



The New Zealand Ecolabelling Trust

Licence criteria for Plaster and Plasterboard Products

EC-19-22

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Specification change history

Minor clarifications, corrections or technical changes made since the specification was last reviewed and issued in September 2022.

Date	Version	Change
01/06/23	June 2023	Environmental Choice New Zealand renamed to Eco Choice Aotearoa and all references in this document amended to reflect the new name. Wording in section 7 'Use of the Eco Choice Aotearoa Label' updated- the requirement for the label to be accompanied by the specification name is now optional.

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1 Introduction

Eco Choice Aotearoa (ECA) 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).

ECA 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 ECA licence applicants and is able to be measured and verified. As a result of this approach, criteria may not be included in an ECA 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 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 revised specification sets out the requirements that plaster and plasterboard products will be required to meet in order to be licensed to use the ECA 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 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 ECA specifications, publicly available information, and information provided by current licensees.

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.

2 Background

2.1 Raw materials for plaster and plasterboard

Natural gypsum plasterboard is comprised of gypsum rock 'calcium sulphate dihydrate' ($\text{CaSO}_4 \cdot \text{H}_2\text{O}$). It is an abundant mineral mined around the world. It is typically mined by blasting mineral deposits in a quarry or open cast mine¹. The United States is the world's top gypsum producer, producing approximately 20 million tonnes in 2019, followed by China and Iran².

Synthetic gypsum can be used as an alternative to naturally sourced gypsum. It is generally derived from coal power stations and flue-gas desulfurisation (FGD). FGD is a by-product of the flue gas cleaning process³. Approximately 45 % of the gypsum used by US manufacturers in 2019 was of the synthetic variety⁶. In New Zealand, a number of plasterboard products are imported from overseas and may contain synthetic gypsum, however Winstone Wallboards, New Zealand's only gypsum plasterboard manufacturer, uses natural gypsum and 100 % recycled paper⁴.

For interior plaster products, typically used for coating walls, ceilings, and partitions, the products are generally based on lime, cement, clay or gypsum. Cement plaster is not considered within this specification as its addressed under EC-43-18 Concrete: Ready Mixed Concrete, Pre-Cast Concrete, Concrete Products, Dry Bagged Mortars and Dry Bagged Plasters specification. Lime or clay plasters have similar environmental concerns to gypsum plaster, such as responsible mining of raw materials. They are non-renewable resources, and with potential impacts from quarrying including wastewater and surface water discharges which can increase the pH due to alkalinity, and increase suspended solids in receiving waters. Similar effects can also occur if plaster products are ineffectively managed during use, resulting in discharges of plaster or wash water to the receiving environment. This can result in an increase of pH to the receiving environment, with downstream effects on flora and fauna.

2.2 Production impacts

Interior plaster products are typically manufactured as a dry powder and then worked into a stiff paste by mixing with water prior to application⁵. Interior plaster products available in the New Zealand market are both manufactured in New Zealand and imported from overseas.

Production of plasterboard started in New Zealand in 1927⁶ and currently there are two plasterboard manufacturing plants: one in Auckland and the other in Christchurch. Both are owned by Winstone Wallboards, part of the Fletcher Building Group. The raw gypsum is imported from mines in Australia and transported by boat to New Zealand. In 2022, Winstone Wallboards produced approximately 700,000 m² of plasterboard per week⁷. Winstone Wallboards is the largest supplier of plasterboard in New Zealand, though some product is also imported from Australia and Southeast Asia.

Plasterboard production involves three key steps:

- 1 Calcination of gypsum at high temperature to form Plaster of Paris (hemi-hydrate gypsum plaster);
- 2 Rehydration of Plaster of Paris, mixing it with water and additives (e.g. starch, potassium sulphate and detergent) and pressing it between two paper layers; and

¹ <https://www.scu.edu/media/ethics-center/environmental-ethics/Drywall.pdf>

² <https://pubs.usgs.gov/periodicals/mcs2020/mcs2020-gypsum.pdf>

³ <https://cuppdf.com/document/green-public-procurement-wall-panels-technical-background-ec-green-public.html?page=8>

⁴ <https://www.gib.co.nz/about-winstone-wallboards/aboutsustainability/>

⁵ <https://www.designingbuildings.co.uk/wiki/Plaster>

⁶ <https://www.gib.co.nz/about-winstone-wallboards/who-is-winstone-wallboards/>

⁷ <https://www.gib.co.nz/gib-news/gib-update/plasterboard-demand-and-supply-update/>

3 Drying off excess water in an oven to form plasterboard⁸.

The production of gypsum plasterboard releases particulates from the gypsum powder in addition to sulphur dioxide, nitrous oxide, and carbon monoxide. Heating the gypsum also has a high energy cost¹.

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

Additives used to manufacture interior plaster and gypsum plasterboard products 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 overdrying 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. Restricting the use of these hazardous substances, some of which are volatile organic compounds (VOCs), will help reduce the adverse impacts of plaster and plasterboard on people and the environment, both during production, use and end-of-life.

2.3 End of use/recycling

When plasterboard is disposed of in landfills, it can cause the release of hydrogen sulphide gas, which is both toxic and odorous. It can also potentially leach dangerous sulphates into groundwater¹¹. Since 2009, the United Kingdom's Environment Agency has banned the disposal of gypsum and other wastes with a high sulphur content at landfills, instead requiring the waste to be deposited in a separate cell with non-biodegradable waste¹². This also supports efforts to recycle gypsum products rather than sending them to landfills. Whilst there are currently no legislative requirements around disposal in place in New Zealand, the building industry is aware of the negative environmental impacts and is working on options to recycle and reuse gypsum for horticultural and agricultural purposes¹³ as gypsum has benefits as a soil improver¹⁴.

In 2014, the Building Research Association of New Zealand (BRANZ) estimated that in New Zealand, the construction and demolition industries create 50 % of all waste¹⁵, and more than 70 % of waste produced from a construction site is recyclable¹⁶. To support and encourage the diversion of construction and demolition waste to landfills in New Zealand, regulatory requirements were introduced in the Building Act 2004 and the Waste Minimisation Act 2008⁹. The Building Act encourages the efficient and sustainable use of material, and reduction of waste during construction. The Waste Minimisation Act was introduced to encourage waste minimisation and reduce waste disposal by applying a levy. In 2019 the NZ government produced a consultation document, *Reducing waste: a more effective landfill levy*, and within the document

⁸ Thinkstep 'Under construction Hidden emissions and untapped potential of buildings for New Zealand's 2050 zero carbon goal' produced on behalf of the NZGBC, 2019

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

¹⁰ <https://gypsum.org/wp-content/uploads/2014/02/Life-CycleAssessmentSummary02-13.pdf>

¹¹ <https://www.scu.edu/media/ethics-center/environmental-ethics/Drywall.pdf>

¹² <https://www.edie.net/library/Environment-Agency-issues-new-gypsum-waste-guidance/4908>

¹³ <https://www.nziaqs.co.nz/newsletter-articles/ID/163/Prioritising-GIB-plasterboard-waste-minimisation-and-recycling>

¹⁴ Thinkstep 'Under construction Hidden emissions and untapped potential of buildings for New Zealand's 2050 zero carbon goal' produced on behalf of the NZGBC, 2019

¹⁵ BRANZ, 2014, REBRI guides Waste Reduction - https://www.branz.co.nz/cms_display.php?st=1&sn=113

¹⁶ <https://www.greengorilla.co.nz/processing-facilities/recycled-products/gypsum/>

it was indicated that while in other countries there is a growing recovery and recycling of materials, in NZ the waste sent to landfill is increasing¹⁷. In the consultation document, it was proposed to introduce a levy for construction and demolition waste, and increase the existing levy for municipal landfills. This has since been adopted ('Waste disposal levy'), with a gradual levy increase and introduction of a construction waste levy over the next four years. The purpose of this is to recognise the real cost of waste, and to incentivise materials reuse and recycling rather than disposal at landfills¹⁸.

In response to this, waste collection companies in New Zealand have created plasterboard recycling facilities. Paper is stripped for recycling from waste plasterboard and the recycled or reclaimed gypsum can be re-purposed and added to soils to improve growing conditions and act as a natural additive to boost horticultural crops²⁰. Cement producer Holcim NZ Ltd has also tested the used recycled gypsum in its manufacturing process and found it suitable as a partial replacement for natural gypsum¹⁹. Plasterboard containing FGD gypsum or fly ash fillers may contain high concentrations of heavy metals which may make it unsuitable for composting. This specification encourages recycling and reuse practises to prevent waste being sent to landfill, and encourages license holders to explore initiatives to reduce waste generation and improve recovery/ recycling efforts.

Recovery and reuse of interior plaster products has significant challenges: exposure to moisture and rain drastically depletes the recyclability of plaster and its degree of acceptability at recycling facilities, therefore, products stewardship requirements have not been set for interior plaster products at this time.


Based on a review of currently available information, the product category requirements proposed within this specification will result in 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.


¹⁷ <https://environment.govt.nz/publications/reducing-waste-a-more-effective-landfill-levy-consultation-document/>

¹⁸ <https://environment.govt.nz/what-government-is-doing/areas-of-work/waste/waste-disposal-levy/expansion/>

¹⁹ [There's value in building waste | BRANZ Build \(buildmagazine.org.nz\)](#)

3 Interpretation

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

 (Environmental Responsibility) means a criterion or sub-clause within the ECA 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.

Gypsum means hydrous calcium sulphate (CaSO₄.2H₂O)

ISO means International Organisation for Standardisation.

Label means the Eco Choice Aotearoa 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 dried²⁰. 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.

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.

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

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.

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.

5 Environmental criteria

5.1 Legal requirements

Criteria

- a The licence applicant/holder must demonstrate how applicable environmental legal requirements are met, including that all necessary environmental consents and permits are in place.
- b Where the applicant/licence holder is not the manufacturer of the plaster or plasterboard product(s), the applicant/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 these requirements 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 ECA-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 ECA labelled product is managed to a level that minimises risk of reputation damage to the ECA label and programme.

5.2 Product information required

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

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

Licence holders must maintain this information, and notify ECA 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.

5.3 Modern slavery and social accountability

Criteria

- a The applicant/licence holder and product 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 in the United Nations International Bill of Human Rights²¹ and the International Labour Organization (ILO) Declaration on the Fundamental Principles and Rights at Work (see Appendix B);
 - 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 commitments and monitor compliance with it.

In addition to the above, the applicant/licence holder and product manufacturer shall consider:

- implementing the requirements of Social Accountability International Standard, SA8000.
 - Being a Living Wage employer (or equivalent).
 - Having a senior member of its organisation responsible for social and environmental sustainability.
- b Where an applicant/licence holder and product manufacturer has found instances of modern slavery in their business operations and or supply chains in the past two years, they must provide evidence of corrective action.

Explanatory notes

Information on the United Nations International Bill of Human Rights and the ILO Declaration on the Fundamental Principles and Rights at Work is provided in Appendix B.

Verification required

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

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

5.4 Raw materials

5.4.1 Synthetic gypsum materials and fillers

²¹ <https://www.ohchr.org/en/what-are-human-rights/international-bill-human-rights>

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.

- 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).

Licence holders must maintain and update this information and advise The Trust about any changes to this information.

5.4.2 Natural 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 ECA-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;
 - 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 materials and fillers procurement programme and records of the supplier, nature and geographical source of all natural 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 requirements 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).

5.5 Paper in plasterboard

Criteria

- 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.
- The paper shall not be bleached for reuse. It is accepted that the paper may have been bleached during its previous lifecycle.
- Where surfactants are used for de-inking recycled paper input, these surfactants shall be readily biodegradable.
- 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.

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 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/ plasticisers 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 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).

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).

5.7 Manufacturing process

The criteria below apply to the manufacture of the 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.
 - For gypsum-based products: emissions to air of sulphur dioxide.
 - 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.
 - 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.

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.

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 Eco Choice labelled plaster and plasterboard products.
 - Preferentially source and use raw materials with lower levels of crystalline silica for Eco Choice products.
- b The licence holder must report annually to the Trust on the implementation of their purchasing policy for raw materials containing 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 Offer 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.

5.8 Emissions

5.8.1 Volatile organic compounds (VOCs) 🌍 🗑️

Criteria

Products must have a Total VOC (TVOC) content of less than 45 g/ L when tested to ASTM D3960.

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, including:

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

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 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 showing compliance with the above limits and including details of the test method used.

Explanatory notes

- 1 % Potassium is equivalent to 310 Bg/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. Test results should be provided in Bq/ Kg.

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 these requirements 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.

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 ECA licence holder 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 ECA-licensed products, and associated GHG emissions, 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 ECA- licensed products, and associated CO₂ emissions, over time.

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.
- b The ECA licence holder 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 ECA 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.

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 in designated wash areas where the wash water cannot 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.
- 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 required

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.

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 ECA-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 5.6.

d Primary cardboard packaging shall consist of any combination of:

- Packaging approved under EC-60 (Paper Products)
AND/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 D 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.

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.
 - Promotion of the product stewardship scheme to customers.

Note: the product stewardship scheme may be either an internal or a third-party scheme.
- 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.
 - Initiatives taken as part of the programme to increase the volume of recovered plasterboard products and reduce the % of 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.

6 Product characteristics

6.1 Product 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 2588:2018 (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.

Verification required

Conformance with these requirements shall be stated in writing and signed by the Chief Executive Officer or other authorised representative of the applicant/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.

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 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, including:

- A copy of the product warranty.

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 noncompliance 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.

Use of Eco Choice Aotearoa label

The licence holder shall supply information on the proposed use of the label on products or promotional material.

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 Licence Number e.g. 'licence No1234. It is optional to include the spec name.

The Label must be reproduced in accordance with:

- The licence conditions; and
- The Eco Choice Aotearoa programme's brand kit which includes examples of keyline art for reproduction on the Label.

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

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

Appendix A: Information Tables

Table A1: Component/process supplier information

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

Include each component and subcontracted processing operation.

Table A2: Hazardous substances and materials description table

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

Complete one table for each product

Appendix B: Modern slavery and social accountability

B1 International Bill of Human Rights

In December 1948, the United Nations General Assembly adopted the Universal Declaration of Human Rights (UDHR). In December 1966, the UN General Assembly adopted two international treaties that would further shape international human rights: the International Covenant on Economic Social and Cultural Rights (ICESCR), and the International Covenant on Civil and Political Rights (ICCPR). These are often referred to as “the International Covenants.” Together, the UDHR and these two Covenants are known as the International Bill of Human Rights.

The ICESCR and the ICCPR set out the civil, political, economic, social and cultural rights that everyone is entitled to:

ICESCR	ICCPR
<ul style="list-style-type: none"> • Freedom from discrimination • Right to equality between men and women • Right to life • Freedom from torture • Freedom from slavery • Right to liberty and security of person • Right to be treated with humanity in detention • Freedom of movement • Freedom of non-citizens from arbitrary expulsion • Right to fair trial • Right to recognition before the law • Right to privacy • Freedom of religion and belief • Freedom of expression • Right of peaceful assembly • Freedom of association • Right to marry and found a family • Right of children to birth registration and a nationality • Right to participate in public affairs • Right to equality before the law • Minority rights 	<ul style="list-style-type: none"> • Freedom from discrimination • Right to equality between men and women • Right to work • Freedom to choose and accept work • Right to just and favourable conditions at work • Right to form trade unions • Right to strike • Right to social security • Right of mothers to special protection before and after birth • Freedom of children from social and economic exploitation • Right to an adequate standard of living • Freedom from hunger • Right to health • Right to education • Freedom of parents to choose schooling for their children • Right to take part in cultural life • Right to enjoy benefits of science • Right of authors to moral and material interests from works • Freedom to undertake scientific research and creative activity

B2 ILO Declaration

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)
- Discrimination (Employment and Occupation) Convention, 1958 (No. 111)

Appendix C: Hazardous Substances Classifications

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

New Zealand HSNO Classes	Globally Harmonised System
Acute toxicity	
6.1A (oral, dermal, inhalation)	acute oral toxicity Category 1 acute dermal toxicity Category 1 acute inhalation toxicity Category 1
6.1B (oral, dermal, inhalation)	acute oral toxicity Category 2 acute dermal toxicity Category 2 acute inhalation toxicity Category 2
Respiratory or skin sensitisation	
6.5A	respiratory sensitisation Category 1
6.5B	skin sensitisation Category 1
Carcinogenicity, mutagenicity and reproductive toxicity	
6.7A	carcinogenicity Category 1
6.7B	carcinogenicity Category 2
6.6A	germ cell mutagenicity Category 1
6.6B	germ cell mutagenicity Category 2
6.8A	reproductive toxicity Category 1
6.8B	reproductive toxicity Category 2
Ecotoxicity	
9.1 A	hazardous to the aquatic environment acute Category 1 hazardous to the aquatic environment chronic Category 1
9.1B	hazardous to the aquatic environment chronic Category 2
9.1C	hazardous to the aquatic environment chronic Category 3
9.1D	hazardous to the aquatic environment chronic Category 4 <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 ECA 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 D: 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 ECA-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.

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) (<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) (<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 <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)