a gypsum-based core material sold in the form of sheets for the purpose of finishing the interior surfaces of walls prior to the application of paint, wallpaper, or other coating. It includes paper-faced, water-resistant, noise-resistant and fire-resistant and fibre-reinforced gypsum board.

¹¹<https://www.designingbuildings.co.uk/wiki/Plaster#:~:text=Plaster%20is%20a%20building%20material,cement%20with%20water%20and%20sand.>

Phosphogypsum means synthetic gypsum, which is a by-product of fertiliser manufacture and is produced from phosphate rock treated with sulphuric acid to produce phosphoric acid by the “wet process”, liberating sulphur oxides which are converted to gypsum.

Raw materials are the materials used to manufacture gypsum plasterboard or plaster products.

Readily biodegradable shall be as referred to in Directive 67/548/EEC, and its subsequent amendments, in particular the methods detailed in Annex V.C4, or their equivalent OECD test methods (No. 301 (A to F) in OECD Guidelines for the Testing of Chemicals, ISBN 92-64-1222144) or their equivalent ISO tests. The 10 days window principle shall not apply. The pass levels shall be 70 % for the tests referred to in Annex V.C4-A and C4-B of Directive 67/548/EEC (and their equivalent OECD 301 A and E tests and ISO equivalents), and shall be 60 % for tests C4-C, D, E and F (and their equivalent OECD 301 B, C, D and F tests and ISO equivalents).

Recycling means the reprocessing of waste or diverted material to produce new materials.

Recycled material includes:

- **Post-Consumer:** Material generated by households, or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose. This includes returns of material from the distribution chain; and
- **Pre-Consumer:** Material diverted from the waste stream during a manufacturing process. Excluded is re-utilisation of materials such as rework, or scrap generated in a process and capable of being reclaimed within the same process that generated it.

Reduction means lessening waste generation, including by using products more efficiently or by redesigning products; and in relation to a product, lessening waste generation in relation to the product.

Reuse means the further use of waste or diverted material in its existing form for the original purpose of the materials or products that constitute the waste or diverted material, or for a similar purpose.

SDS means Safety Data Sheet, formerly known as Material Safety Data Sheet (MSDS).

Sulphur (S) means gaseous emissions of sulphur to the atmosphere, such as sulphur dioxide and reduced sulphur compounds.

Suspended solids means undissolved material in water that contributes to a detectable level of turbidity.

Volatile Organic Compound (VOC) means any organic compound which has a vapour pressure more than 0.1 mm Hg at 25 °C. Organic compounds with a boiling point greater than 250 °C, measured at a standard pressure of 101.3 kPa, will not be considered to be a VOC.

Waste means anything disposed of or discarded; and includes a type of waste that is defined by its composition or source (for example, organic waste, electronic waste, or construction and demolition waste); and to avoid doubt, includes any component or element of diverted material, if the component or element is disposed of or discarded.

Waste management programme means a programme to achieve and sustain efficient and effective minimisation and disposal of waste including policies, practices, planning activities, responsibilities

and resources that affect the organisation's performance for achieving the objectives and targets of the Waste Policy.

Notes and questions:

The Trust has added definitions for the two new symbols used throughout the text which indicate whether a criterion addresses a social or an environmental concern.

The Trust has added a definition for plaster, as plaster products are now included in this proposed revised specification.

The Trust has added a definition for volatile organic compounds (VOC), as this is a common air pollutant associated with building construction materials including plasterboard and plaster products. They are found in everything from paints and glues to furniture products and are a common air pollutant. At low levels, their short-term human health effects can include headaches and breathing problems. Longer-term effects can include asthma through to cancer. This definition is consistent with the definition for VOCs used in other ECNZ-specifications.

Q1) Do you agree with the proposed wording for the new definition for plaster? If not, please comment on why not, and what you would propose as an alternative approach, if any.

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4 Category definition

This category includes the following products:

- [Interior plaster products; and](#)
- Plasterboard products whose raw material includes at least 70 % by weight of natural or synthetic gypsum. This includes paper-faced, water-resistant, noise-resistant, fire-resistant and fibre-reinforced gypsum plasterboard.

The following products are excluded from this category:

- Vinyl-faced gypsum boards; and
- [Cement-based plaster and surface coating materials composed of mainly cementing materials and fine sand. These are included under EC-43-18 Concrete: Ready Mixed Concrete, Pre-Cast Concrete, Concrete Products, Dry Bagged Mortars and Dry Bagged Plasters specification.](#)

To be licensed to use the Label, [the plaster](#) or [gypsum](#) plasterboard product must meet all of the environmental criteria set out in clause 5 and product characteristics set out in clause 6.

Notes and questions

All ECNZ specifications are reviewed every five years and during this update, the Trust considers it timely to expand the category definition of EC-19 to include both gypsum plasterboard products and interior plaster.

In the past, ECNZ had developed an Interior Lining Boards specification (EC-46-10), which was later incorporated into the current Furniture, Fittings and Flooring specification (EC-32-17) with gypsum plasterboards remaining separate. Since then, it has become apparent that the environmental issues faced by other interior plaster products are similar to those relevant to gypsum plasterboard, and as such it is logical to expand this specification to provide for a broader range of plaster products.

The Trust considers the most relevant environmental issues of concern to plaster and plasterboard products are associated with hazardous substances, in particular:

- the use of potentially harmful additives;
- volatile organic compounds; and
- human health impacts of lime.

The expanded scope for plaster products includes those products which are applied over the top of materials such as plasterboard or concrete to provide a decorative finish, using components such as sand, lime and clay. Plaster products may include pre-mixed plaster and dry-bagged plaster for interior use.

Q2) Do you agree that it is appropriate to expand the category definition? If not, please explain why, and what alternatives you would propose?

5 Environmental criteria

5.1 Legal requirements

Criteria

~~The product must comply with the provisions of all relevant environmental laws and regulations that are applicable during the product's life cycle.~~

- a The licence applicant/holder must demonstrate how applicable environmental legal requirements are met, including that all necessary consents and permits are in place; and
- b Where the licence holder is not the manufacturer of the plaster or plasterboard product(s), the licence holder must have a documented requirement for the manufacturer(s) to manage its compliance with applicable environmental regulatory requirements (for example, via supply contract conditions).

Verification required

Conformance with this requirement shall be demonstrated by providing a written statement on regulatory compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by current documentation:

- Identifying the applicable regulatory requirements including specific obligations arising from permits, regulations, and plan rules;
- Demonstrating how compliance is monitored and maintained; and
- Copies of wording from supply contract conditions or other documented requirements for contract manufacturers (if applicable).

In cases where there is a high potential risk associated with environmental regulatory compliance and limited assurance provided by the licence applicant/holder's supplier regulatory compliance management programme, The Trust's assessor may require an on-site inspection at the relevant supplier's premises.

Verification of continued compliance with legal requirements will form part of the Licence Supervision Plan.

Explanatory notes

Relevant laws and regulations applicable to the facilities that are manufacturing the ECNZ-licensed product and the licence holder's distribution and sales operations, could, for example, include those that relate to:

- Producing, sourcing, transporting, handling and storing raw materials and components for manufacture;
- Manufacturing processes;
- Handling, transporting, and disposing of waste products arising from manufacturing;
- Transporting product within and between countries; and
- Using and disposing of the product.

The documentation required may include, as appropriate:

- Procedures for approving and monitoring suppliers and supplies; and
- Information provided to customers and contractors regarding regulatory requirements.

Assurance and/ or information that applicants/ licence holders may require from their suppliers could include:

- Evidence of a formal certified environmental management system (for example an ISO 14001 certificate) and supporting records on regulatory compliance (for example, copies of regulatory requirements registers, procedures to manage regulatory compliance, monitoring and evaluation reports on regulatory compliance, internal or external audits covering regulatory compliance and management review records covering regulatory compliance);
- Copies of published environmental, sustainability and/or annual reports expressly addressing environmental regulatory compliance (for example verified Environmental Statements prepared under the European EMAS regulations);
- Audit reports completed by independent and competent auditors addressing regulatory compliance (for example, reports for other eco-label licences or reports from regulator audits); and
- Participation by the supplier in the licence applicants/holders own supplier audit programme.

It is not intended to require licence holders to accept increased legal responsibility or liability for actions that are outside their control. The Trust's intention is to ensure any potential for environmental regulatory non-compliance associated with an ECNZ labelled product is managed to a level that minimises risk of reputation damage to the ECNZ label and programme.

Note:

The above changes on legal requirements are common to all ECNZ specifications which have been recently revised. It sets an expectation that the licence holder and manufacturer (if different) are managing their compliance with applicable environmental legal requirements.

5.2 **Product information required**

Licence applicants/holders must provide the following information as part of the assessment process:

- Supply chain information including components or processes, suppliers and geographical origin (see Table A1 in Appendix A); and
- Additives and hazardous substances used in the production of the product (see Table A2 in Appendix A).

Licence holders must maintain this information, and notify ECNZ if it changes.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. The statement shall be supported by completed Tables A1 and A2.

Notes

This is a standard clause in all recent ECNZ specifications. It helps to clarify the supply chain associated with each ECNZ-licensed product and ensure that any changes to the supply chain, process or hazardous substances used are verified to confirm they comply with the requirements of EC-19.

5.3 Modern slavery and social accountability 🧑🏻‍🤝‍🧑🏻

Criteria

- a The applicant/licence holder and manufacturer must have a policy/policies on human rights, diversity & inclusion, and anti-bullying. At a minimum, it should comprise:
- An explicit commitment to respect all internationally recognized human rights standards – understood, at a minimum, as the International Bill of Rights and the International Labour Organization (ILO) Declaration on the Fundamental Principles (see below) and Rights at Work;
 - Stipulations concerning the company's expectations of personnel, business partners and other relevant parties e.g. a code of conduct; and
 - Information on how the company will implement its commitment and monitor compliance with it.
- b Where a licence holder/applicant and manufacturer has found instances of modern slavery in their business operations and or supply chains in the past two years, there shall be evidence of corrective action.
- c In addition to the above, the licence holder/applicant and manufacturer shall consider:
- Providing information to confirm whether the requirements of Social Accountability International Standard, SA8000 have been considered;
 - Being a Living Wage employer (or equivalent); and
 - Having a senior member of its organisation responsible for social and environmental sustainability.

Note: From ILO Declaration on the Fundamental Principles and Rights at Work, there are the following core labour standards:

- Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87);
- Right to Organise and Collective Bargaining Convention, 1949 (No. 98);
- Forced Labour Convention, 1930 (No. 29);
- Abolition of Forced Labour Convention, 1957 (No. 105);
- Minimum Age Convention, 1973 (No. 138);
- Worst Forms of Child Labour Convention, 1999 (No. 182);
- Equal Remuneration Convention, 1951 (No. 100); and
- Discrimination (Employment and Occupation) Convention, 1958 (No. 111).

Verification required

Conformance with this requirement shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be accompanied by documentation that:

- Copies of the relevant policies, procedures and plans; and
- Records demonstrating the plans are being effectively implemented (including monitoring results).

Notes and questions

Human rights are relevant to all businesses, regardless of size, sector or country operation, and may include:

- Social cultural and economic rights, such as the right to participate in cultural activities, the right to food, the right to clean drinking water and sanitation, and the right to education.
- Labour rights, such as the right to freedom of association and effective recognition of the right to collective bargaining, and freedom from forced labour, child labour and discrimination.
- Civil and political rights, such as the right to life and liberty, freedom of expression and equality before the law.

New Zealand joined the International Labour Organisation (ILO) in 1919 (as a founding member) and as a member of the ILO, New Zealand is required to report on its application of ILO Conventions.

In 1998 the ILO Declaration on Fundamental Principles and Rights at Work was adopted and highlights a set of core labour principles endorsed by the international community. The Declaration covers four main areas for the establishment of a social 'floor' in the world of work:

- freedom of association and the effective recognition of the right to collective bargaining;
- the elimination of all forms of forced or compulsory labour;
- the effective abolition of child labour and;
- the elimination of discrimination in respect of employment and occupation.

From the above core labour principles, ILO Conventions has identified core labour standards (listed in the note above).

The Trust considers it now timely and appropriate for the licence applicant/holder and manufacturer to comply with the above core labour standards as human rights are the basic rights and freedoms to which all humans are entitled.

The Trust proposes to encourage the use of the SA8000 Standard and Certification System as it provides a framework for organizations of all types, in any industry, and in any country to conduct business in a way that is fair and decent for workers and to demonstrate their adherence to the highest social standards, and is freely available for download from Social Accountability International (SAI). Elements of the standard include: child labour, forced or compulsory labour,

health and safety, freedom of association & right to collective bargaining, discrimination, disciplinary practices, working hours, remuneration, and management system¹².

Q3) Do you agree with the proposal to require licence holders/applicants and manufacturer to have a policy on human rights, diversity & inclusion and anti-bullying and to have requirements for dealing with modern slavery and social accountability?

5.4 **Raw materials**

5.4.1 Synthetic gypsum **materials** and fillers 🌍

Criteria

- a Gypsum plasterboard shall not be formulated or manufactured with Phosphogypsum;
- b Licence holders must disclose to The Trust on the synthetic gypsum or fillers used, including:
 - Percentage and type of synthetic gypsum or fillers used in specific product/ batches or contracts; and
 - Results of any chemical analysis for contaminants undertaken on any synthetic gypsum or filler material used, or determined to be inappropriate.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation, including an annual report to The Trust which covers the requirements for synthetic gypsum and fillers.

Licence applicants must provide the following information to The Trust at the time of making an application. Licence holders must maintain and update this information and advise The Trust about any changes to this information.

- component and process supplier information (see Table 1 in Appendix A); and
- substances and hazardous materials used in the production of the product (see Table 2 in Appendix A).

5.4.2 Natural **gypsum materials** and fillers 🌍 👤

Criteria

- a Virgin mined materials must come from mining operations with documented mine remediation programmes;
- b The applicant/licence holder must ensure that natural raw materials do not come from environments that are protected for biological and/or social reasons;
- c Mines from which materials are obtained for an ECNZ-licensed product must have and implement management plans including any policies and management procedures to minimise adverse effects from the following potential impacts:
 - Noise;
 - Vibration;
 - Dust; ~~and~~

¹² <https://sa-intl.org/programs/sa8000/>

- Discharges to surface water, groundwater, oceans or land; [and](#)
- [Biodiversity loss.](#)

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation, including:

- Information about the natural [gypsum materials](#) and fillers procurement programme and records of the supplier, nature and geographical source of all natural [gypsum materials](#) and filler inputs;
- Certificates or other evidence of a documented mine remediation programme;
- Description of the raw material procurement management systems in place to ensure that the requirement in b) and c) are consistently met;
- Copies of the relevant management plans required by c); and
- Records demonstrating the management plans are being effectively implemented (including monitoring results).

5.4.3 Heavy metals

Criteria

The raw materials must contain less than the following amounts of heavy metals:

– Arsenic	17 mg/kg
– Inorganic lead	160 mg/kg*
– Cadmium	0.8 mg/kg
– Inorganic mercury	200 mg/kg**
– Chrome (III)	290 mg/kg

* This limit is for inorganic lead and does not apply to elemental (pure) lead.

** This limit is for inorganic mercury and does not apply to elemental (pure) mercury.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation, including test results for heavy metals in raw materials.

Test methods for heavy metals

Metals should be extracted from an air dried sample in accordance with US-EPA Method 200.2 for “Total Recoverable Metals”. The extracted metals should be analysed by ICP-MS (Inductively Coupled Plasma Mass Spectroscopy).

Notes and questions:

The heavy metals limits in clause 5.4.3 have not been altered, as the Ministry for the Environment Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health (2011) has not changed since the last revision of EC-19-15. As this is a National Standard, the Trust expects that all materials used in plaster and plasterboard products will not exceed these limits.

Q4) Do you agree with the decision for the inclusion of heavy metals testing to remain, and do you agree with the limits proposed?

5.5 Paper in plasterboard

Criteria

- a The paper must be made from 100 % recycled paper with a minimum of 80 % post-consumer recycled content, when calculated on a 12-month rolling basis;
- b The paper shall not be bleached for reuse. It is accepted that the paper may have been bleached during its previous lifecycle;
- c Where surfactants are used for de-inking recycled paper input, these surfactants shall be readily biodegradable;
- d Foam inhibitors used in manufacturing processes must meet at least one of the options below:
 - No use is allowed of foam inhibitors that are classified as ecotoxic; or
 - 95 % by weight of the constituent substances that have a foam inhibiting or retarding effect must be either readily or ultimately biodegradable.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation:

- Demonstrating the paper is recycled, and the amount of pre- and post-consumer recycled content;
- Safety Data Sheets (SDS), test reports or information from the DID list to demonstrate biodegradability of any surfactants or foam inhibitors used;
- SDS for foam inhibitors to demonstrate compliance with the ecotoxicity criterion, if applicable. Compliance with the requirement for ecotoxicity may be demonstrated by providing data (often included in SDS) indicating that the substance does not have any of the classifications (or combinations thereof) listed in Appendix B for ecotoxins; and
- Describing management systems in place to ensure that these requirements are consistently met.

Notes and questions:

Clause 5.5 has remained unaltered from the previous revision of EC-19-15, and this is similar to other recently updated specifications.

Q5) Do you agree with the recycled content requirements for paper set in clause 5.5? If not, please provide an alternative.

5.6 Hazardous substances

Trace levels (<0.1 % by weight) of substances, reported in SDS to be potentially present as contaminants or impurities in raw materials or additives, are exempt from Clause 5.6.

Criteria

- a Substances which are classified as acutely toxic, ecotoxic, respiratory sensitiser, carcinogenic, mutagenic or toxic to reproduction in accordance with Appendix B shall not be added to the gypsum plaster or plasterboard product or used during the production process.
- Boric acid is exempt from this requirement as it is specifically addressed in b) below.
 - Foaming agents are exempt from the ecotoxicity requirements as they are specifically addressed in c) below.

Note: Under the Globally Harmonised System (GHS) classifications, this clause will preclude the use of certain phthalates/ plastercisers including DEHP, DBP and DPP, and may preclude the use of fly ash.

Note: The use of raw materials containing crystalline silica is exempt from the requirements in a). Crystalline silica is addressed in clause 5.7.2.

- b If boric acid is a component of the product, then licence holders must have and implement an ongoing programme to review options to replace boric acid in licensed products and report annually to The Trust on the progress of the programme.
- c Foaming agents used in manufacturing processes must meet either option below:
- No use is allowed of foaming agents that are classified as ecotoxic; or
 - 95 % by weight of the constituent substances that have a foam inhibiting or retarding effect must be either readily or ultimately biodegradable.
- d CFC/halogens must not be used in the production of the gypsum plaster or plasterboard or the raw materials.
- e Solvents used to clean the production equipment must not contain halogenated hydrocarbons.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation, including:

- Identifying hazardous substances used in materials and production processes (including CAS numbers and Safety Data Sheets (SDS), where available);
- Identifying the classifications that apply to these substances, confirming all meet criteria a). Compliance with the requirements in a) may be demonstrated by providing data indicating that the substance does not have any of the classifications (or combinations thereof) listed in Appendix B for toxins, exotoxins, respiratory sensitisers, carcinogens, mutagens and reproductive toxins;
- Annual report to The Trust on replacement on boric acid;
- SDS for foam inhibitors to demonstrate compliance with the ecotoxicity criterion, if applicable. Compliance with the requirement for ecotoxicity may be demonstrated by providing data

(often included in SDS) indicating that the substance does not have any of the classifications (or combinations thereof) listed in Appendix B for ecotoxins; and

- Describing management systems in place to ensure that these requirements are consistently met.

Explanatory notes

Proof of Biodegradability

Biodegradability may be demonstrated using one of the following methods:

- Information on Safety Data Sheets; and
- Results of relevant tests (if test reports are provided, they must be from a laboratory competent to carry out the relevant test methods).

~~DID-list~~

~~A copy of the EU Detergent Ingredient Database (DID-List) can be found at http://ec.europa.eu/environment/ecolabel/documents/did_list/didlist_part_a_en.pdf or can be obtained on request from The Trust. Substances with an “R” in the “Aerobic” column are readily biodegradable according to OECD guidelines. Substances with an “I” or “P” in the “Aerobic” column are not readily biodegradable and shall not be used. For substances with an “O” in the “Aerobic” column, biodegradability has not been determined and additional information or testing may be required.~~

Testing methods

The following test methods, or equivalents, shall be used. If equivalent tests are to be used, The Trust may require details of the methods and validation. Test methods for readily biodegradable shall be as referred to in Directive 67/548/EEC, and its subsequent amendments, in particular the methods detailed in Annex V.C4, or their equivalent OECD test methods (No. 301 (A to F) in OECD Guidelines for the Testing of Chemicals, ISBN 92-64-1222144) or their equivalent ISO tests. The 10 days window principle shall not apply. The pass levels shall be 70 % for the tests referred to in Annex V.C4-A and C4-B of Directive 67/548/EEC (and their equivalent OECD 301 A and E tests and ISO equivalents), and shall be 60 % for tests C4-C, D, E and F (and their equivalent OECD 301 B, C, D and F tests and ISO equivalents).

Notes and questions:

In previous revisions of EC-19, boric acid has been exempt from the hazardous classifications in clause 5.6 a), as it is commonly used to prevent plasterboard from over-drying. The Trust is interested to know if there are substitutes to boric acid which do not contain hazardous substances which may be readily available for use.

- Q6) Are alternatives to boric acid readily available? If yes, please provide information.**
- Q7) Should any other substances (apart from boric acid and foaming agents) be exempt from the proposed criteria for toxins, exotoxins, respiratory sensitisers, carcinogens, mutagens or reproductive toxins? If yes, please state which substances should be exempt and why.**

Clause 5.6 c) and d) ban the use of halogens in plaster and plasterboard production or halogenated hydrocarbons in solvents to clean production equipment. The GECA specification has a similar requirement to prevent its use.

Q8) Are the requirements on CFCs /halogens and halogenated hydrocarbon solvents in parts c) and d) of clause 5.6 still applicable? If not, please comment on why not and what you would suggest as alternative or additional requirements, if any.

Q9) Are there any other hazardous substances in plaster or plasterboard production for which criteria should be set in this proposed revised specification? If yes, please provide details of the substances, the hazards associated with it, and what you consider appropriate control measures to be.

Appendix B has been updated to reflect the adoption by New Zealand of the seventh revised edition of the Globally Harmonised System (GHS 7). GHS 7 took effect in New Zealand on 30 April 2021 and replaced the HSNO classification system.

Explanatory notes have been updated to be consistent with other specifications.

5.7 Manufacturing process

The criteria below apply to the manufacture of the [gypsum plaster or plasterboard products](#). The manufacture of paper components or additives is not included in the criteria below.

5.7.1 Discharges to air and water

Criteria

- a Effective measures must be in place to control:
- Emissions to air from the manufacturing process including emissions of dust **and**;
 - For [gypsum-based products](#): emissions to air of sulphur dioxide; and
 - Discharges to air shall be demonstrated to result in an acceptable and environmentally sustainable level of impact on the quality of the receiving environment.
- b Effective measures must be in place to control:
- Discharges to water including suspended solids and COD; and
 - Discharges of contaminants to the natural environment (natural water bodies, ocean or land) shall be demonstrated to result in an acceptable and environmentally sustainable level of impact on the quality of the receiving environment.
- c ~~If crystalline silica is a component of the product: Effective measures must be in place to control exposure of workers to crystalline silica; and exposure to crystalline silica shall be demonstrated to result in an acceptable level of impact on human health. Licence holders must:~~
- ~~— Develop, document and implement an ongoing continual improvement programme to reduce crystalline silica and impacts resulting from exposure to crystalline silica in the workplace; and~~
 - ~~— Provide an annual report to The Trust on the continual improvement programme and its implementation in the production facility where the ECNZ-licensed [plaster and plasterboard products](#) are manufactured.~~

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation, including:

- For parts a) and b), an independent assessment of quality of discharges to air, water and land, and impacts on the receiving environment is to be completed by a person or agency competent to complete such an assessment. An assessment of environmental effects and other supporting information lodged in support of a resource consent application would be deemed to meet this requirement; and
- For discharges to water, the assessment may be based on the quality of discharges from the point at which the discharges from the site or any relevant combined or municipal waste collection and treatment system discharges to the natural environment; or from the plant in situations where the plant discharge is mixed with other organisations' waste streams and the combined waste stream is treated before it is discharged to the natural environment, is outside the control of the plant or licence applicant, and suitable information is not available on the quality of the combined discharge.
- ~~For part c), test results of workplace exposure: These should include results for average and maximum exposure over an eight-hour working day. In New Zealand, exposure of crystalline silica must meet the Workplace Exposure Standard Time-Weighted Average (WES-TWA) for cristobalite crystalline silica as respirable dust of 0.1 mg/m³ and quartz crystalline silica as respirable dust of 0.2 mg/m³. An annual report on the crystalline silica continual improvement programme is to be provided.~~

Notes:

Clause 5.7 c) has been removed to create a new clause, 5.7.2 below on crystalline silica.

5.7.2 Crystalline Silica

Criteria

- a The applicant/ licence holder must have and effectively implement a purchasing policy to minimise content of crystalline silica in raw materials. The policy must include actions to:
 - obtain and maintain information from suppliers about the levels of crystalline silica present in raw materials being used in Environmental Choice labelled plaster and plasterboard products.
 - preferentially source and use raw materials with lower levels of crystalline silica for Environmental Choice products.
- b The licence holder must report annually to the Trust on the implementation of their purchasing policy on raw materials contaminating crystalline silica. The report must include:
 - tabulated information recording all raw materials being used that contain crystalline silica, the level of crystalline silica in each material, the supplier of the raw material and reference to the supporting data source (SDS or other technical information provided by the supplier).

- records of research and correspondence carried out during the previous 12 months with suppliers regarding the sourcing and purchasing of raw materials with lower crystalline silica levels.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement on compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. The statement shall be supported by documentation that:

- describes or contains the purchasing policy;
- details raw materials containing crystalline silica and the level of crystalline silica present in each (e.g., SDS); and
- includes annual reports to the Trust on implementation of the purchasing policy.

Notes and Questions:

Crystalline silica is found naturally in some raw materials used to manufacture plaster and gypsum plasterboard products. Crystalline silica becomes a human health hazard when in the form of particles smaller than 10 µm in diameter, which are breathable ('respirable')¹³. Crystalline silica is classified by the International Agency for Research on Cancer (IARC) as Group 1 - carcinogenic to humans¹⁴. Crystalline silica is classified under the New Zealand Hazardous Substances and New Organisms Act (HSNO) as 6.7A (known or presumed human carcinogen) only if they are in the form of a fine respirable dust in an occupational (chronic exposure) setting. Under the Globally Harmonised System which New Zealand adopted in 2021, crystalline silica in its powder form is considered as carcinogenicity Category 1.

Health hazards associated with exposure to crystalline silica-containing dusts arise from the inhalation of the respirable dust fraction, which is comprised of particles sufficiently small to reach the deep lung¹⁵. In plaster and plasterboard products, the risk is thus limited to inhalation of dry powdered raw materials in an occupational setting during manufacturing and installation.

To provide greater protection of human health, the Trust is shifting its focus from limiting exposure to crystalline silica during manufacture and installation, to limiting use at the procurement stage (and therefore help to screen out crystalline silica up through the supply chain).

The proposed new criteria for crystalline silica in clause 5.7.2 align with the research and updates made to EC-07 Paint specification dated August 2020.

Q10) Do you agree with the Trust's proposed reporting requirements for crystalline silica? If not, please comment on why and what you would propose as an alternative.

¹³ <https://www.hilti.com.au/content/hilti/A2/AU/en/29/media-relations/blog/dust-control-/Crystalline-silica-is-common-in-construction-materials.html>

¹⁴ <https://monographs.iarc.fr/ENG/Monographs/vol100C/mono100C-14.pdf>

¹⁵ https://www.osha.gov/silica/Combined_Background.pdf

5.8 Emissions

5.8.1 Volatile organic compounds (VOC) 🌍 👤

Criteria

Products must not produce a Total VOC (TVOC) emission greater than 45 g/ L when tested to ASTM D3960.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation, including:

- Test reports on VOC emissions using the ASTM D3960 – Standard Practise for Determining Volatile Organic Compound Content of Paints and Related Coatings.

Notes and questions:

VOCs released by solvents and other substances contribute to poor air quality in buildings, and exposure has been linked to respiratory issues, with long-term exposure also being linked to cancer. This is particularly important for wet-applied products, to ensure that the products do not contain excessive levels of VOCs, for the health of installers and other workers who are exposed to these products.

The German 'Blue Angel for low- emission internal plasters' uses a method available in DIN ISO 16000-28 for "Indoor air: Determination of odour emissions from building products using test chambers". Based on the "Health- related evaluation procedure for VOC emissions from building products", limits on VOC emissions values in test chambers have been placed on internal plasters. These are measured on the third and 28th (final) day in the test chamber in mg/ m³, and a test record must be produced to confirm compliance with the clause.

The Australia GECA 'Panel boards' specification sets a criterion that products must not produce a Total VOC emission greater than 0.5 mg/ m²/ hr, or 0.5 mg/ item/ hr (as toluene equivalents) as applicable when tested to ASTM D5116 or ASTM 6670. To confirm compliance, testing reports on VOC emissions must use one of the following test methods: ASTM D15116 Standard guide for small-scale environmental chamber determinations of organic emissions form indoor materials/ products; or ASTM D6670 Standard practise for full-scale chamber determination of volatile organic emissions from indoor materials/ products. The Trust understands testing under ASTM D5116 or ASTM 6670 is not available in New Zealand.

The Trust understands that the New Zealand Green Building Council (NZGBC) allows for testing in accordance with ASTM D3960 for Standard Practise for Determining Volatile Organic Compound Content of Paints and Related Coatings to confirm compliance with its Green Star points for VOCs. As such, the Trust believes this is a useful starting point for the introduction of a testing method and limit for total VOCs in plaster products for New Zealand. We also understand that 45 g/ L is considered an appropriate limit for low VOC paints, and therefore to achieve a low VOC plaster product, have proposed to use the same limit.

- Q11) Do you agree that a VOC limit should be included as a clause for plaster products in this specification? If not, please comment why.**
- Q12) Do you agree with the limit proposed? If not, please provide an alternative limit.**
- Q13) Do you agree with the testing method proposed to confirm meeting the criteria? If not, please provide an alternative testing method.**

5.8.2 **Gypsum plasterboard** - Radioactivity

Criteria

Gypsum plasterboard products containing greater than 5 % by mass of ash from coal or peat, or other potentially radioactive materials, must comply with the following:

- $CK/3000 + CRa /300 + CTh /200 < 1.0$
AND
- $CRa /100 < 1.0$

Where:

- CK = Concentration of Potassium-40 (Bq/Kg)
- CRa = Concentration of Radium-226 (Bq/Kg)
- CTh = Concentration of Thorium-232 (Bq/Kg)

Verification required

Conformance with this requirement shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation showing compliance with the above limits and including details of the test method used.

Explanatory notes

- 1 % Potassium is equivalent to 310 Bq/Kg of Potassium-40
- 1 ppm Uranium is equivalent to 12.3 Bq/Kg of Radium-226
- 1 ppm Thorium is equivalent to 4.0 Bq/Kg of Thorium-232

Testing method

The analysis should be performed by gamma spectrometry of crushed materials, gamma spectrometry using a portable gamma spectrometer, strong acid digest ICP-AAS or ICP-MS technique, or similar test method.

5.9 **Water Management**

Criteria

a The applicant/licence holder and product manufacturer must have effective water management policies and procedures and/or a water management programme.

- b Licence holders must report annually to the Trust on water management during the manufacturing process, this should include:
- objectives and targets.
 - explanation for any divergence from objectives and targets.
 - initiatives taken to manage fresh water use better and improve water efficiency, including use of recycled water or harvested rainwater, if applicable.

Verification required

Conformance with this requirement shall be stated in writing and signed by the Chief Executive Officer, or other authorised representative, of the applicant/licence holder. This statement shall be supported by documentation (as relevant):

- describing the water management policies, procedures and programmes;
- including annual reports to The Trust on water use and management; and
- detailing performance against continuous improvement objectives and targets relating to the reduction of water use related to production over time.

Notes & Questions

Water is used in the manufacturing process for plaster and plasterboard products, and as such the Trust considers it appropriate to monitor the usage of water.

The proposed requirements in Clause 5.9 above for a management policy, annual report and continuous improvement are similar to those included in other ECNZ specifications for water.

Q14) Do you agree with the proposed requirements above? If not, please explain why not and what you suggest as an alternative, if any.

5.10 Energy management and embodied carbon

Criteria

- a The licence applicant/holder and manufacturer must have effective energy management policies and procedures and/or an energy management programme.
- b The ECNZ licence holder ~~and the product manufacturer~~ must report annually to The Trust on energy management, including:
- Total energy use;
 - Breakdown of total energy use to types of energy used, including renewable energy;
 - Energy use related to production (i.e. the embodied energy of a product);
 - Energy use related to transport of raw materials;
 - Methodology for calculating and recording material greenhouse gas (GHG) emissions;
 - Initiatives taken to reduce energy use and CO₂ emissions and improve energy efficiency;
 - Initiatives taken to calculate CO₂ emissions per product (i.e. the embodied CO₂ of a product); and
 - Initiatives or requirements for suppliers or contract manufacturers.

- c Licence holders must have improvement objectives and targets for reduction of energy use related to production of ECNZ-licensed products, and associated GHG, over time. Furthermore, licence holders must publicly disclose a commitment to decarbonise between now and 2050 on a 1.5 °C trajectory, with a significant reduction prior to 2030. Any divergence from objectives or targets should be explained in the annual report.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation, that:

- Describes the energy management policies, procedures and programmes;
- Includes annual reports on energy use and management; and
- Provides details of use and performance against improvement objectives and targets relating to the reduction of energy use related to production of ECNZ- licensed products, and associated CO₂ emissions, over time.

Notes and Questions:

All ECNZ specifications now include the standard requirements for energy management in clause 5.10 a) and b). The Trust is proposing to expand the standard part b) requirements and strengthen the overall energy requirements with the introduction of a new requirement in part c). These changes will ensure that embodied carbon is not only measured and reported but that there is also a target to decarbonise between now and 2050, with a significant reduction prior to 2030, related to production of ECNZ-licensed products over time.

The requirement in part c) aligns with the New Zealand commitment to contribute to the global effort under the Paris Agreement¹⁶ to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels. New Zealand intends to achieve this by reducing net GHG emissions (other than biogenic methane) to 50% below 2005 levels by 2030.

The 2019 NZ Climate Change Response (Zero Carbon) Amendment Act introduced a target for 2050; net zero emissions of all GHG (other than biogenic methane). As such, there is a requirement for New Zealand industry to make energy efficient and renewable energy investments and adopt best practice energy management.

The new requirement in part c) above will ensure that energy is not only managed and reported but that there is also a decrease in energy use and CO₂ emissions related to production of ECNZ-licensed products over a specific period.

Q15) Do you agree with the proposed requirements above? If not, please explain why not and what you suggest as an alternative, if any.

¹⁶ Paris Agreement - a legally binding international treaty on climate change, adopted by 196 Parties in 2015 and entered into force in 2016. NZ ratified the Paris Agreement in 2016 and it took effect in 2020.

5.11 Waste management

Criteria

- a The applicant/licence holder and manufacturer must have effective waste management policies and procedures and/or a waste management programme. ~~covering manufacturing operations. This must include active management of production waste.~~
- b The ECNZ licence holder ~~and product manufacturer~~ must report annually to The Trust on waste management, including:
 - Quantities and types of waste recovered for reuse internally and externally;
 - Quantities and types of waste recycled internally and externally;
 - Quantities and types of waste disposed of to landfill;
 - Quantities and types of waste burned internally for energy recovery;
 - Waste generation related to production;
 - Initiatives taken to reduce waste generation and improve recovery/recycling of waste; and
 - Initiatives or requirements for suppliers or contract manufacturers.
- c The ECNZ licence holder must have improvement objectives and targets for reduction of waste generation, and the increase of reuse and recycling rates over time, where practical. Any divergence from objectives or targets should be explained in the annual report.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation that:

- Describes the waste management policies, procedures and programmes;
- Includes annual reports to The Trust on waste generation, minimisation and management; and
- Provides details of performance against the improvement objectives and targets for reduction of waste generation and increase of reuse and recycling rates.

Notes and Questions:

All ECNZ specifications include the standard requirements for waste management in clauses 5.11 a) and b). The Trust recently strengthened those standard requirements with the introduction of a new requirement in part c) which will ensure that waste is not only managed and reported but that there is also a decrease in waste generation and increase in reuse and recycling rates over time.

The Trust is considering setting a specific requirement for the re-use or recycling of plaster and plasterboard manufacturing wastes, such as a percentage of waste that must be sent to landfill.

Q16) Please comment on whether you agree that a requirement for re-use and recycling of plaster and plasterboard manufacturing waste would encourage re-use and recycling. If you disagree, please provide alternate options to prevent waste from manufacturing going to landfill, if any.

5.12 Consumer information

5.12.1 Product information for plasterboard products 🌍 👤

Criteria

Appropriate and acceptable information describing the handling, installation procedures, surface treatment applications, recycling and/or disposal methods shall be provided with the product or on the packaging or labels. This should include information about how to reduce waste during installation of the plasterboard.

Verification required

Conformance with this requirement shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation to be supplied with the product, including examples of labels, packaging and point of sale information.

5.12.2 Product information for plaster products 🌍 👤

Criteria

The plaster manufacturer shall have consumer information available for users at point of sale, on packaging and by other means (e.g. on a website) on the potential impacts on the environment from the use of plaster products. This must include instructions on appropriate use and actions to be taken to minimise the impact on the environment, describing actions to avoid contaminated water entering stormwater or surface water, in particular from wash water, including:

- The potential effects on the environment from the use and disposal of the product;
- Procedures for washing equipment including advising that all washing should be undertaken over bare grass or bare land areas and that no washing should be undertaken where the wash water may flow to streams, the coast or stormwater;
- Disposal of wash water from cleaning containers;
- Appropriate disposal of surplus or waste material, to reduce waste being sent to landfill; and
- Disposal of packaging.

The applicant/licence holder must have, implement and periodically review a strategy for providing consumer product information. The strategy must provide sound rationale for determining which information should be provided by which means (e.g. point of sale, website, labelling).

Verification provided

Conformance with these requirements shall be stated in writing and signed by the Chief Executive other authorised representative of the applicant/licence holder on application and annually. This statement shall be supported by documentation, including a copy of the manufacturer's consumer information and procedures to provide this to customers.

Notes and Questions:

The Trust is proposing to add Clause 5.12.2 for wet- applied products, including those purchased pre-mixed and dry-bagged. For the end user, these products pose a higher level of risk to the receiving environment compared to interior plaster, or plasterboard. This clause is similar to the recently updated EC-43-18 Concrete: Ready Mixed Concrete, Pre-Cast Concrete, Concrete Products, Dry Bagged Mortars and Dry Bagged Plasters specification, which was expanded to include dry-bagged plaster products of concrete composition.

Q17) Do you agree with the proposal to include wet-applied plaster product information to this revision and the requirement for manufacturers to provide information on its environmental effects, if not managed appropriately? If not, please comment further.

5.13 Packaging requirements

Criteria

- a All plastic packaging must be made of plastics that are able to be recycled in New Zealand (or the country to which the product is exported and sold).
- b Primary packaging must not be impregnated, labelled, coated or otherwise treated in a manner, which would prevent recycling (i.e. PVC sleeves, metallic labels).
- c If PVC primary packaging is used: Information shall be provided to The Trust at application and thereafter reported annually on PVC and/or phthalates used in the packaging. This should include information from production records and/or suppliers on:
 - the percentages by weight of recycled and virgin PVC.
 - the particular production processes (membrane cells, non asbestos diaphragms, modified diaphragms, graphite anodes, mercury cells, closed-lid production etc) used to produce chlorine and VCM for the PVC being used in the packaging for ECNZ-licensed products (including the locations of the production).
 - information, where available, on waste disposal, wastewater treatment and emissions to air (occupational exposure, emissions from the factory and emissions from the final PVC resin).
 - information on any Environmental Management System (EMS) for the production process, including requirements for waste, water, air and product-related requirements.
 - the types of stabilisers used.
 - the types and amounts of any phthalate plasticisers present in recycled content of the PVC (if that information is available) and/or added when manufacturing PVC.
 - research and initiatives implemented on substitutes for phthalates identified as of concern by regulators.
 - any product stewardship arrangements for the packaging.

Note: Regulators have identified the following phthalates to be of concern – dibutyl phthalate (DBP), diisobutyl phthalate (DIBP), butyl benzyl phthalate (BBP), di-n-pentyl phthalate (DnPP), di(2-ethylhexyl) phthalate (DEHP), di-n-octyl phthalate (DnOP), diisononyl phthalate (DINP) and diisodecyl phthalate (DIDP). These phthalates may be prohibited by the Hazardous Substances criteria in Clause 5.4.

- d Primary cardboard packaging shall consist of any combination of:
- Packaging approved under [EC-60 \(Paper Products\)](#)
OR
 - Recycled content.
AND/OR
 - Waste wood or virgin fibre from native forests provided the forests are certified under the Forest Stewardship Council (FSC) or the Programme for the Endorsement of Forest Certification (PEFC) as sustainably managed (or equivalent certification)
AND/OR
 - Waste wood or virgin fibre from plantations (including from farm forests or wood lots), provided the plantations are legally harvested.

NOTE: Please see Appendix C for details of acceptable certifications for certified sustainable forest management and legally harvested wood.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation, including:

- Conformance with criteria a) shall be supported by documentation verifying the packaging is recyclable.
- Conformance with criteria b) shall be demonstrated by providing samples of all plastic packaging components.
- Conformance with criteria c) shall be demonstrated by providing initial and ongoing annual reports to The Trust on PVC and plasticisers used. This should include as much of the available information requested in c) as possible.
- Conformance with criteria d) shall be supported by documentation from the packaging manufacturer verifying the recycled content of the cardboard packaging and documentation from the packaging manufacturer verifying the source of all fibre in the cardboard packaging.

Notes and Questions:

Clase 5.13 c) is focussed on PVC packaging, however it is the Trust's understanding that this may not be as commonly used for plaster and plasterboard packaging as other materials.

Q18) Is PVC used for packaging in your products, and if not please comment on what is considered as commonly used packaging.

Q19) Are there any specific requirements for packaging or plaster or plasterboard products which would require changes to 5.13? If yes, please comment on what you think these changes should be.

5.14 Product stewardship for plasterboard

Criteria

- a Plasterboard products must not be impregnated, labelled, coated or otherwise treated in a manner which would prevent recycling and / or composting in New Zealand or in the country where the product is used.
- b Information on paint types that are acceptable and will not hinder the recycling or diversion process must be available to purchasers of the gypsum plasterboard to avoid the product being painted with substances that will prevent it being diverted from landfill sites.
- c The licence holder and/or the manufacturer of gypsum plasterboard must be actively participating in a product stewardship scheme, operational in New Zealand, that involves:
 - Recovery of unwanted or unused plasterboard from pre- and post-consumer sources;
 - Reuse and/or recycling/composting of recovered plasterboard; and
 - Promotion of the product stewardship scheme to customers.
- d Licence holders must report annually to The Trust on the performance of the product stewardship scheme, including:
 - Volume of pre-consumer and volume of post-consumer plasterboard recovered;
 - The percentage of recovered plasterboard that was re-used and the means by which it was reused;
 - The percentage of recovered plasterboard that was recycled (including back into plasterboard or downcycled into cement or soil conditioner);
 - The percentage of recovered plasterboard subsequently disposed to landfill;
 - Testing requirements and test results which demonstrate that the plasterboard is suitable for the chosen recycling or disposal option; and
 - Initiatives taken as part of the programme to increase the volume of recovered plaster or plasterboard products and reduce the % of plaster or plasterboard unable to be reused or recycled and that are therefore sent to landfill.
- e Initially, at least 5% of waste from plasterboard (based on annual production tonnage) must be reused or recycled/composted under the product stewardship scheme.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation, including:

- Confirmation that the products can be recycled or composted;
- Information about suitable paint types and how this information is made available to customers;
- Information that describes the New Zealand-based product stewardship scheme (initiatives, procedures and programme);
- An annual report on product stewardship; and
- Production documentation confirming the amount of material reused or recycled/ composted.

Notes and Questions:

Clause 5.14 has been written with plasterboard products in mind only, however the Trust is interested to understand if product stewardship schemes for re-use and recycling would be appropriate for plaster products as well. Below is the Product Stewardship clause from EC-07-18 (Paints Specification):

Criteria

- a *The applicant/licence holder and/or the manufacturer or supplier of paints must be actively participating in a product stewardship scheme that involves:*
- *recovery of unwanted or unused paints from pre- and post-consumer sources;*
 - *reuse and/or recycling of recovered paint and paint containers; and*
 - *promotion of the product stewardship scheme to customers.*
- b *Licence holders must report annually to ECNZ on the performance of the product stewardship scheme, including:*
- *volume of pre-consumer and volume of post-consumer paint recovered;*
 - *the % of recovered paint that was re-used and the means by which it was reused;*
 - *the % of recovered paint that was recycled (either the paint and its pigments or by solvent recovery);*
 - *the % of paint disposed to landfill;*
 - *the percentages (by weight) of recovered paint containers that were reused, recycled or sent to landfill; and*
 - *initiatives taken as part of the programme to increase the volume of recovered paint and reduce the % of paint and containers that are unable to be reused or recycled and that are therefore sent to landfill.*

Verification required

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

- *documentation that describes the product stewardship scheme; and*
- *annual reports on the performance of the product stewardship scheme.*

Q20) Please comment on whether a similar product stewardship clause would be appropriate for plaster products. If not, please provide solutions to prevent waste products being sent to landfill, if any.

6 Product characteristics

6.1 Product ~~lifetime performance~~

Criteria

- a ~~The product must be fit for its intended use and conform, as appropriate to relevant product performance standards.~~
- b Gypsum plasterboard shall be manufactured in accordance with AS/NZS 2588:1998 2018 (or equivalent). This standard specifies the performance requirements for gypsum plasterboard intended for use in buildings as a lining material for walls, ceilings and partitions and providing a surface suitable for receiving decorative treatments. It includes standard bracing, water resistant and fire-resistant grades of gypsum plasterboard.
- c ~~The licence applicant/holder or product manufacturer must offer a commercial guarantee of a minimum of eight years on the quality of the product, provided the product is used for its intended purpose. The guarantee must be valid from the date of delivery to the customer.~~

Verification required

Conformance with this requirement shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder.

Conformance with criterion a) shall be supported by a statement and/or the following documentation:

- Identifying the applicable standards, specifications and or consumer/customer requirements;
- Demonstrating how compliance is monitored and maintained (including quality control and assurance procedures); and
- Records of customer feedback and complaints.

Conformance with criterion b) shall be supported by a statement and/or the following documentation:

- Test reports from laboratories accredited to carry out the relevant test methods.

Notes and Questions:

Clause 6.1 a) has been included to be consistent with other specifications.

Clause 6.1 b) has been updated to reflect the current (2018) version of the NZ Gypsum Plasterboard standard. Our research has shown there is no standard for non-cement based plaster.

Q21) Please advise on any standard you believe is applicable for non-cement based plaster.

6.2 Product warranty for gypsum plasterboard

The applicant/licence holder or product manufacturer must offer a commercial guarantee of a minimum of eight years on the quality of the product, provided the product is used for its intended purpose. The guarantee must be valid from the date of delivery to the customer.

Verification required

Conformance with these requirements shall be demonstrated by providing a written statement of compliance, signed by the Chief Executive Officer or other authorised representative of the applicant/licence holder. This statement shall be supported by documentation, including:

- A copy of the product warranty.

Notes:

Clause 6.2 has been updated and separated from 6.1 to be consistent with other specifications.

7 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 products 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 production delivery records and the right of access to production 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

The Label may appear on the wholesale and retail packaging for the product, provided that the product meets the requirements in this specification and in the Licence Conditions.

Wherever it appears, the Label must be accompanied by the words “[Plaster and](#) Plasterboard Products “and by the Licence Number e.g. ‘licence No 1234’.

The Label must be reproduced in accordance with the ECNZ programme’s keyline 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 keyline art.

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

Appendix A: Information Tables

Table A1: Component/process supplier information

<u>Supplier name</u>	<u>Supplier address and contact details (include all manufacturing locations)</u>	<u>Component or process supplied</u>
<i><u>e.g. Supplier A</u></i>	<i><u>Address Wiri, Auckland</u></i>	<i><u>Upholstery textiles</u></i>

Include each component and subcontracted processing operation.

Table A2: Hazardous substances and materials description table

<u>Process/Type of Chemical</u>	<u>Trade Name</u>	<u>Chemicals Name</u>	<u>Supplier</u>	<u>Safety Data Sheet (SDS)</u>		<u>% added by weight</u>
				<u>Issue date</u>	<u>Copy provided to ECNZ (✓)</u>	
<i>e.g. Additive X</i>						

Complete one table for each product

Appendix B: Hazardous Substances Classifications

Table B1- Hazardous Substances Classifications prohibited in EC-19-22- Clause 5.6

<u>New Zealand HSNO Classes</u>	<u>Globally Harmonised System</u>
<u>Acute toxicity</u>	
<u>6.1A (oral, dermal, inhalation)</u>	<u>acute oral toxicity Category 1</u> <u>acute dermal toxicity Category 1</u> <u>acute inhalation toxicity Category 1</u>
<u>6.1B (oral, dermal, inhalation)</u>	<u>acute oral toxicity Category 2</u> <u>acute dermal toxicity Category 2</u> <u>acute inhalation toxicity Category 2</u>
<u>Respiratory or skin sensitisation</u>	
<u>6.5A</u>	<u>respiratory sensitisation Category 1</u>
<u>6.5B</u>	<u>skin sensitisation Category 1</u>
<u>Carcinogenicity, mutagenicity and reproductive toxicity</u>	
<u>6.7A</u>	<u>carcinogenicity Category 1</u>
<u>6.7B</u>	<u>carcinogenicity Category 2</u>
<u>6.6A</u>	<u>germ cell mutagenicity Category 1</u>
<u>6.6B</u>	<u>germ cell mutagenicity Category 2</u>
<u>6.8A</u>	<u>reproductive toxicity Category 1</u>
<u>6.8B</u>	<u>reproductive toxicity Category 2</u>
<u>Ecotoxicity</u>	
<u>9.1 A</u>	<u>hazardous to the aquatic environment acute Category 1</u> <u>hazardous to the aquatic environment chronic Category 1</u>
<u>9.1B</u>	<u>hazardous to the aquatic environment chronic Category 2</u>
<u>9.1C</u>	<u>hazardous to the aquatic environment chronic Category 3</u>
<u>9.1D</u>	<u>hazardous to the aquatic environment chronic Category 4</u> <i>Note: Hazardous to the aquatic environment acute Category 2 and acute Category 3 have not been adopted.</i>

NOTE: There are different classification systems for hazardous substances that are used internationally. As the ECNZ specifications need to consider products that are manufactured in New Zealand and overseas, it is necessary to consider the equivalence of hazardous property classification systems in different jurisdictions. The table above shows the (broadly) equivalent New Zealand HSNO Classifications and the United Nations' Globally Harmonised System of Classification and Labelling of Chemicals (GHS) classifications. The seventh revised edition of the Globally Harmonised System (GHS 7) has been adopted as New Zealand's official hazard classification system. It took effect on 30 April 2021 and replaced the HSNO classes.

It is important to note that the GHS is a classification framework and the particular classifications applied to a substance may vary between jurisdictions (for example Europe, the United States and New Zealand each have their own agency with responsibility for assessing and classifying hazardous substances). Differences between classifications can be due to the weight placed on particular toxicity studies (i.e. a jurisdiction may consider that a study is flawed) or in the event that new information becomes available (i.e. differences in the timing of the classification or re-classification of a substance).

Where there is a discrepancy between the classifications applied to specific substances in the different schemes, the Trust's appointed technical advisors will review supporting information regarding the classifications on a case-by-case basis to determine and recommend to the Trust how these discrepancies should be managed within the life cycle context of the relevant product category. Where appropriate, technical clarifications and changes, with accompanying explanation, will be included in the relevant specification.

Appendix C: Explanatory notes for types of claims that can be used to demonstrate compliance with criteria set in clause 5.13

Sustainable Forest Management (SFM):

The FSC and PEFC certification schemes each have a range of certificates/labels. Some of these allow for wood/fibre from certified sustainably managed plantations or forests to be mixed with non-certified wood/fibre. Under FSC Mixed Credit or PEFC Volume Credit methods, wood/fibre or products associated with the certification claim or label may or may not actually contain wood/fibre from the certified sustainably managed source. Certifications accepted by The Trust are those which will ensure that wood from sustainably managed forests, as required in criteria 5.13, will be actually present in the final ECNZ-licensed product. These are set out below.

Types of FSC claims which can be used to demonstrate compliance with the requirements:

- FSC 100 %.
- FSC Mix Credit – only if the manufacturer can demonstrate that actual FSC material is used for the packaging.
- FSC Recycled provided it contains 100% recycled material

FSC Controlled Wood cannot be used to meet the FSC certified requirements.

Types of PEFC claims which can be used to demonstrate compliance with the above requirements:

- PEFC Certified – Physical Separation method.
- ~~X % PEFC Certified – Volume Credit method – only if the manufacturer can demonstrate that actual PEFC certified material is used for the packaging.~~

PEFC Controlled Sources material cannot be used to meet the PEFC certified requirements

The following certification schemes will be accepted as equivalent to FSC or PEFC certification of SFM:

- Pengelolaan Hutan Produksi Lestari – Sustainable Production Forest Management certified (PHPL) (~~<http://liu.dephut.go.id/>~~)-(<https://ifcc-ksk.org/get-certified/sustainable-forest-management.html>).
- Sustainable Forest Management Plans, supported with Annual Logging Plans that have been prepared and approved under the New Zealand Forests Act 1949 (amended in 1993). These Plans must be prepared in accordance with Standards and Guidelines for the Sustainable Management of Indigenous Forests and guidance for preparing Sustainable Management Plans and Annual Logging Plans. Wood sourced from New Zealand indigenous forests covered by approved plans will be accepted as equivalent to FSC sustainably managed forest certification provided compliance with the approved plans is demonstrated through independent on-site assessment.

For any other schemes to be considered, the applicant will be required to provide detailed information that demonstrates the certification scheme is credible and equivalent.

Legal harvesting:

The following certification schemes will be accepted as sources of information to demonstrate legal harvesting, where certificates and chain of custody evidence is available for virgin fibre sources:

- Forest Stewardship Council – “Certified” or “Controlled Wood” (www.fsc.org).
- Programme for the Endorsement of Forest Certification (PEFC) - “Certified” or “Controlled Sources” (www.pefc.org).
- SGS Timber Legality & Traceability Verifications service (TLTV) Verification of Legal Compliance certification (TVTL-VLC) (~~<http://www.sgs.com/en/Public-Sector/Monitoring-Services/Timber-Traceability-and-Legality.aspx>~~; <https://www.sgs.co.nz/en/public-sector/monitoring-services/timber-traceability-and-legality>).
- Rainforest Alliance SmartWood Verification of Legal Compliance (VLC) certification (<http://www.rainforest-alliance.org/forestry/verification/legal>).
- System Verifikasi Legalitas Kayu - Timber Legality Verification System (SVLK) certified, or SVLK/PHPL (Pengelolaan Hutan Produksi Lestari – Sustainable Production Forest Management) certified (~~<http://liu.dephut.go.id/>~~; <https://www.scsglobalservices.com/services/svlk-timber-legality-verification>).
- Sustainable Forest Management Plans (supported with Annual Logging Plans) that have been prepared and approved under the New Zealand Forests Act 1949 (amended in 1993).
- Evidence of legal harvesting from the Global Forest Registry (www.globalforestregister.org)