

International Standard



ecospecifier global

GREEN TAG[®]

green product certification
trust brands

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QUALITY STATEMENT

This Program is assessed under the Ecospecifier & Global GreenTag Quality Management System (QMS) which is certified to ISO 9001:2008. GreenTag management and employees are committed to providing independent third party, accurate product conformance assessments against this standard for all compliant products and providing excellent customer and stakeholder communication and services, as well as committing to the pursuit of continual improvement and environmental and social sustainability within our own organisation.

DOCUMENT ABSTRACT

This Standard specifies environmental and other performance requirements of products under the ecospecifier Global GreenTag Ecolabel Program (GreenTag^{Cert™}). This Program complies with ISO 14024: "Environmental labels and declarations - Guiding principles" which requires environmental labeling specifications to include criteria that are objective, reasonable and verifiable. All Assessments also comply with AS NZS ISO 14021:2000, "Environmental labels and declarations — Type II Self declared environmental claims".

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REFERENCED STANDARDS

ISO 17065: 2012	Conformance Assessment: Requirements for Bodies Certifying Products, Processes and Services
ISO 9001:2008	Quality Management Systems Requirements
ISO 14020:2000	Environmental labels and declarations - General principles
AS NZS ISO 14021:2000	Environmental labels and declarations - Type II Self declared environmental claims
ISO 14024:1999	Environmental labels and declarations — Type I environmental labeling — Principles and procedures.
ISO 14025: 2006	Environmental labels and declarations — Type III environmental declarations — Principles and procedures
ISO 14040	Environmental management — Life cycle assessment — Principles and framework.
ISO 14044:2006	Environmental management - Life cycle assessment- Requirements and guidelines)
ISO 14064-1:2006:	Greenhouse Gases -- Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
ISO 14065:2009	Greenhouse gases - Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition.
ISO 14066:2011	Greenhouse Gases: Competence Requirements for Greenhouse Gas Validation Teams and Verification Teams
ISO 14067.2	Carbon footprint of products -- Requirements and guidelines for quantification and communication
ISO 21930: 2007	Sustainability in building construction -- Environmental declaration of building products
UN GHS Rev 2.	United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) for use outside Australia
Regulation (EC) 1272/2008,	EU classification, labelling and packaging of substances and mixtures (CLP)- (EU Regulation on the Classification, Labelling and Packaging of Substances and Mixtures – GHS Compliant)UE Directive 67/548/EEC for assessing products for use in Australia in accordance with Safe Work Australia’s Hazardous Substances Information System (HSIS) and April 2009 update to the 30th Adaptation to Technical Progress to UE Directive 67/548/EEC – also. <i>Approved Criteria for Classifying Hazardous Substances</i> [NOHSC:1008(2004) 3rd Edition and/or have National Exposure Standards declared under the NOHSC <i>Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment</i> [NOHSC:1003(1995)]

GBC Australia

Green Building Council of Australia Green Star™ Technical Manuals:

- Office Design v2.0
- Office Design v3.0
- Office Interiors v1.1
- Retail v1.0
- Public Buildings
- Operations
- Convention & Conference
- and all subsequent tools and versions
- Healthcare v1.0
- Multi-unit Residential v1.0
- Industrial (Pilot) and subsequent versions
- Education v1.0
- Custom tools
- Interiors (Pilot) and subsequent versions
- Communities (Pilot)

Social Accountability
International

Social Accountability Standard SA 8000

TERMS & DEFINITIONS

For the purposes of this Guide, the relevant definitions given in ISO/IEC Guide 2 and ISO 8402 apply, together with the following definitions:

API	Additional Performance Information (see Section 3.05).
Complying LCA	A life cycle assessment (LCA) in accordance with ISO 14040, ISO 14064 or PAS 2050 including LCADetail sourced LCA as relevant to the product assessment under consideration. A complying LCA may use partial data derived from third party audited sources such as other ecolabels or LCA or life cycle inventory (LCI) etc.
Conformity Assessment Body:	A CAB can objectively assess conformity to specified requirements. A CAB can perform conformity assessment activities that include certification, inspection, testing and calibration.
Design for Disassembly:	Applies to product streams containing distinct components (e.g. furniture, partitions, storage, etc) and implies products are designed so that components are easily disassembled. The processes which are required in product removal from site and component separation must not involve specialist tools so that a future recycler, supplier or another third party, can easily direct the different materials into the appropriate reuse or recycling streams. Flooring product standards may allow for the use of specialist tools to facilitate product component disassembly.
Dose:	Refers to the amount of a chemical absorbed into the body from an exposure.
Global GreenTag:	The ecospecifier Global GreenTag product assessment program, as described by this Standard and its rules of operation. Described herein as GreenTag.
Endocrine Disruptor	Compounds that mimic, block, or interfere with hormone production, and/or metabolism and/or excretion causing malfunction of the endocrine system and creates potential malfunction/s of the reproductive and/or nervous, and/or immune systems.
Environmental label:	A claim which indicates the environmental aspects of a product or service.
Environmental declaration:	NOTE An environmental label or declaration may take the form of a statement, symbol or graphic on a product or package label, in product literature, in technical bulletins, in advertising or in publicity, amongst other things.
ESCAP:	Ecospecifier Cautionary Assessment Process - as defined in Appendix 1.
Exposure:	The actual contact that a person has with a chemical. It can be one-time, short-term, or long-term.
Green Building Rating Scheme	A points based sustainability performance rating system for buildings operated by either Government Agencies or Non-government organisation such as a Green Building Council, whether it be mandatory or voluntary.
GreenRate:	The ecospecifier product assessment program that assesses products compatibility to various Green Building Rating schemes including Green Star™, NABERS, BASIX, LEED®, Estidama Pearls, BREEAM, Green Mark as relevant to the country of operation of the ecospecifier online database or publication relevant to the Product Assessment or Label.
Heavy Metal	Generally considered to include those metals with a specific gravity that is at least 5 times the specific gravity of water. Metals of concern include antimony, arsenic, bismuth, cadmium, cerium, chromium, cobalt, gallium, gold, iron, lead, manganese, mercury, nickel, platinum, silver, tellurium, thallium, tin, uranium, and vanadium
Life cycle:	consecutive and interlinked stages of a product system, from raw material acquisition or generation of natural resources to the final disposal.
Life cycle assessment (LCA)	the assessment of the environmental impact of a given product throughout its lifespan.
Life-cycle inventory (LCI):	quantifying the energy and raw material inputs and environmental releases associated with each stage of production.
Life Cycle Impact Analysis (LCIA):	assessing the impacts on human health and the environment associated with energy and raw material inputs and environmental releases quantified by the inventory.

NOAECs:	No Observed Adverse Effects Concentration. The highest level of a chemical stressor in a toxicity test that did not cause harmful effect in a plant or animal. While NOAELs and NOAECs are similar, they are not interchangeable. A NOAEC refers to direct exposure to a chemical (e.g. through gills or the skin).
NOAELs:	No Observed Adverse Effect Levels for any ill-effects that might occur. Also called NOEL is the highest dose in an investigation that does not cause ill-effects. A NOAEL refers to a dose of chemical that is ingested.
Product	Any material/s, product/s or technology performing the same functional purpose for assessment under this Standard.
Product Stewardship:	A product-centred approach to environmental protection implying that operating entities in the product's life cycle (e.g., suppliers, retailers, users) need to share responsibility for reducing its environmental impact. Practically, product stewardship is understood as the supplier's service to the customer to collect the product for reuse, recycling or reprocessing whenever the customer no longer requires its service.
Risk:	Risk is summarised as 'Hazard x exposure' a measure of the likelihood or probability of such damage occurring under particular circumstances of exposure
Routes of exposure:	Ingestion, inhalation, dermal or conjunctival.
Supplier	The party that is responsible for ensuring that products meet and, if applicable, continue to meet, the requirements on which the certification is based.
Sufficiently Biodegradable	Chemical compound biodegradability is determined to be sufficient for the purposes of this standard when: <ul style="list-style-type: none"> - if when tested with one of the methods OECD 301 A, OECD 301 E, ISO 7827, OECD 302 A, ISO 9887, OECD 302 B, or ISO 9888 it shows a percentage degradation of at least 70 % within 28 days, - or if when tested with one of the methods OECD 301 B, ISO 9439, OECD 301 C, OECD 302 C, OECD 301 D, ISO 10707, OECD 301 F, ISO 9408, ISO 10708 or ISO 14593 it shows a percentage degradation of at least 60 % within 28 days, - or if when tested with one of the methods OECD 303 or ISO 11733 it shows a percentage degradation of at least 80 % within 28 days, - or, for substances for which these test methods are inapplicable, if evidence of an equivalent level of biodegradation is presented.
Toxicity:	The ability of a chemical to produce adverse effects in living organisms i.e. damage an organ system, to disrupt a biochemical process, or to disturb an enzyme system.
Worst Case Business as Usual	A BAU product is a product that is in common usage, advertised or available within the region and market of concern, with the highest environmental impact as demonstrated by a market and LCA study of products within the same functional category.

GLOBAL GREENTAG PROGRAM OPERATION

1.0 INTRODUCTION

1.01. Global GreenTag

Global GreenTag Pty Ltd, ACN 155 663 013, is a wholly owned private sector company with no affiliation, financial interests or pecuniary involvement in the manufacturing sector.

Global GreenTag Pty Ltd (GreenTag) is a third-party Conformity Assessment Body (CAB) that conducts the GreenTag^{Cert™} Certification program, an Australian Competition and Consumer Commission (ACCC) approved Certification (Series) Mark undertaking product-focused environmental and social responsibility assessments of products and their manufacturers in accordance with this standard and under licence to Ecospecifier Pty Ltd. The program also conducted in accordance with ISO 17065 - 'Sustainability in building construction -- Environmental declaration of building products' and ISO 14024:1999 - Environmental labels and declarations — Type I environmental labelling — Principles and procedures. GreenRate Certification is also compliant with AS NZS ISO 14021:2000, "Environmental labels and declarations — Type II Self declared environmental claims".

Documents attesting to the legal registration and accreditation are available on request..

1.02. Terms of Reference

1.02.1. The Need for GreenTag

The GreenTag Program is intended to fill a current void, nationally and internationally for a consistent green building product rating scheme that is scientifically derived, life cycle assessment based and includes appropriate assessment of ecological and social issues yet cognisant of the economic impacts of products.

The scheme also satisfies the growing demand from the global green building industry for increased simplicity rather than the mushrooming complexity as many different countries introduce their own green building rating schemes with existing, sometime multiple schemes operating in the same market or region. The globalization of architectural and consulting practices also means that many design and other organisations are operating within multiple schemes simultaneously.

Currently, no equivalent integrated product rating and green building rating scheme product assessment service exists outside GreenTag.

In the Australian context GreenTag integrates a holistic life-cycle based product assessment approach with a sub-scheme designed to achieve the Certification requirements of the Green Building Council of Australia's Part I- Criteria for Evaluating Product Certification Schemes document required for third party certification of specific Green Star™ credits.

1.02.2. GreenTag Objectives

The GreenTag objective is to provide internationally relevant certification of a reliable and consistent, third party, scientifically assessed, life cycle assessment based product rating and certification system globally that simplifies the green building sector research and helps purchasers and specifiers make their decisions in full light of the ecological quality, health, resource and social impacts of their product selection.

It is also designed to provide multi-factor, multi-scheme green building rating system information to assist global suppliers present consistent, globally relevant information about ecological, health and socially preferred products in a way that allows direct numerical comparison between products to drive product improvement *to reduce impacts and promote restoration of living systems globally.*

1.03. Scope of the Program

Global GreenTag operates The Global Green Tag^{Cert™} label and its subset LCARate and GreenRate product assessment services that together:

- verify supplier environmental and health claims relating to a product or products;
- certify that the product/s meet this Standard (Program Rules);
- award a license that authorises the use of a label on products;
- is based on multi-criteria standards;

- takes an overall 'cradle to cradle' product lifecycle approach;
- indicates overall environmental preferability of a product within its particular product category and in accordance with particular threshold levels of performance;
- provides written product Environmental Performance Declarations (EPDs) in accordance with AS NZS ISO 14025 and ISO 21930;
- once they achieve 'GreenTag Bronze' conformance products will be awarded a graded achievement label that, when relevant, will via the GreenRate^{Cert™} process, also demonstrate conformance with the Green Building Council of Australia's (GBCA) Green Star Technical Manual Credits (or other country based GBC rating tool requirements, e.g. LEEDv4) including but not limited to: Mat- Materials Calculators for Fitout Interiors and other relevant tool Credits generally such as IEQ-Formaldehyde, IEQ-Volatile organic compound (VOC) and Mat-Recycled Content credits as relevant;
- include (but are not limited to) green building and development issues such as:
 - buildings & services;
 - interior Fitout, furnishings and equipment (FF&E);
 - facilities management;
 - building maintenance and operations;
 - landscape design; and
 - infrastructure sectors;
- are intended for use in both Business to Business and Business to Consumer context;
- involves both Management Committee, Expert Panel and broad stakeholder participation in the Standard setting process.
- Is subject to assessment by JAS/ANZ in conformity with ISO 17065.
- With second party audits of Product Certification undertaken by an accredited certifier.

1.04. Scope of this Document

This standard sets out essential rules under which the ecospecifier Global GreenTag^{Cert™} Ecolabel Program will assess and certify products and its various elements in Australia and internationally. This Standard also establishes the sustainability indicators and procedures in awarding the label.

1.05. Relationship to ecospecifier Materials Databases

Following successful assessment under this standard and the awarding of a label appropriate to the level of achievement, GreenTag^{Cert™} Technical Assessments will be published in a one or more, unique and comprehensive databases. These databases created by Ecospecifier, currently contain over 6000 independently verified and certified eco-materials many of which have already attained accreditation under this standard..

1.06. GreenTag Product Assessment

GreenTag assesses products across the whole-of-life (WOL) cycle, using a robust life cycle assessment based process and a key range of detailed assessment screens. The assessment and certification process incorporates a full and transparent reporting of the whole-of-environment impact assessment process in all product listings as a minimum assessment of impacts on and/or benefits to:

- Human Health;
- Environmental Quality;
- Resource Depletion; and an analysis of the
- Integrated Design benefits of the product in generating system synergies that reduce the intensity of, or need for, other products or systems within buildings thereby generating cost savings of offsets, plus;
- Biodiversity impact assessments to the extent possible;
- Other third party certification schemes; and includes
- 'Issue of Concern' mild Cautionary Comment/s where relevant;
- 'Red Light' or severe Cautionary Comment/s, where relevant.

This standard includes a unique Human Health and Eco-toxicity Ecospecifier Cautionary Assessment Process (hereinafter referred to as ESCAP) based around the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and the related EU Directive 2001/59/EC i.e., the EU Regulation on the Classification, Labelling and Packaging of Dangerous Substances and Mixtures and the related EU ESIS: European chemical Substances Information System is used to assess products based on element and compound concentrations present within a product via a full composition analysis together with a scale and intensity based risk assessment process.

The basic principle of this system is to approximate the NOAEL, or NOAEC levels of constituents within products via the ESCAP assessment process.

This approach recognises that NOAEL/NOAEC and LC/LD toxicity data are DOSE indicators and as toxicity hazard potential is a function of both dose and exposure, NOAEL/NOAEC levels or LC/LD toxicity data are, in themselves, not able to assess toxicity risk levels of products in manufacture, use (except in the case of VOCs and other gaseous emissions or with extremely detailed *in-situ* chemical specific analysis well beyond the range of any building rating scheme) or disposal.

The system adopted herein allows an approximation of the NOAEL/NOAEC after assessing the likely Probability and Severity of the possible risk before ascribing a hazard/risk level or score which according to the Expert Panel most closely reflects NOAEL/NOAECs.

This ESCAP results in the attribution of an appropriate score and four possible actions/warnings:

- unmodified inclusion of the product assessment in the database; OR
- a product listing modified with an 'Issue of Concern' mild Cautionary Comment/s including relevant R-Phrases and S-Phrases; OR
- a product listing modified with an 'Red Light' or severe Cautionary Comment/s including relevant R-Phrases and S-Phrases; OR
- exclusion from further assessment and licensing of Label.

This information is then attached to the Product Assessment or Label to ensure full transparency.

1.07. Stakeholder Process

Key stakeholders will be pro-actively approached to contribute to the consultation. A stakeholder database will be maintained to record whom has been contacted and contributed to the consultation.

- a) There shall be a public review phase in the development of the standard or later revision of which shall include one round of comment submissions by interested parties, where necessary. The round shall include a period of at least 30 days for the submission of comments. The extent of the consultation process will be determined by both the scope of the revision e.g. administrative and non-substantive changes to the standard can be made at the discretion of GreenTag on advice from the NAC without need of a consultation. The final Standard will be published on the ecospecifier.com.au or relevant country website
- b) for each round of consultation a public summary of the consultation process will be produced dealing with each substantive comment and the reasons for the decision taken by the program and published on the ecospecifier.com.au or relevant country website.

1.08. Documented Procedures

All documented procedures relating to this Standard are available to bona fide stakeholders on request, from the Program Director.

2.0 GreenTag^{Cert™} Program

GreenTag^{Cert™} is a voluntary, multi-criteria, tiered award, product rating conformance certification process and Series Certification Mark that includes two components: an 'LCARate' component that assesses products using life cycle assessment processes and a 'GreenRate' Assessment process directed at Certification within Green Building Rating Schemes in Australia and Internationally. The Market context of these associated assessment processes are shown in Figure 1. The overall GreenTag Certification process uses key Assessment Screens including:

2.01 ESCAP Health and Ecotoxicity Analysis:

ESCAP (as defined in Appendix 1 and called up in clause 4.1, SAC3) provides the means for determining key indicator comments for consumers and industry in relation to health, occupational health and safety and ecological toxicity. While these issues are dealt with to varying extents by the LCA methodology within the LCA rating process, ESCAP gives GreenTag the ability to provide precautionary statements about possible risks and impacts in a qualitative way that should be easily understood by any member of the public. The ESCAP assessment also gives GreenTag a framework by which to exclude products from the assessment if they are deemed to have too significant health and/or ecological impacts to be Certified. This provides a highly detailed, parallel process to the very broad-based LCA health and eco-impact analysis;

- REFERENCE STANDARD AUSTRALIA: Safe Work Australia HSIS System, United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and Regulation (EC) 1272/2008 - EU Regulation on the Classification, Labelling and Packaging of Substances and Mixtures and ESCAP process (see Appendix 1)
- REFERENCE STANDARD GLOBAL: United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and Regulation (EC) 1272/2008 - EU Regulation on the Classification, Labelling and Packaging of Substances and Mixtures and ESCAP process (see Appendix 1).

2.02 LCA RATE Program:

By use of GreenTag's global licence for the Sustainable Built Environments National Research Institute's (SBE NRI) (formerly Cooperative Research Centre for Construction Innovation) LCADesign and LCADetail, life-cycle assessment software suite as well as other robust sources of LCA data such as AusLCI, GreenTag integrates Life Cycle Assessment (LCA) directly into GreenTag^{Cert™} certification processes, in accordance with:

- REFERENCE STANDARD AUSTRALIA: 14040 Environmental management — Life cycle assessment — Principles and framework.
- REFERENCE STANDARD GLOBAL: 14040 Environmental management — Life cycle assessment — Principles and framework.

GreenTag integrates Corporate Social Sustainability (CSR) directly into GreenTag^{Cert™} certification processes, in accordance with:

- REFERENCE STANDARD AUSTRALIA: SA 8000
- REFERENCE STANDARD GLOBAL: SA 8000

2.03 GreenRate Program:

Where relevant, products will be GreenRate assessed against existing, relevant Green Building Rating Tool standards and indicators with summary outcomes listed on the Certificate; as well as the results of the Product assessment scored against relevant Materials Credits and Credit Points available (see below) in accordance with the process described in Section 5.0.

Note: LCA procedures above for LCARate- apply to GreenRate Greenhouse and Water Priority Areas of Concern.

2.04 GreenRate Technical Reference Standards

REFERENCE STANDARDS AUSTRALIA & NEW ZEALAND:

- a) Green Star[™]¹ Technical Manuals of currently released sector tools and subsequent tools and versions.

REFERENCE STANDARDS INTERNATIONAL:

- a) Other tools as adopted.

2.05 LCA Rate & GreenRate Pathways

¹ Green Star[™] is a Registered Trade Mark of the Green Building Council of Australia

GreenTag is assessed using 2 pathways as described in Figure 2:

- a) The LCA Rate program is used for all product assessments to award the GreenTag Label;
- b) The GreenRate program is used in parallel to the LCA Rate pathway for products relevant to green building rating systems and is displayed independently within the GreenTag Label.

2.06 GreenTag Management Committees

The GreenTag program will be overseen in each country by 2 independent committees:

- a) National Advisory Committee.
- b) International Expert Panel.

The NAC and IEP will operate in accordance with the GreenTag Program Rules for NAC and IEP Operation.

2.06.1 The National Advisory Committee

The National Advisory Committee (NAC) advises the GreenTag Management Team on the general oversight of the program operation relevant to their country or region as relevant. It provides and reviews comments on the program and provides advice on any changes to processes and the general operation of this Standard deemed necessary by the committee or any other stakeholder/s. A NAC will be formed in each country where GreenTag is operational.

The Australian NAC is comprised of representatives of industry bodies or associations typical of any NAC. It does not include suppliers representing their own or any other private organisation. It includes up to 12 members where each is selected from one of the following national organisation types:

- 3 Professional Association Representatives
- 2 Environmental/Community NGO Representatives
- 1 University Representative
- 1 Government Representative
- 5 Manufacturing Sector Industry Association Representatives

The NAC will be chaired by the GreenTag Program Director. The Committee may form sub-committees at its discretion and invite additional members as relevant to any sub-committee. The sub-committee will provide advice as necessary to the Advisory committee. A member of the Advisory Committee must chair the sub-committee.

The NAC will assist GreenTag Program operation with issues as follows:

- i. Operation of the Program
- ii. Further development of this Standard
- iii. Development of any product category specific standards
- iv. Stakeholder review processes;
- v. Dispute or Conflict resolution processes;
- vi. Appeals relating to Certification issues.

2.06.2 International Expert Panels

An expert advisory panel relevant to each major standard will advise the Board and where requested, the NAC. The Expert Panel will comprise a minimum number of 6 experts in key related fields but has no limit to the number of members that may be adopted permanently or temporarily, depending on the technical needs of the Panel.

The Expert Panels will be chaired by the GreenTag Program Director. Expert Panels may form Technical sub-panels at its discretion and invite additional members as relevant to any sub-panel. The sub-panel will provide advice as necessary to the Expert Panel. A member of the Expert Panel must chair the Technical sub-panels.

The IEPs will assist GreenTag Program operation with issues as follows:

- i. Technical issues relating to further development of the relevant Standard;
- ii. Technical issues relating to development of any product category specific standards
- iii. Technical aspects related to Dispute or Conflict resolution processes.

2.06.3 Voting, Committee & Panel Operation

The voting of both the National Advisory Committee and International Expert Panels is on a consensus basis. If consensus is not possible a minimum of 2/3 of the quorum of the Committee or the Panel present is required to approve any issue for recommendation to the Board.

2.07 Conflict Resolution

This programme has adopted a conflict resolution process to manage disputes and complaints regarding compliance with this Standard, auditing outcomes and applicants. The Policy aims to ensure that the conflict resolution process is:

- i. independent and free from conflicts of interest;
- ii. completed in a timely manner;
- iii. provides an opportunity for appeal by the aggrieved party; and
- iv. provides for public notification of the outcome of the grievance resolution process.

MODEL RATING SCHEME FOR ADDRESSING SUSTAINABILITY & INTERNATIONAL GREEN BUILDING RATING SCHEMES: EXAMPLE AUSTRALIA

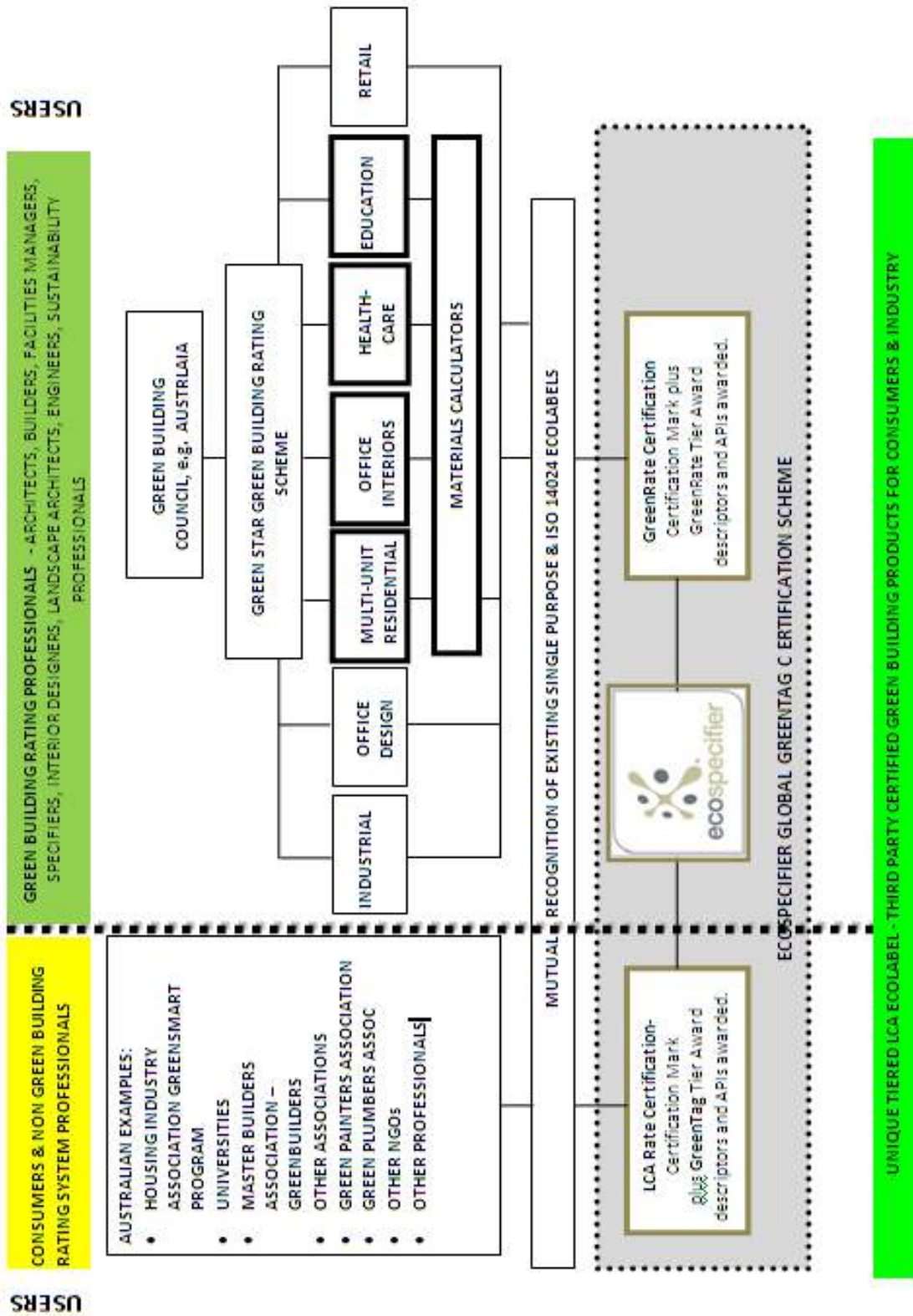


Figure 1:

GreenTag and GreenRate Certification Context

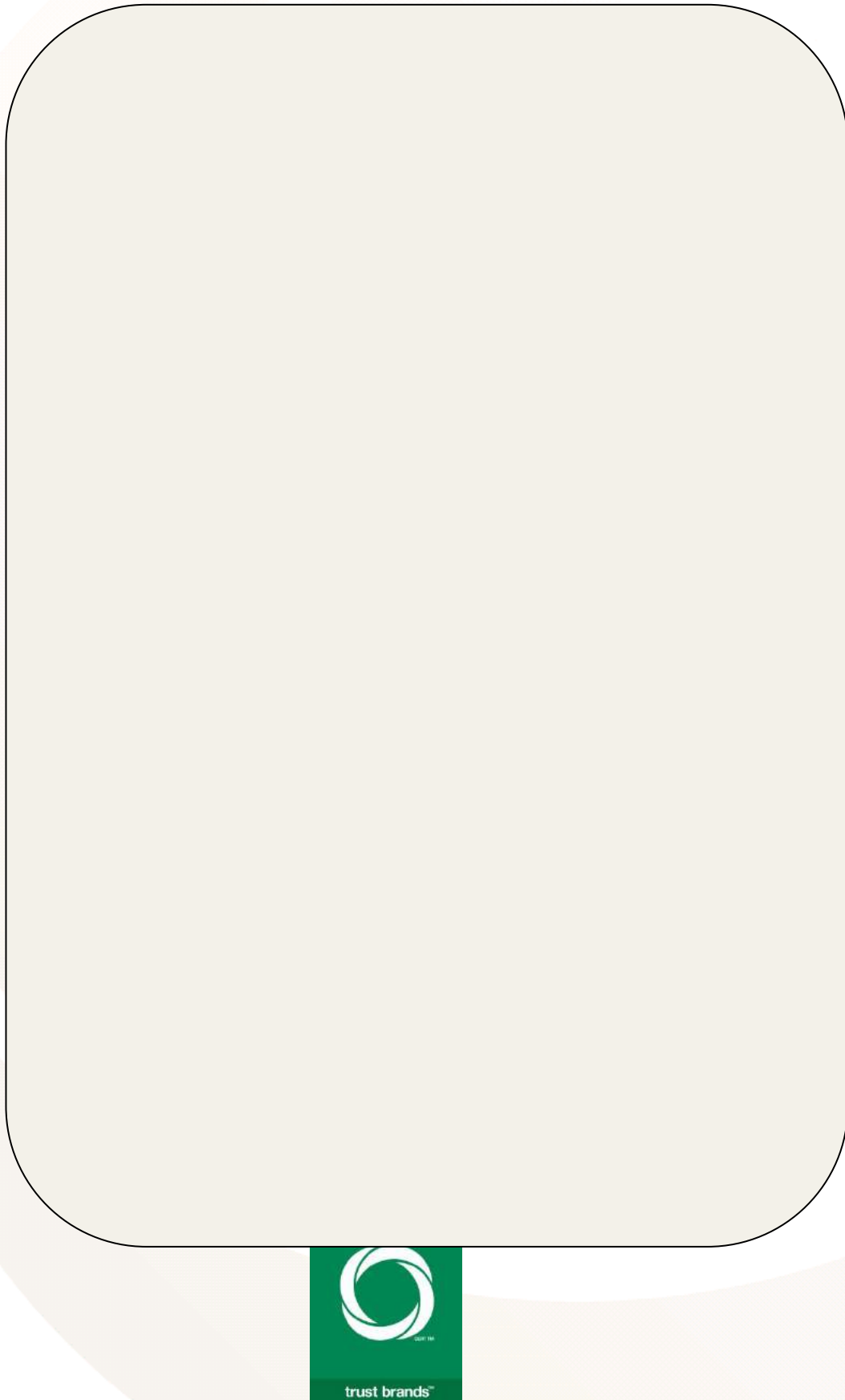


Figure 2: GreenTag Certification Process Diagram

3.0 GREENTAG PROGRAM OPERATION

3.01 Standards

The GreenTag^{Cert™} Scheme is essentially a 4 tier (Bronze, Silver, Gold and Platinum), points based rating system, recognizing 2 levels of conformance (Streamlined and Plus) in accordance with the LCA Rate Program Standard in Section 4.0 of this Standard and recognition of achievement of other factors including certification against the GreenRate Program Standard in accordance with Section 5.0 of this Standard.

- The GreenRate product certification program is a parallel, tiered conformance assessment system based on Green Building Rating Scheme Manuals relevant to the Scheme e.g. Green Star™ Technical Manuals, or other relevant Technical Specification relating to other National or NGO based Green Building Rating Scheme under which a product is to be assessed. Prior to any GreenRate Certification being formally accredited by each Green Building Council, NGO or Government Agency, GreenRate certification is advisory only.
- In Australia and New Zealand, GreenRate is recognised for Green Star™ conformance assessment, having been developed in accordance with the Green Building Council of Australia's (GBCA) Assessment Framework for Multi-Criteria Product Certification Schemes and is a GBCA recognised product certification scheme.

Both programs are to be assessed under these and related and Normative Standards with the overall program created and maintained in accordance with the principles of ISO 17065, ISO 14024, ISO 14021 and ISO 9001:2008.

3.02 Awarding the Label

Awarding the GreenTag Label is based on:

1. Achievement of one of the 4 tiers within the LCA Rate Certification process with awarding of a particular tier recognised by specific text-based and graphic descriptors within the Series Mark.
2. Where a GreenRate assessment is appropriate a product will also be assessed under the GreenRate Certification process and awarded the relevant GreenRate Series Mark.

A licence to use the Label will include the relevant Series Mark including the appropriate and tier descriptor, LCA Rate Assessment results, Certificate, additional graphics and Additional Performance Information (API) as determined relevant (See Section 3.05 below).

This unique combination of, Certification Mark, LCA Rate tier attainment descriptor, graphics, GreenRate Assessment results and API if relevant, will be created for each product assessed, based on the results of the full Product Assessment and will, on Certification, be Licensed to the supplier for its use (along with use by its agents/representatives and licensees) in advertising and marketing materials relevant to the country (or countries) in which the product is assessed.

The unique artwork and Series Mark variant will be provided to the Applicant for use as a swing tag on products, printed onto packaging, in marketing, advertising, electronic media and online distribution etc. (See Appendix 3 for current graphics).

3.03 Label Rating Tiers

The 4 rating tiers from lowest to highest are Bronze, Silver, Gold and Platinum. The scoring system to determine tier performance is as specified in Section 4.2.31.

3.04 Audited LCA 'PLUS' and LCA 'Streamlined' Recognition

PLUS: Where the product has undergone a site-based, third party audited assessment process, by GreenTag and an accredited third party agent, the Tier Award level achieved will be modified by the issuing of a Licence to use the 'PLUS' recognition in addition to the Tier Award recognition on the label.

Streamlined: Where the product uses industry sourced generic inventory and has not undergone a site-based third party audited assessment process, by an accredited RABQSA staff or third party agent, the Tier Award level achieved will be modified by the issuing of a Licence to use the 'Streamlined' recognition in addition to the Tier Award recognition on the label.

3.05 Additional Performance Information:

In addition to the Label tier of achievement, the graphic variants of the label for swing tags, marketing etc will also recognise the achievements of the product in relation to the following issues where relevant and possible:

- Whether any 'Issues of Concern' (IoC) exist for the product in accordance with the ESCAP policy;
- Whether any 'Red Light Issues' (RLI) exist for the product in accordance with the ESCAP policy;
- Embodied Water: : the amount of municipal supply sourced potable or groundwater water embodied in Litres/functional unit;
- Results of the GreenTag GreenRate assessment system. Comments relating to:
- The Climatic sensitivity of the information;
- Any other issues of merit or relevance deemed appropriate in the societal or environmental interest;
- Other Green Building Rating Scheme compatibility where relevant;
- Baseline Assessment Comparison;
- A single number GreenTag Ecopoint score;
- Whether the level of Assessment warrants the PLUS or Streamlined recognition;
- Any other issues of merit or relevance appropriate in societal or environmental interest;
- Program assessment information:
 - clarifying whether a product, service or process is certified;
 - Country of Assessment;
 - Date of issue of certificate;
 - 'Valid to' date;
 - Licence number;
 - Assessment version number and date;
 - Signature and title of authorized officer;
 - Name and Contact details of the Operator;
- Product information:
 - name and address of the manufacturer;
 - identification of the product certified and the lot, batch, serial number, model or type number to which the certification applies;
- Any Green Building Council Third Party Certifier Accreditation;
- Any other Certification body Accreditation e.g. JAS/ANZ and GreenTag second party auditor.

See Sections 4.0 and 5.0 for detail of Product Assessment Processes.

3.06 Online Database/s:

Once GreenTag Certified, the product will be listed with appropriate Award recognition, on the globalgreentag.com and [ecospecifier](http://ecospecifier.com) online databases relevant to the countries/regions the product is available to, e.g. in Australia, the www.globalgreentag.com, www.ecospecifier.com.au site and/or the www.ecospecifier.com site or other websites relating to specific geographical areas.

3.07 Currency and Renewal

Each Product Assessment will have a currency of one year and requires annual renewal to maintain the Licence. Suppliers are required to have product/s re-certified each year based on submission of a Supplier Declaration by a Director or Principal. Certificates that involve audit assessment will require re-audit on each 3rd Anniversary. Any Certified product will include the validity period of the assessment clearly within the listing.

3.08 Product Fitness Characteristics

Fitness for purpose will be considered as an essential indicator of product fitness for awarding of a licence. For the purpose of this Standard, fitness for purpose implies that a product satisfies health, safety and consumer performance needs.

3.09 Stakeholder Consultation

Key Professional, Industry and other stakeholder groups will be consulted in a process in accordance with ISO 14024:1999. Formal open participation among interested parties will be established from the beginning for the purpose of selecting and reviewing product categories, product environmental criteria and functional characteristics.

3.10 System Development

The rating score thresholds shown in this document are subject to ongoing development prior to launch and as follows:

3.10.1 Continuous Improvement

The Standard Indicator Thresholds will be regularly reviewed as part of the Continuous Improvement process in accordance with ISO 9001:2008 and ISO 14024:2000.

3.10.2 Standard Review Period

The period of review for this Standard will be maximum 3 years, however, in line with Continuous Improvement; Product Assessment Criteria may be reviewed within this period.

3.11 Recognition of Assessment Version

Any change in thresholds or Product Assessment Criteria will be recognised by a change in Assessment version number and date within the artwork issued to products bearing the Tiered Certification Mark. Where a product does not comply with subsequently lowered (or raised) thresholds, the product will continue to be able to use the originally issued Certified Mark Logo showing the Standard version and date against which the Certificate was originally issued until the 3rd anniversary of assessment, when it is required to be assessed under current version or the Licence is revoked.

3.12 Compliance and verification

All aspects of product compliance and performance shall be verified by GreenTag Accredited Assessors within the level of compliance recognised by the Tier Awards, with the Lead Assessor being finally responsible for the determination of the Awards. The methods for assessing compliance make use of the following evidence where relevant, in order of preference:

- Certification under ISO and IEC standards: and/or
 - other internationally recognized standards; and/or
 - regional and national standards; and/or
- other repeatable and reproducible methods which follow accepted principles of good laboratory practice (see ISO/IEC 17025 for information on good laboratory practice); and/or
- Third party verified data sources;
- Manufacturer Declarations under Legal Requirements e.g. MSDS;
- GreenTag expert assessment and/or audit; and
- supplier provided evidence (supported by audit where required or noted as not audited).

3.13 Transparency:

Transparency will be maintained through all stages of development and operation. Transparency implies that information shall be available to interested parties for inspection and comment where appropriate. Adequate time will be allowed for comments to be submitted including:

- selection of product categories;
- selection and development of product environmental criteria;
- product function characteristics;
- testing and verification methods;
- certification and award procedures
- review period;
- period of validity;
- non confidential evidence on which the awarding of the label is based;
- funding sources for the program development (e.g. fees, government financial support etc.);
- compliance verification.
- transparency will not conflict with the requirements of 3.19.

3.14 International trade aspects:

Procedures and requirements are not prepared, adopted or applied with a view to, or with the effect of creating unnecessary obstacles to international trade. The applicable provisions and interpretations of the World Trade Organization (WTO) will be taken into account.

3.15 Accessibility

Application to, and participation in, the GreenTag^{Cer™} program is open to all potential manufacturer and supplier proponents with products that successfully fulfill the product environmental criteria for a given rating tier and other program requirements. Any successful supplier/product proponent will be entitled to be granted a licence and authorized to use the label. Fees and conditions to access the GreenTag program will be consistently applied across

all applicants, without any conditions related to the size of the supplier or membership of any association or group, nor shall certification be conditional upon the number of certificates already issued.

3.16 Scientific basis of product environmental criteria

The development and selection of criteria are based on sound scientific, life cycle impact assessment and engineering principles. The criteria are derived from data that support the claim of environmental preferability.

3.17 Avoidance of conflict of interest

GreenTag will ensure that the process is free from undue influence and that sources of funding will not create a conflict of interest.

3.18 Costs and fees

Fees may include application, assessment and certification or recertification, testing, administration or marketing support fees as may be published or provided from time to time. In principle, the costs and fees for the granting and maintaining of a label will:

- i) be based on recovery of all program costs and
- ii) be kept as low as possible to maximize accessibility.
- iii) be applied equitably to all applicants and licensees.

Separate fees may be imposed for specific LCI development or if on-site audits are deemed to be required. In general, any such fee will be identified in advance of commitment to the product assessment. Any Audit fees will:

- i) include reimbursement for costs associated with the audit including travel, meals and misc. costs;
- ii) be provided in the form of a lump sum quotation;
- iii) be paid by the supplier a minimum 7 days in advance of departure or inspection date if local inspectors are being used and be subject to cancellation fees once confirmed.

Fees will not be based on a percentage of turnover.

3.19 Confidentiality

The confidentiality of all information which is identified as confidential via the execution of an agreed Confidentiality Agreement will be maintained.

3.20 Mutual recognition

Mutual recognition between GreenTag and other ecolabel organisations, based on mutual confidence, is welcomed and encouraged. Mutual recognition may include but not be limited to:

- mutual recognition of tests,
- inspections, conformity assessment, administrative procedures and, where appropriate, product assessment criteria.
- to ensure full transparency, information on existing mutual recognition agreements with other eco-labelling bodies shall be made available as appropriate.

3.21 Documentation

Suppliers seeking Certification must provide the following information as a minimum:

- i) a full declaration of product composition of homogeneous materials to 0.1% (or 100ppm) of composition or equivalent Bill of Components (or otherwise required by sector specific or supplementary standards);
- ii) all required GreenTag Questionnaires and Declarations completed and including place of manufacture or assembly of each raw material or component;
- iii) Materials Safety Data Sheet (MSDS) for all chemical components including constituent dyes, tints or inks;
- iv) current certification for any ISO or other standards compliance claimed- including FSC, PEFC (or any member scheme), ISO 9001, 14001, other 14024 Type 1 Ecolabels, or 14025/21930 Type 3 Environmental Performance Declarations
- v) third party laboratory testing or other audits as required to demonstrate key product claims or to demonstrate compliance with specific product standards as per Appendix 2 ;
- vi) where emissions to water are involved in key manufacturing processes (e.g. wool scouring, water bath dyeing, leather tanning etc), effluent emissions testing showing compliance with Environment Protection Authority/Government Licence conditions or ANZEC or WHO Water Quality Guidelines;
- vii) compliance with relevant social and environmental legislative or other legal requirements including International Labour Organisation's conventions;
- viii) indication of status regarding participation in Corporate Social Responsibility (CSR) programs or Standards e.g. SA8000 or the Global Reporting Initiative's (GRI) 'Sustainability Reporting Guidelines';
- ix) any other information deemed necessary by GreenTag to demonstrate compliance.

- x) Submit to any audit of materials supply chain or manufacturing processes or emissions related issued as required

A supplier seeking GreenRate Certification must also provide evidence of the following as a minimum:

- a) the post consumer and post industrial recycled content of all constituents;
 - b) specific VOC, TVOC and emissions of components;
 - c) formaldehyde emissions;
 - d) any third party certified life cycle data as relevant
- all in accordance with required testing protocols.

Where a supplier seeks GreenRate Certification for a product that relates to the Green Star Materials Calculators, evidence towards compliance to the following must also be provided:

- i) data on material usage and waste generation in a format that allows optimisation of the production process,
- ii) a commitment to optimise the production process;
- iii) resource efficiency, i.e., optimisation of materials sourcing and production processes
- iv) water use accounting- sufficient to allow calculation and reporting of comprehensive product life cycle water footprint (where relevant)
- v) fitness for purpose;
- vi) availability of replacement parts and repair/service functions;
- vii) product stewardship program (where relevant)
- viii) design for disassembly (where relevant)

All evidence submitted to be in accordance with the relevant GBCA Green Star Technical Manuals or other Green Building Scheme technical requirements.

For GreenRate assessments relating to International Green Building Rating Schemes, submission requirements may change according to the Credits and the Scheme being assessed.

Under some circumstances, aspects of the above maybe subject to on-site audit. The supplier will be informed in advance of committing to the Certification whether audit will be part of the assessment. Audits may occur with notice or without subject to the issue being assessed.

3.21.1 Documentation Requirements for Recertification

Each year prior to renewal of the Licence, the supplier must supply as a minimum, a Declaration signed by a Director or Principal of the company or organisation, stating:

- i) There have been no changes to the product's design, specification or composition of the product;
 - ii) There have been no changes to the manufacturing process of the product;
 - iii) There have been no changes to the sourcing of raw materials of the product;
 - iv) There have been no relevant changes to the Management Systems relating to the product Certification;
 - v) or changes in the ownership, structure or management of the supplier,;
- OR
- vi) Providing full information as to the changes and if deemed necessary by GreenTag any further details requested.
 - vii) Additional documents required if applicant seeks a higher certification level;
 - viii) Submitting to audit if deemed necessary by GreenTag.

3.22 Supplier Responsibility

It is the responsibility of the supplier to:

- a) complete an official Application form, Terms and Conditions and Client Agreement, Product Declaration, all signed by a duly authorized representative of the applicant, in which or attached to which are the following:
 - i. the scope of the desired certification;
 - ii. a statement that the applicant agrees to comply with the requirements for certification and to supply any information needed for evaluation of products to be certified.
- b) The applicant, as a minimum, shall provide the following:
 - i. corporate entity, name, address and legal status;
 - ii. a definition of the products to be certified, the certification system, and the standards against which each product is to be certified if known to the applicant;
 - iii. applicable fee;
 - iv. A completed product Questionnaire and all other documentation required by the Program Procedures listed in 3.21 above and requested throughout the assessment;
- c) Maintain its annual Certification fee 12 months in advance as required;
- d) Comply with the Licence and the rules for the use of the Logo contained in the Style Guidelines;

- e) Not reproduce in part any Product Assessment without written approval from GreenTag Program Director;
- f) Apply the Logo only to packing advertising and marketing collateral directly related to the Certified Product;
- g) Avoid Incorrect references to the certification system or misleading use of licences, certificates or marks, found in advertisements, catalogues, etc., to avoid withdrawal of certificate, corrective, legal or other suitable actions.
- h) Makes all necessary arrangements for the provision of required evidence and/or conduct of the evaluation, including provision for examining documentation and access to all areas, records (including internal audit reports) and personnel for the purposes of evaluation (e.g. testing, inspection, assessment surveillance, reassessment) and resolution of complaints;
- i) Inform GreenTag of any change in the Certified product or manufacturing process that is likely to significantly affect the product's design or specification, or changes in the ownership, structure or management of the supplier, if relevant, or any other information that indicates the product may no longer comply with the requirements of this Standard;
- j) In the event of GreenTag determining changes have been made to product or supplier details as per 3.22.i) above and not notified to GreenTag, the supplier will, on receipt of an GreenTag 'Notice to Rectify', immediately provide GreenTag with the required details and any fees necessary to allow recertification. Failure to do so may result in the withdrawal of the Licence. If the product Licence is withdrawn, the manufacture must, within 7 days, cease to further promulgate all product marketing, packaging, advertising or other material carrying the logo. Furthermore all material carrying the Logo will be withdrawn within 90 days.
- k) keep a record of all complaints made known to the supplier relating to a certified product's compliance with requirements of the relevant standard :
 - i. make these records available to the certification body when requested;
 - ii. take appropriate action with respect to such complaints and any deficiencies found in products or services that affect compliance with the requirements for certification;
 - iii. document the actions taken.

3.23 GreenTag Organisation

To foster confidence in its operation of the GreenTag ^{Cert™} program, GreenTag undertakes to:

- a) be impartial
- b) be responsible for decisions relating to its granting, maintaining, extending, suspending and withdrawing of certification;
- c) identify the management (committee, group or person) that will have overall responsibility for all of the following:
 - i. performance of testing, inspection, evaluation and certification as defined in this Guide,
 - ii. formulation of policy matters relating to the operation of the certification body,
 - iii. decisions on certification,
 - iv. supervision of the implementation of its policies,
 - v. supervision of the finances of the body,
 - vi. delegation of authority to committees or individuals as required to undertake defined activities on its behalf,
 - vii. technical basis for granting certification;
- d) have documents which demonstrate it is a legal entity;
- e) have a documented structure which safeguards impartiality including provisions to ensure the impartiality of the operations of the certification body; this structure shall enable the participation of all parties significantly concerned in the development of policies and principles regarding the content and functioning of the certification system;
- f) ensure that each decision on certification is taken by a person(s) different from those who carried out the evaluation;
- g) have rights and responsibilities relevant to its certification activities;
- h) have adequate arrangements to cover liabilities arising from its operations and/or activities;
- i) have the financial stability and resources required for the operation of a certification system;
- j) employ a sufficient number of personnel having the necessary education, training, technical knowledge and experience for performing certification functions relating to the type, range and volume of work performed, under a responsible senior executive;
- k) have a quality system giving confidence in its ability to operate a certification system for products;
- l) have policies and procedures that distinguish between product certification and any other activities in which the certification body is engaged;

- m) together with its senior executive and staff, be free from any commercial, financial and other pressures which might influence the results of the certification process
- n) have formal rules and structures for the appointment and operation of any committees which are involved in the certification process; such committees shall be free from any commercial, financial and other pressures that might influence decisions; a structure where members are chosen to provide a balance of interests where no single interest predominates will be deemed to satisfy this provision;
- o) ensure that activities of related bodies do not affect the confidentiality, objectivity and impartiality of its certifications, and it will not
 - i) supply or design products of the type it certifies,
 - ii) give advice or provide consultancy services to the applicant as to methods of dealing with matters which are barriers to the certification requested,
 - iii) provide any other products or services which could compromise the confidentiality, objectivity or impartiality of its certification process and decisions;
- p) analyse relationship with related bodies to determine possibilities for conflict of interest:
 - i. employees: are not involved in certification process if they have any conflict of interest with any client within two years of the date of application for certification;;
 - ii. subcontractors: are required to report any conflict of interest prior to executing the project contract;
 - iii. clients: are not provided advice or consulting in relation to achieving certification;
 - iv. partners: remain independent.
- q) have policies and procedures for the resolution of complaints, appeals and disputes received from suppliers or other parties about the handling of certification or any other related matters.

3.24 GreenTag Responsibility

GreenTag further undertakes to comply with the detailed requirements of ISO 17065 'Sustainability in building construction -- Environmental declaration of building products', including but not limited to the following:

3.24.1 Staff

- a) ensure personnel of shall be competent for the functions they perform, including making required technical judgments, framing policies and implementing them. The person who takes the decision on granting/withdrawing certification has a level of knowledge and experience sufficient to evaluate the information obtained from the evaluation process.
- b) clearly document instructions that are available to the personnel describing their duties and responsibilities. These instructions shall be maintained up to date;
- c) Clearly define the minimum relevant criteria for the competence of personnel;
- d) require its personnel involved in the certification process to sign a contract or other document by which they commit themselves:
 - i) to comply with the rules defined by GreenTag, including those relating to confidentiality and independence from commercial and other interests; and
 - ii) to declare any potential conflicts including prior and/or present association on their own part, or on the part of their employer, with a supplier or designer of products to the evaluation or certification of which they are to be assigned.
- e) ensure that and document how, any contracted personnel' for their own part, and on the part of their employer if any, satisfy all- the requirements for personnel outlined in the herein.
- f) Independent Auditors: require product auditors to be accredited auditors registered by RABQSA, IRCA or other national or international auditor accreditation system and to be completely independent in their assessment of products. Assessors do not make any decision on granting, maintaining, extending, suspending or withdrawing certification;
- g) maintain information on the relevant qualifications, training and experience of each member of the personnel involved in the certification process. Records of training and experience to be kept up to date, in particular the following:

- i) name and address;
- ii) organisation affiliation and position held;
- iii) educational qualification and professional status;
- iv) experience and training in each field of the certification body's competence;
- v) date of most recent updating of records;
- vi) performance appraisal.

3.24.2 Fees

Maintain a current uniform Schedule of fees equal for all products and notify suppliers in advance of any change to the fees;

3.24.3 Confidentiality

- a) execute a Confidentiality Agreement on request by any supplier and ensure this agreement also binds all staff, assessors, subcontractors and/or agents where relevant;
- b) have adequate arrangements consistent with applicable laws to safeguard confidentiality of the information obtained in the course of its certification activities at all levels, including committees and external bodies or individuals acting on its behalf;

3.24.4 Application for Certification

- a) provide applicants an up-to-date detailed description of the evaluation and certification procedures, appropriate to the GreenTag^{Cert™} program, and the documents containing the requirements for certification, the applicants' rights and duties of suppliers which have certified products (including fees to be paid by applicants and suppliers of certified products).
- b) require suppliers to:
 - i. always complies with the relevant provisions of the certification programme;
 - ii. make all necessary arrangements for the conduct of the evaluation, including provision for examining documentation and access to all areas, records (including internal audit reports) and personnel for the purposes of evaluation (e.g. testing, inspection, assessment surveillance, reassessment) and resolution of complaints;
 - iii. make claims regarding certification only in respect of the scope for which certification has been granted;
 - iv. not use its product certification in such a manner as to bring the certification body into disrepute and does not make any statement regarding its product certification which the certification body may consider misleading or unauthorized;
 - v. upon suspension or cancellation of certification, discontinue its use of all advertising matter that contains any reference thereto and returns any certification documents as required by GreenTag;
 - vi. use certification only to indicate that products are certified as being in conformity with specified standards;
 - vii. endeavour to ensure that no certificate or report nor any part thereof is used in a misleading manner;
 - viii. make comment or inclusions solely in accordance with license requirements in making reference to its product certification in communication media such as online, emails, documents, brochures or advertising.
 - ix. provide any explanation needed to the applicant in relation to the operation of GreenTag. If requested, additional application information shall be provided to the applicant.

3.24.5 Preparation for evaluation

- a) Before proceeding with evaluation, GreenTag will conduct, and maintain records of, a review of the application for certification to ensure that
 - i. the requirements for certification are clearly defined, documented and understood
 - ii. any difference in understanding between GreenTag and the applicant is resolved
 - iii. GreenTag has the capability to perform the certification service with respect to the scope of the certification sought and, if applicable, the location of the applicant's operations and any special requirements.
- b) prepare a plan for evaluation activities to allow for the necessary arrangements to be managed
- c) assign personnel appropriately qualified to perform the tasks for the specific evaluation. Personnel will not be assigned if they have been involved in, or been employed by a body involved in, the design, supply, installation or maintenance of such products in a manner and within a time period which could

conflict with impartiality ensuring that a comprehensive and correct evaluation is carried out, the personnel involved will be provided with the appropriate working documents.

3.24.6 Product Certification and Licensing

- a) evaluate the product in accordance with information provided;
- b) determine whether or not to certify a product based on the information gathered during the evaluation process and any other relevant information. All decisions relating to Product Certification shall be made by the Program Director or delegate (who shall be a competent person, not performing product evaluation).
- c) provision of a Licence for use of the Logo) and Rules for Use of the Mark, Style Guide and Product Certification Documents if the product assessment report supports Certification;;
- d) re-evaluate the Product Certification in the event of changes significantly affecting the product's design or specification, or changes in the standards to which compliance of the product is certified, or changes in the ownership, structure or management of the supplier, if relevant, or in the case of any other information indicating that the product may no longer comply with the requirements of the certification system;
- e) give 14 days Notice to Rectify in the event of GreenTag determining changes have been made to product or supplier details as per 3.22 above and GreenTag has not been notified. Thereafter GreenTag may withdraw the Licence. Any product for which the Licence has been withdrawn will be published by GreenTag by means of Public Notice on its website/s and in two consecutive Product Newsletter e-letter broadcasts.
- f) ensure that activities of related bodies do not affect the confidentiality, objectivity and impartiality of its certifications, and it shall not:
- g) not delegate authority for granting, maintaining, extending, suspending or withdrawing certification to an outside person or body.
- h) provide to each supplier offering certified products, formal certification documents such as a letter or a certificate signed by an officer who has been assigned such responsibility. These formal certification documents shall permit identification as a minimum, of the following:
 - i. the name and address of the supplier whose products are the subject of certification;
 - ii. the scope of the certification granted, including, as appropriate,
 - 1) the products certified, which may be identified by type or range of products,
 - 2) the product standards or other normative documents to which each product or product type is certified,
 - 3) the applicable certification system;
 - 4) the effective date of certification, and the term of the certification if applicable.
- i) decide, in response to an application for amendment to the scope of a certificate already granted, what, if any, evaluation procedure is appropriate in order to determine whether or not the amendment should be made and act accordingly. Decision will be made by the Program Director or delegate (who shall be a competent person, not performing product evaluation).
- j) may require re-evaluation of the product in the instance the supplier or supplier informs or GreenTag determines that any of the following changes have occurred and the changes significantly affect the product. The changes that may trigger re-evaluation if relevant are:
 - i. product design, specification or composition,
 - ii. changes in the standards to which compliance of the product is certified,
 - iii. changes in the ownership, structure or management of the supplier,
 - iv. intended modification to the product, manufacturing process or, if relevant, its quality system which affect the conformity of the product.
 - v. any other information indicating that the product may no longer comply with the requirements of the certification system.

In the case of any of the above occurring, GreenTag will determine whether the announced changes require further investigations. If such is the case, the supplier is not permitted to release certified products resulting from such changes until GreenTag has notified the supplier accordingly.
- k) review of the product is undertaken on a minimum annual basis.
- l) surveillance of the certified products is to be documented
- m) personnel appointed to evaluate the conformance of the products shall provide GreenTag with a report of findings as to the conformity with all the certification requirements;

- n) promptly bring to the applicant's notice GreenTag's full Product Assessment report (Product Listing) on the outcome of the evaluation identifying any nonconformities that have to be discharged in order to comply with all of the certification requirements and the extent of further evaluation or testing required. If the applicant can show that remedial action has been taken to meet all the requirements within a specified time limit, the certification body shall repeat only the necessary parts of the Initial procedure.
- o) give due notice of any changes it intends to make in requirements for certification. Following the publication of changed requirements, GreenTag will verify that each supplier makes any necessary adjustments within a reasonable time.
- p) exercise proper control over ownership use and display of licenses, certificates and marks of conformity.

3.25 Recognition of Testing Laboratories

Only testing undertaken by laboratories that are registered by the Australian National Association of Testing Authorities (NATA) or is approved by a member of the International Laboratory Accreditation Cooperation (ILAC) or the Asia Pacific Laboratory Accreditation Cooperation (APLAC) are recognised under this standard.

3.3 GreenTag Operations

GreenTag will take all steps necessary to evaluate conformance with the relevant product standards according to the requirements of GreenTag (or other specific product certification system-see Note 2 below). GreenTag will specify the relevant standards or parts thereof and any other requirements such as sampling, testing and inspection requirements which form the basis for the applicable certification system. In conducting its certification operations, GreenTag will observe, as appropriate, the requirements for the suitability and competence of body(ies) or person(s) carrying out testing, inspection and certification/ registration as specified in ISO/IEC Guides 25, 39 and 62.

3.4 Subcontracting

When GreenTag subcontracts work related to certification (e.g. testing or inspection) to an external body or person, a properly documented agreement covering the arrangements including confidentiality and conflict of interest will be drawn up. GreenTag will:

- a) take full responsibility for such subcontracted work and maintain its responsibility for granting, maintaining, extending, suspending or withdrawing certification;
- b) ensure that the subcontracted body or person is a competent accredited auditor and complies with the applicable provisions of 17065 and other standards and guides relevant to testing, inspection or other technical activities (see Note 1 below), and is not involved either directly or through the person's employer with the design or production of the product in such a way that impartiality would be compromised;
- c) obtain the applicant's consent;
- d) have arrangements in place for confirming the scope, currency and applicability of the certification it is relying upon, and other data pertaining to the competency of the body it is relying upon, before the issue of its own certification.

Notes:

- 1) Where work related to certification has been undertaken prior to the application for certification, the body may take account of it, provided it can take responsibility as detailed in 3.4 a) and satisfy itself regarding the matters detailed in 3.4 b).
- 2) The requirements given in 3.4 a) and b) are also relevant by extension, when a certification body uses, for granting its own certification, work performed by another certification body with which it has signed an agreement.

3.5 Quality system

- 3.5.1 The management of GreenTag having executive responsibility for quality has defined and documents its policy for quality and its objectives for and commitment to, quality. The management undertakes to ensure that this policy is understood, implemented and maintained at all levels of the organisation.
- 3.5.2 GreenTag will continue to operate an effective quality system in accordance with the relevant elements of 17065 as below appropriate for the type, range and volume of work performed. This quality system will be documented and the documentation available for use by the certification body staff. GreenTag further undertakes to ensure effective implementation of the documented quality system, procedures and instructions and designate a person having direct access to its highest executive level who, irrespective of other responsibilities, shall have defined authority for:
 - a) ensuring that a quality system is established, implemented and maintained in accordance with this Guide, and

- b) reporting on the performance of the quality system to the body's management for review and as a basis for improvement of the quality system.

3.5.3 The quality system is documented in a quality manual and associated quality procedures, and the manual contains or refers to at least the following:

- a) a quality policy statement;
- b) a brief description of the legal status of the certification body, including the names of its owners and, if different, names of the persons who control it;
- c) the names, qualifications, experience and terms of reference of the senior executive and other certification personnel, both internal and external;
- d) an organization chart showing lines of authority, responsibility and allocation of functions stemming from the senior executive;
- e) a description of the organization of the certification body, including details of the management (committee, group or person) identified in 3.2 c), its constitution, terms of reference and rules of procedure;
- f) the policy and procedures for conducting management reviews;
- g) administrative procedures including document control;
- h) the operational and functional duties and services pertaining to quality, so that the extent and limits of each person's responsibility are known to all concerned;
- i) the procedure for the recruitment, selection and training of certification body personnel and monitoring of their performance;
- j) a list of its approved subcontractors and the procedures for assessing, recording and monitoring their competence;
- k) its procedures for handling nonconformities and for assuring the effectiveness of any corrective and preventive actions taken;
- l) procedures for evaluating products implementing the certification process, including:
 - i) conditions for issue, retention and withdrawal of certification documents,
 - ii) controls over the use and application of documents employed in the certification of products; the policy and procedure for dealing with appeals, complaints and disputes; its procedures for conducting internal audits, based on the provisions of ISO 10011-1

3.6 Conditions and procedures for granting, maintaining, extending, suspending and withdrawing certification

3.6.1 The conditions for granting, maintaining and extending certification and the conditions under which certification may be suspended or withdrawn, partially or in total are included in the Licence and Terms and Conditions..

3.6.2 The QMS includes procedures to:

- a) grant, maintain, withdraw and, if applicable, suspend certification;
- b) extend or reduce the scope of certification;
- c) re-evaluate, in the event of changes significantly affecting the product's design or specification, or changes in the standards to which compliance of the product is certified, or changes in the ownership, structure or management of the supplier, if relevant, or in the case of any other information indicating that the product may no longer comply with the requirements of the certification system.

3.7 Internal audits and management reviews

3.7.1 GreenTag conducts periodic internal audits covering all procedures in a planned and systematic manner, to verify that the quality system is implemented and is effective in ensuring that:

- a) personnel responsible for the area audited are informed of the outcome of the audit;
- b) corrective action is taken in a timely and appropriate manner; and
- c) the results of the audit are documented.

3.7.2 GreenTag's management with executive responsibility reviews its quality system at defined intervals which are sufficiently short to ensure its continuing suitability and effectiveness in satisfying the requirements of 17065 and the stated quality objectives. Records of such reviews are maintained.

3.8 Documentation

- 3.8.1 GreenTag ^{Cert™} provides (through publications, electronic media or other means), update at regular intervals, and make available on request, the following:
- information about the authority under which GreenTag operates as certification body;
 - a documented statement of its product certification system, including its rules and procedures for granting, maintaining, extending, suspending and withdrawing certification;
 - information about the evaluation procedures and certification process related to GreenTag ^{Cert™};
 - a description of the means by which the organization obtains financial support and general information on the fees charged to applicants and to suppliers of certified products;
 - a description of the rights and duties of applicants and suppliers of certified products, including requirements, restrictions or limitations on the use of the certification body's logo and on the ways of referring to the certification granted;
 - information about procedures for handling complaints, appeals and disputes;
 - a directory of certified products and their suppliers.
- 3.8.2 GreenTag has established and maintains procedures to control all documents and data that relate to its certification functions. These documents shall be reviewed and approved for adequacy by appropriately authorized and competent personnel prior to issuing any documents following initial development or any subsequent amendment or change being made. A listing of all appropriate documents with the respective issue and/or amendment status identified shall be maintained. The distribution of all such documents shall be controlled to ensure that the appropriate documentation is made available to personnel of the certification body or suppliers when they are required to perform any function relating to the certification body's activities.

3.9 Records

- 3.9.1 GreenTag maintains a record system to suit its particular circumstances and to comply with existing regulations. The records are sufficient to demonstrate that the certification procedures have been effectively fulfilled, particularly with respect to application forms, evaluation reports, surveillance activities and other documents relating to granting, maintaining, extending, suspending or withdrawing certification. The records are identified, managed and disposed of in such a way as to ensure the integrity of the process and the confidentiality of the Information. The records will be kept for a period of time that ensures continued confidence can be demonstrated for at least one full certification cycle, or as required by law.
- 3.9.2 GreenTag has policies and procedures for retaining records for a period consistent with its contractual, legal or other obligations. The policy and procedures concerning access to these records is consistent with confidentiality agreements and requirements.

3.100 Development of Product Specific Requirements.

Product Specific Category Rules (PCRs) are developed to consistently apply Functional unit, boundary conditions and methodologies for each product category they are developed for. Each existing or new PCR adopted sets out the rules for LCA- data collection, methodology, calculations and presentation of the results. PCRs will be created or modified based on the GreenTag PCR Development Process, including the following steps:

- Initiation and seeking co-operation with stakeholder and other interested parties;
- An open and effective consultation process and outcome during the preparation of the PCR documents
- Approval of PCR documents by both NAC and IEP groups before recommendations are provide to the Board;
- Annual Review and maintenance of validity of PCR documents;
- Reporting and publication of PCR documents via email notification and hosting on globalgreentag.com website public domain.

GLOBAL GREENTAG PRODUCT TECHNICAL STANDARDS

This Technical Standard Section relating to the certification program is in 2 parts as represented by Sections 4.00 and 5.00, where relevant, the two may be undertaken together. However, the two parts are separable and may be done independently or together.

4.0 LCA RATE CERTIFICATION STANDARD

To be accepted for assessment under this standard a product must meet at least one of the following 2 criteria:

1. It must exhibit unique ecological or health preferred characteristics compared to business as usual (BAU) product in its product category performing the same essential function;

OR

2. Be a member of a category of products that is ecologically or health preferred compared to Business as usual (BAU) product performing the same essential function;

AND

3. Not create significant ecological or health impacts. This is defined as product that passes the ESCAP assessment processes (Shown in attached Appendix 1).

Once assessed and categorised under the ESCAP or GCAP processes, the product is required to demonstrate compliance LCA Rate Program and any other Product Category Specific Standards (Appendix 2).

4.1 GreenTag SAC Scores and Weightings

Legal Compliance –To be considered for LCA Rate Award Tiers Bronze through Platinum, suppliers are required to demonstrate Code compliance with country relevant, legal fit for purpose requirements.

Weightings: The 6 key LCA Rate Sustainability Assessment Categories (SACs) and weightings that comprise the performance pathway are as follows:

SAC1 =Integrated Design Synergy	– 10%
SAC2= Life-cycle Assessment –Greenhouse	– 20%
SAC3= Life-cycle Assessment –Health	– 20%
SAC4= Life-cycle Assessment –EcoPOINTS	– 15%
SAC5= Biodiversity –Physical impacts (non-LCA)	– 20%
SAC6= Corporate Social Responsibility	– 15%

Each SACs is allocated a possible score of 0-1, except SAC2, SAC 3 and SAC5 which allow for scores to minus 1. Where -1 = Best Possible Positive Impact 0 = No Impact and 1 = Impact of Worst Case Business as Usual (BAU) and minus 1 = 100% Net Positive product in same functional purpose category.

A product is assessed against each SAC and final scores calculated to 2 decimal places as follows:

LCA Rate Score (GreenTag EcoPoint) =

$$(SAC1 \times 0.1) + (SAC2 \times 0.2) + (SAC3 \times 0.2) + (SAC4 \times 0.15) + (SAC5 \times 0.2) + (SAC6 \times 0.15)$$

Products with lower scores are determined to be of lower impact and higher benefit.

Where SAC1 IDS is not relevant (e.g.in the case of a Fitout component or internal finish) this score is considered not applicable and the final Performance Categories average score is divided between three categories to give a score out of 1 as follows

Re-weighted LCA Rate Score (GreenTag EcoPoint) =

$$(SAC2 \times 0.25) + (SAC3 \times 0.2) + (SAC4 \times 0.2) + (SAC5 \times 0.2) + (SAC6 \times 0.15)$$

Products with lower scores are determined to be of lower impact. In this case, the comment- “Not relevant to Integrated Design Synergy in reducing building costs’ is to be included in the assessment.

4.2 Awarding LCA Rate Tier Levels

Products must meet any Supplementary Category Specific Standards as shown in Appendix 2.0, achieve the following GreenTag EcoPOINT scores and meet the ESCAP threshold criteria shown below (based on current process as shown in attached Appendix 1):

4.2.1 PLATINUM Award

An LCARate Platinum award is given to products that achieve a score of < 0.15 .

and product contains no added ESCAP Level 1 or Level 2 chemical ingredient/s except from natural/ trace contamination of raw materials allowing for ESCAP clause 6.8.4 exceptions.

Platinum is the highest level of achievement under the LCA Rate program and indicates a product in the top 10% of its market category. Discernment of the comparative performance of products within this (or any) Tier can be made by reference to the actual GreenTag Ecopoint score determined by the Assessment process;

4.2.2 GOLD Award

An LCARate Gold award is given to products that achieve a score of $\leq 0.5 > 0.15$.

and product triggers no ESCAP 'Issue of Concern' warnings due to added chemical ingredient/s post Risk Analysis allowing for ESCAP clause 6.8.4 exceptions.

A Gold award indicates a product in the top 15% of its market category

4.2.3 SILVER Award

An LCARate Silver award is given to products that achieve a score of $\leq 0.75 > 0.5$.

and product triggers no ESCAP 'Red Light' warnings- post Risk Analysis allowing for ESCAP clause 6.8.4 exceptions.

A Silver award indicates a product in the top 20% of its market category

4.2.4 BRONZE Award

An LCARate Bronze award is given to products that achieve a score of > 0.75 .

and product passes the ESCAP assessment process allowing for ESCAP clause 6.8.4 exceptions.

A Bronze award indicates a product in the top 25% of its market category and generally equivalent to other Type 1 Ecolabels.

The scores for each SAC can be interpolated between thresholds and each SAC is defined and assessed as follows:

4.3 SAC1 -Integrated Design Synergy (IDS)

Integrated Design Synergy is defined in this context as the process by which buildings and their systems beneficially interact with occupants or associated buildings processes providing enhanced outcomes, so that the integrated systems achieve a degree of synergy, not otherwise attainable, thereby reducing system or resource intensity of the overall project. This attained synergy should potentially lower costs or increase the overall value proposition without increasing costs proportionately. In the context of buildings, this can include additional savings or efficiencies in other building systems, elements or structure, energy, water, materials, waste/re-use, productivity, health, social outcomes etc., in first costs or operational costs.

Scoring: This Performance Category is assessed by evaluation of the number of buildings systems impacted and the degree to which they are impacted. The score for this category is derived via the IDS Matrix 1 below:

		Number of Building Systems/Elements Impacted				
		5	4	3	2	1
Significance of impact on one or more system, element or resource	Major >15%	0	0.25			
	Significant >10% ≤15%		0.5			
	Minor >5% ≤10%		0.75			
	Insignificant ≤5%		1.0			

Matrix 1: Integrated Design Synergy Scores.

The determination of the performance category score can be assessed by

several potential pathways:

- By simulation modelling using a relevant computer simulation software and climate zones; or
- By calculation: or by
- Expert estimation where the system assessment is straightforward and reasonably determined in this way;
- Computer simulation will be comparative, based on a standardised typical BAU building form and specification in category most relevant to product i.e. residential or commercial.

4.3.1 Climate or regional dependant outcomes: Where results in this Performance Category are climate or regionally dependant, advisory notations and potential resulting ratings range will be included on the ratings label.

Where building synergy is not relevant this score is considered not applicable and the final Performance Categories average score is obtained by the re-weighted formula shown in section 4.1.

4.4 SAC-2 Greenhouse Impacts

Greenhouse emissions are comprised of negative impacts from CO₂ and other greenhouse gas emissions as well as positive impacts from sink effects where the product or material comprises carbon bound up from the atmosphere (e.g. magnesia cements and wood).

The percentage carbon savings or sink is calculated by using LCADetail Software or other approved software and LCA methods as for SAC-4. Scores are calculated as follows:

- For products with a net sink effect Table 1 is used.
- For products with GHG savings from BAU Table 2 is used;

Table 1: Greenhouse Impacts Carbon Sinks

	Greenhouse Impacts- % Carbon Sink					
	>100 Sink	≤100 > 75	≤75 > 50	≤50 >25	≤25 >0	Carbon Neutral
Score	-1.0	-0.85	-0.65	-0.35	-0.15	0

Table 2: Greenhouse Impacts Carbon Emission Savings

	Greenhouse Impacts- % Carbon Emission Savings						
	Carbon Neutral	<85<100	<75≤85	<50≤75	<25≤50	<BaU≤25	Business as usual
Score	0	0.25	0.50	0.75	0.85	0.95	1

Scores are also interpolated in direct relationship to their actual performance..

4.5 SAC-3 Life Cycle Assessment – Human Health (Toxicity)

All toxicity and health impacts are assessed in accordance with ESCAP as shown in Appendix 1 and subsequent versions which eliminates and restricts the following substances and impacts.

This section requires assessment under and compliance with the current version of ESCAP as it is upgraded from time to time and with any additional industry specific standards in Appendix 2.0.

If the Risk Analysis shows the risk is not likely to impact the environment, OH&S, or building users, the product may be Certified.

Formaldehyde emissions of composite wood: must be in accordance with Formaldehyde requirements as shown in Appendix 2.0

Scoring: The scoring for the LCA Human Health category is based on the ESCAP results and the Caution Assessment (if any) required to be issued as shown in Table 3 below.

ESCAP Toxicity Assessment								
	Zero Lvl. 1 or Lvl. 2 ESCAP Ingredients	Lvl.1<0.1% & Lvl. 2<1% ESCAP Ingredients	Lvl.1<0.5% & Lvl.2<5% with No Comment Post ESCAP	Lvl.1<0.5% & Lvl.2<5% with Issue of Concern Post ESCAP	Lvl.1≥0.5% & Lvl.2≥5% with Issue of Concern Post ESCAP	Lvl.1<1% & Lvl.2<10% with Red Light Comment Post ESCAP	Lvl.1≥1% & Lvl.2≥10% with Red Light Comment Post ESCAP	Red Light Exclusion Post ESCAP
Score	0	0.1	0.25	0.5	0.75	0.9	0.95	Excluded

Table 3: LCA Human Health Category Scores

Note: The Human Health impacts considered under this category relate to emissions generated by product's direct constituents. Diffuse health impacts generated by raw materials, manufacturing or disposal impacts are considered in 4.6 below.

4.6 SAC-4 Life-cycle Assessment –LCA EcoPOINTS

The LCA is undertaken by use of the LCADesign/LCADetail, whole-of-life-cycle analysis, rapid eco-profiling software tools based on Building Information Modelling (BIM) integrated computer software with multi-software interoperability characteristics. The LCADesign/LCADetail software introduces unique potential to allow LCA analysis of buildings and developments (LCADesign) and products (LCADetail) to be undertaken much more easily and faster than any previous LCA techniques have allowed.

LCADesign enables LCA profiling that makes assessment of even major buildings, quick, cost effective and at a generic product and materials level, representative of total project WOL environmental and health impacts. It employs access to a range of international Life-cycle Inventory (LCI) databases and professional LCI developer inputs to determine the life-cycle impacts of all stages of a products derivation, from raw material extraction to end-of-life (cradle to grave) and potentially re-use (cradle to cradle).

It calculates the many impacts using the LCI databases using complex algorithms derived by experienced LCA practitioners.

LCADetail is used by GreenTag to assess the GreenTag LCA Scores for SACs 2 and 4.

4.6.1 LCADesign for GreenTag:

This standard allows for GreenTag assessments via LCADetail software, to analyse whole-of-life impacts for products and provide individual detailed category results to be collated into a single weighted score using Eco-indicator99 or locally derived weightings.*

Life Cycle Inventory Development: LCADesign and LCADesign for GreenTag use an existing Australian National Life Cycle Inventory (LCI) database that is subject to ongoing enhancement and integration with BPIC Product Assessment Methodology and AusLCI data when available without economic allocations and data is appropriate. Databases for other countries are already licensed by the GreenTag contract LCI developer. Bespoke National LCI databases are required for other countries.

4.6.2 LCA EcoPOINT

An LCA EcoPOINT as defined by this Standard is the weighted results of the LCA analysis over the potential life of an eco-preferred building material, compared to a 'Business as Usual' or typical product used within the market, typically over a 60 year cycle of use in a building including maintenance, cleaning and replacement (as per typical life expectancy) and is a number between 0 and 1 with the lowest ecological and health impacts being a '0' score.

The LCA EcoPOINT score for a product used by GreenTag^{Cert™} is determined by product raw materials composition, manufacturing process and raw materials/component source country and includes any required fixing/s preparation and directly associated other components.

Ratings that have been determined by GreenTag or other recognised third party site audit will be recognised by the PLUS attribute.

The category life cycle impacts considered by the LCA EcoPOINT system includes but is not limited to:

- Energy and Fuel use;
- Water use
- Air Pollution;
- Ozone Depletion;
- Human Health (impacts from emissions not generated by product's direct constituents).
- Ecosystem Quality
- Eco-Toxins and Waste;
- Resource Depletion;
- Recycled content and
- Water Pollution.

The LCA EcoPOINT is used in the GreenTag^{Cert™} Assessment process to calculate the final GreenTag^{Cert™} Score used to determine the Tier Award during Certification. Where an LCA analysis is not available a score of 1 shall be used. Only Bronze Certified products can be scored without an LCA.

*Other LCA tools that deliver equivalent Eco-indicator 99 or locally derived weightings for the ecopoint and compliant GHG emission results as per SAC-2, may be used at the discretion of the Program Director subject to verification of compliance to the approved PCR and current LCA methodologies stipulated by the Program.

4.7 SAC-5 Biodiversity –Physical impacts (non-LCA)

LCA analysis does a detailed assessment of chemical and many other biodiversity impacts on ecosystems, however does not have highly developing indicators for biodiversity quality and physical biodiversity impacts. This SAC attempts to assess the aspects of LCA not adequately covered by the LCA process in SAC2.

The assessment of biodiversity impacts is split between timber based and non timber based products:

4.7.1 Timber based products

This PAC is aimed at ensuring the biodiversity issues relating to the extraction of timber are assessed via a proxy measure i.e. Certification. Matrix 2 is used for timber based products.

		Product composition by % of Certified Timber			
		>10% ≤25%	>25% ≤50%	>50% ≤75%	>75%
Rating Scheme Recognition	FSC Chain of Custody (CoC)	0.2	0.15	0.1	0.05
	FSC Mixed Credit CoC (FSC Cert'd %)	0.22	0.17	0.12	0.07
	PEFC/ AFS CoC	0.25	0.2	0.15	0.1
	Mixed % CoC (FSC & AFS) (Cert'd %)	0.25	0.2	0.15	0.1
	Controlled Wood*	0.3	0.25	0.2	0.15
	Uncertified or non CoC	0.65	0.7	0.85	1.0

Matrix 2: Timber, timber-based or timber containing product assessment scores

Combinations of sources: With the exception of FSC Mixed Credit Timber, where different combinations of timbers are used, each timber source is assessed individually and the final score arithmetic mean determined, e.g.:

For an FSC Mixed Percentage 70% the score of 0.1 from the FSC Pure CoC line and [>50% ≤75%] heading is added to 0.25 from Controlled Wood line and [>25% ≤50%] category to equal 0.35 and then divided by 2. The resulting score is 0.175.

For FSC Mixed Credit Timber where only the same percentage of Labels are issued as the amount of FSC timber purchased, the scores should be used straight from the Matrix as in the case of FSC Pure and AFS Pure.

This Matrix constitutes the entire product score for all products containing 90% or more timber. For products containing less than 90% timber, the weighted average score based on percentage by weight of each type of component (timber, non-timber) using scores from both Matrix 2 and Matrix 3 applies.

* **Controlled wood** is defined as ‘controlled to avoid illegally harvested wood, wood harvested in violation of traditional and civil rights, wood harvested in forests in which high conservation values are threatened by management activities, wood harvested in forests being converted to plantations or non-forest use and wood from forests in which genetically modified trees are planted’ (FSC-STD-30-010 V2-0 EN 2004).

4.7.2 Non timber based products

This PAC is aimed at the physical biodiversity issues relating to Non-timber based products and components extraction and desposition.. Matrix 3 below is used for predominantly non timber based products.

		Extent of Biodiversity Impact				
		Site	Local	Regional	National	Global
Significance of Biodiversity impact	Insignificant	0		0.25		
	Minor	0.25			0.5	
	Significant	0.5	0.75			
	Major	0.75	1.0			

Matrix 3: Non Timber-based product assessment scores

Combinations of sources: Where a product comprise different materials, each raw material or source of impact is assessed individually and the final score arithmetic mean determined.

If the extent of biodiversity impacts cannot be quantified, then a score of 0.5 is added.

This Matrix constitutes the entire product score for all products containing 90% or more non timber constituents. For products containing less than 90% timber, the weighted average score based on percentage by weight of each type of component (timber, non-timber) using scores from both Matrix 2 and Matrix 3 applies.

Where the product, material component or manufacturing process reduces impacts on biodiversity, such as in the context of recycled plastics, this % of the product by weight shall be attributed a score of 0. Where the product, material or manufacturing process provides potential for net positive biodiversity, these positive impacts to biodiversity will be attributed a negative score using the same process and absolute values in Matrix 3 above, relevant to the extent and significance of the impact.

4.7.3 Data Sources:

By the nature and dispersal of biodiversity impacts, they are inherently hard to quantify unless detailed site-based studies and full impact assessments have been done. In many cases this data may be available e.g. for Licensing Authorities, and where it is, this information will be sourced and used in the assessment. Where this level of data is not available, a literature review will be undertaken and generic, industry wide data used in a qualitative assessment process.

Threats to the following categories of flora or fauna (as assessed by any recognised Government or NGO body) will be assessed as follows:

- Threatened** Significant
- Rare and/or Endangered** Major
- Threatening Process** Significant or Major

Score to be attributed based on extent of impact using Matrix 3.

4.8 SAC-6 Corporate Social Responsibility

Suppliers are required to demonstrate their level of compliance with the following criteria:

- a. **Corporate Policy-** suppliers are required to provide evidence of a Corporate Social Responsibility Policy that demonstrates the organization considers the impact of its activities on the environment, consumers, employees, communities, and all other members of the public sphere during corporate decision-making.

b. **Ethical Labour Practices:** External independent assurance from suppliers demonstrating whole of enterprise (all entities involved in the supply chain representing the entire product and its material components) social compliance to International Labour Organisation (ILO) conventions, (at a minimum):

- Freedom of Association and Collective Bargaining’ (Conventions 87 and 98);
- Elimination of Forced and Compulsory Labour’ (Conventions 29 and 105);
- Elimination of Discrimination in respect of employment and occupation’ (Conventions 100 and 111);
- Convention 155 - Occupational Safety and Health and its accompanying Recommendation No. 164;
- Convention 161 - Occupational Health Services and its accompanying Recommendation No.171.

OR Compliance to Social/Ethical Guidelines – Whole-of-enterprise compliance with SA 8000. The requirements of SA 8000 *in addition* to those shown above are shown below are:

- ILO Convention 1 (Hours of Work – Industry) and Recommendation 116 (Reduction of Hours of Work)
- ILO Convention 102 (Social Security – Minimum Standards)
- ILO Convention 131 (Minimum Wage Fixing)
- ILO Convention 135 (Workers’ Representatives)
- ILO Convention 138 and Recommendation 146 (Minimum Age)
- ILO Convention 159 (Vocational Rehabilitation and Employment - Disabled Persons)
- ILO Convention 169 (Indigenous and Tribal Peoples)
- ILO Convention 177 (Home Work)
- ILO Convention 182 (Worst Forms of Child Labour)
- ILO Convention 183 (Maternity Protection)
- ILO Code of Practice on HIV/AIDS and the World of Work
- Universal Declaration of Human Rights
- The International Covenant on Economic, Social and Cultural Rights
- The International Covenant on Civil and Political Rights
- The United Nations Convention on the Rights of the Child
- The United Nations Convention on the Elimination of All Forms of Discrimination Against Women
- The United Nations Convention on the Elimination of All Forms of Racial Discrimination

AND

- c. **Public Reporting-** suppliers are required to conduct external independent public reporting in accordance with the Global Reporting Initiative (GRI) as a minimum on: Environment, Human Rights, Labour and Product Responsibility.
- d. **Environmental Claims** –supplier public claims on products’ environmental performance are verified as compliant with ISO 14021 ‘Environmental Labels and Declarations - Self-Declared Environmental Claims’ (Type II Environmental Labeling) requirements.
- e. **Social or Restorative Program Participation-** supplier is required to actively participate in, or create socially beneficial programs within socially deprived communities or environmentally beneficial programs engaged in restorative practices or conservation of high conservation value ecosystems.

Score awarded is determined by subtracting points for each criteria achieved from the base score of 1. Number of points subtracted for each criteria are shown below in Matrix 4 as follows:

Corporate Policy:	= 0.1
Ethical Labour Practice:	
ILO Compliant Supply Chain	= 0.15
ILO Compliant Supply Chain -Third party certified	= 0.20
OR	
SA 8000 Compliance:	= 0.30
AND	
Public Reporting:	= 0.25
Environmental Claims:	= 0.25
Social or Ecologically Restorative Program Participation:	= 0-0.25

Matrix 4: Corporate Social Responsibility Score Assessment

Points for Social or Ecologically Restorative Program Participation are awarded on merit based on the degree of participation in the program.

Scores shown as ranges i.e, between 0-0.25 are awarded on merit based on the degree of participation in, or creation of socially beneficial programs in within socially deprived communities or environmentally beneficial programs engaged in ecologically restorative practices or conservation of high conservation value ecosystems and the extent and effectiveness of the program. To achieve this score compliance with Corporate Policy and Ethical Labour Practice is required as a minimum.

4.9 PLUS Ratings

PLUS level Assessment requires manufacturer and product specific audited life cycle inventory. The LCI is required to be relevant to the applicant product and processes, manufacturing plant/s, administrative procedures and/or supply chain as required by the Program Director to determine the compliance with this Standard. Once approved at audit the designator PLUS will be included in the awarded Series Mark.

4.10 GBCA Recognised LCARATE Certification

GBCA recognises LCARate for certification of the MAT -Recycled Content Credits.

The New Zealand Green Building Council (NZCA) publishes the Green StarNZ® Range of building sustainability rating tools including various Technical Manuals and recognises Product Assessment Bodies with Multi-Criteria Product Certification Schemes recognised by GBCA against its Standard for Third Party Product Certifiers.

GBCNZ has thereby also recognised the GreenTag LCARate Certification Scheme as recognised by GBCA.

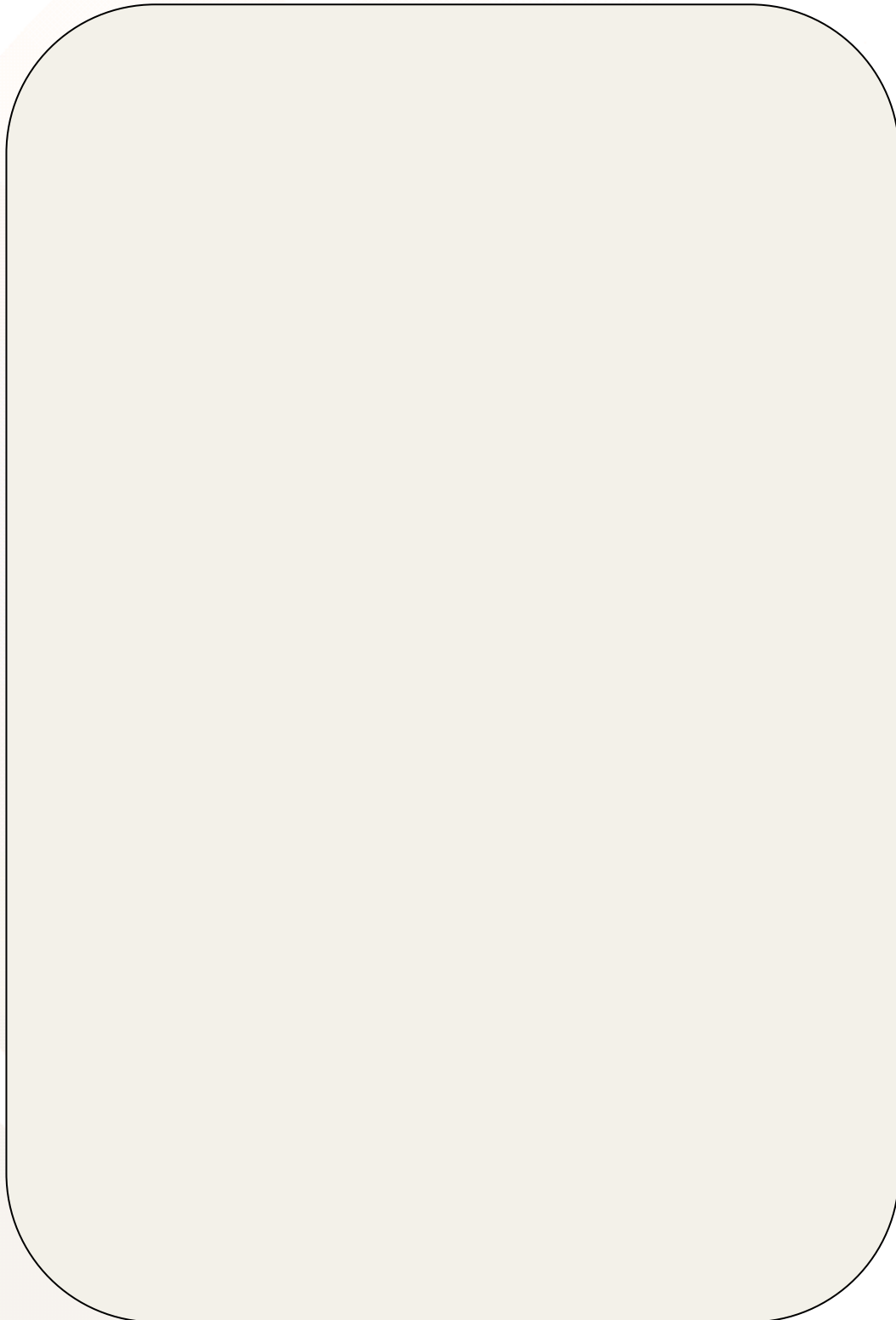


Figure 3:
LCARate Certification
Process Diagram



5.0 GREENRATE CERTIFICATION STANDARD

This Technical Standard Section relating to the certification program is in 2 parts as represented by Sections 4.00 and 5.00, where relevant, the two may be undertaken together. However, the two parts are separable and may be done independently or together.

Various bodies internationally publish Green Building Rating Schemes. This section is intended to cover assessment of products specifically as they relate to compliance with specific credits or issues within these various schemes including but not limited to:

- Green Star

This Standard is intended to be relevant to any country based on recognised Green Building Rating Scheme/s and may be subject to the approval of a Scheme Specific Annexure by the Scheme owner.

The Green Building Council of Australia (GBCA) publishes the Green Star[®] Range of building sustainability rating tools including various Technical Manuals and recognises Product Assessment Bodies with Multi-Criteria Product Certification Schemes against its Standard for Third Party Product Assessors.

Aspects of the GreenTag^{Cert™} GreenRate Standard have been developed in response to the requirements of the GBCA's 'Assessment Framework for Multi-Criteria Product Certification Schemes' (GBCA Framework) and will be assessed by GBCA for conformity separately to ASIC/ACCC assessment.

Assessment criteria for the other Schemes above are based on the specific technical requirements of those Schemes.

The following sections comprise the approved GBCA Green Star™ 3rd Party Certification Scheme Accredited GreenRate Process for assessment of credit points for products relevant to the various Materials Calculator credits:

5.1 Technical Standards relevant to Green Star Materials Calculators

The GBCA Framework addresses a number of Priority Areas of Concern (PACs). This section of the Standard addresses those PACs as follows:

5.1.01 PAC 1 Greenhouse Gas Accounting

This Standard requires measurement of Greenhouse gas footprints to be generated in accordance with:

- I. ISO 14067:2006 (Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals):
OR
- II. PAS 2050:2008 (BSI-Specification for the assessment of the life cycle greenhouse gas emissions of goods and services)

as required in Matrix 5 below.

It also requires public reporting of comprehensive product life cycle greenhouse gas footprint based on a per functional unit basis. Functional unit, boundary conditions and methodologies applied are to be defined through the adoption of established 'Product Category Rules (PCRs) for selected products, or the creation of new PCR's (in accordance with the GEDNet Guidebook or as noted on www.environdec.com). Certified products' greenhouse emissions will be published on GreenTag website/s as a minimum to fulfill this requirement.

PAC Assessment:

By Life Cycle Analysis as per GreenTag Procedure 1: LCA Analysis as required in accordance with performance requirements in Matrix 5 below.

5.1.02 PAC- 2 Toxicity

All toxicity and health impacts are assessed in accordance with ESCAP as shown in Appendix 1 and any Supplementary Product Category Standards shown in Appendix 2.0 which together eliminates and restricts the following substances and impacts. This Standard:

Generally: Certification to levels A, B and C requires compliance to the most current version of ESCAP, as it is upgraded from time to time. Subject to the ESCAP risk analysis process, Certified products must not contain any more than 1% of a Level 2 (Medium-Low Risk) agent and comply with Supplementary Product Category Standards shown in Appendix 2.0. If the Risk Analysis shows the risk is not likely to impact the environment, OH&S, or building users, the product may be Certified.

See ESCAP & EU Directive (EC) 1272/2008 Annex 1 Table 1.1 .on page 57 this is a UN Globally Harmonised System compliant regulation.

Carcinogens: restricts user exposure to substances to less than the NOAEL/NOAEC or zero if NOAEL is unknown.

Toxic Substances: limits exposure to acutely toxic substances, toxic substances (or requires supplier to meet a well documented and justifiable industry specific benchmark for material toxicity), heavy metals – (as a minimum arsenic, cadmium, chromium, copper, lead, tin, mercury and antimony)

Hazardous chemicals: restricts the use of the following hazardous chemicals as they apply to the standard's relevant product group: endocrine disrupters, mutagens and teratogens, irritants and sensitising agents, persistent organic pollutants (POPs) and bio-accumulative chemicals via the analysis of a fully detailed list of constituents at an appropriate level of detail relevant to the level of toxicity of the constituent compounds.

Note: ESCAP excludes any product to be certified from containing any materials contained within Annex III of the Rotterdam Convention and Stockholm Convention and prohibits or restricts relevant agents in the OSHA List of Highly Hazardous Chemicals, Toxics and Reactives.

ESCAP also excludes or restricts the inclusion and/or release of agents carrying the following R Phrases: R26-28 and R50-59.

Formaldehyde emissions of composite wood: must be in accordance with the IEQ-14 'Formaldehyde Minimisation' Credit published in the various GBCA Green Technical Manual credit criteria. See Appendix 2.0.

PAC Assessment:

ESCAP assessment and compliance.

Suppliers are required to provide evidence or a statement from a credible third party confirming an ISO 14001 compliant Environmental Management System *or equivalent* demonstrating the gathering of data on toxics usage and generation in a format that allows for tracking of all toxics purchased or generated with the aim of elimination of toxics in the production process, along with a commitment to continuous improvement.

5.1.03 PAC-3 Material Extraction

Data Collection: Suppliers are required to gather data on material usage and waste generation of raw materials in a format that allows optimisation of the production process, along with a commitment to optimise the production process subject to the need to demonstrate compliance with this PAC and performance requirements demonstrated in Matrix 5 below.

Material Use Optimisation Options: Optimise materials sourcing and production processes to reduce negative environmental impacts from materials sourcing, use and disposal from at least one of the following:

- a. Use of 20% or more post consumer recycled materials or components;
 - Level A = 50 %, Level B= 20%, Level C = not required
- b. Sourcing 20% or more materials from rapidly renewable resources;
 - Level A = 50%, Level B= 20%, Level C = not required
- c. Reduction by 20% or more waste generated in the manufacturing process or incorporating 20% or more waste back into the production process (compared to industry average waste generation);
 - Level A = 50%, Level B= 20%, Level C = not required
- d. Dematerialisation of 20% or more defined as reduction of primary inputs by mass as a result of product design strategy;
 - Level A = 50%, Level B= 20%, Level C = not required
- e. Minimising 20% or more harmful sourcing, farming or habitat destroying practices by the use of practices that have a minimal or neutral impact on land use, biodiversity and soil erosion (maybe demonstrated by LCA or Certification under other National and International Ecolabels).
 - Level A = 50%, Level B= 20%, Level C = not required

PAC Assessment: Suppliers are required to provide evidence or a statement from a credible third party confirming an ISO 14001 compliant Environmental Management System *or equivalent* demonstrating the gathering of data on material usage and waste generation in a format that allows optimisation of the

production process, along with a commitment to continuous improvement in the production process. Data collection and analysis process in accordance with GreenTag Procedure 2: EMS Review as per the requirements in Matrix 5 below. Evidence required of recycled content includes audited purchase invoices and production quantities or other credible third party audited sources such as ISO 14040- 14044 compliant LCA.

5.1.04 PAC-4 Water

Water Use Accounting- Public reporting of comprehensive product life cycle water footprint based on a per functional unit basis is required in accordance ISO 14040:2006 (Environmental management - Life cycle assessment - Principles and framework) and ISO 14044:2006 (Environmental management - Life cycle assessment - Requirements and guidelines) subject to the need to demonstrate compliance with this PAC and performance requirements demonstrated in Matrix 5 below. Functional unit, boundary conditions and methodologies applied are to be defined through the adoption of established 'Product Category Rules (PCRs) for selected products or the creation of new PCR's (in accordance with the GEDNet Guidebook or as noted on www.environdec.com).

PAC Assessment: By Life Cycle Analysis as per GreenTag Procedure 1: LCA Analysis as per Matrix 5 below.

5.1.05 PAC-5 Social and Environmental Compliance

Legal Compliance – For Certification to Levels A, B, and C suppliers are required to demonstrate compliance with relevant social and environmental legislative or other legal requirements.

As per Matrix 5, Suppliers may also be required to demonstrate the following:

- a. **Compliant Supply Chain:** external independent assurance from suppliers demonstrating whole of enterprise (all entities involved in the supply chain representing the entire product and its material components) social compliance to International Labour Organisation (ILO) conventions, (at a minimum):
 - Freedom of Association and Collective Bargaining' (Conventions 87 and 98);
 - Elimination of Forced and Compulsory Labour' (Conventions 29 and 105);
 - Elimination of Discrimination in respect of employment and occupation' (Conventions 100 and 111);
 - Convention 155 - Occupational Safety and Health and its accompanying Recommendation No. 164; and
 - Convention 161 - Occupational Health Services and its accompanying Recommendation No.171.
- b. **Public Reporting-** suppliers are required to conduct external independent public reporting in accordance with the Global Reporting Initiative (GRI) as a minimum on: Environment, Human Rights and Labour.
- c. **Environmental Claims** – Supplier public claims on products' environmental performance must be verified as compliant with ISO 14021 'Environmental Labels and Declarations- Self-Declared Environmental Claims' (Type II Environmental Labelling) requirements.

OR, demonstrate Compliance to Social/Ethical Guidelines – Whole-of-enterprise compliance with **SA 8000**.

PAC Assessment: Data collection and analysis process in accordance with GreenTag Social and Environmental Compliance -Procedure 5, if required in accordance with performance requirements in Matrix 5 below.

Compliant Supply Chain:

For supply chains located entirely in Australia or other Signatory Country to the relevant ILO conventions, directors' declarations of legal compliance from applicant and all suppliers, plus evidence of Occupational Safety and Health management systems will demonstrate compliance with this criteria, subject to investigation of current, pending or past litigation involving the company and on-site auditing of compliance criteria.

For suppliers located outside Australia or other Signatory Country to the relevant ILO conventions, applicants must submit a director's declaration from all major suppliers that the supplier complies with all relevant social and environmental legal requirements applicable to the country in which they operate.

If the country of operation has not ratified any of the ILO conventions identified above, additional evidence demonstrating compliance or independent assurance from NGO's, certification bodies, or third-party auditors will be required from the applicant and all major suppliers.

Suppliers are required to provide evidence of an ISO 14001 compliant Environmental Management System *or equivalent* demonstrating legal compliance with social and environmental legislative or other legal requirements on behalf of the organisation, ILO compliant supply chain, compliance of Environmental claims with ISO 14021 along with a commitment to continuous improvement as required in accordance with performance requirements in Matrix 5 below.

Provision of GRI compliant public reporting.

Data collection and analysis process in accordance with GreenTag Procedure 2: EMS Review as required in accordance with performance requirements in Matrix 5 below

OR

Provision of an Audit Report showing compliance with the Social/Ethical Guidelines –Whole-of-enterprise compliance with SA 8000 if required in accordance with performance requirements in Matrix 5 below.

5.1.06 PAC-6 Durability

- a. **Fitness for Purpose** – products certified for Levels A, B and C are required to demonstrate compliance with relevant national fitness for purpose standards as noted in the relevant Appendix 2 Supplementary Category Standards.
- b. **Replacement Parts** – replacement parts are required to be available to extend the useful life of the product (where relevant).

PAC Assessment: Data collection and analysis process in accordance with GreenTag Durability Assessment - Procedure 3 and declaration by Director of the applicant company (and subject to audit) or credible third party as to schedules of replacement part stocks, levels and holding periods.

5.1.07 PAC-7 End of Life

Subject to the need to demonstrate compliance with this PAC and performance requirements demonstrated in Matrix 5 below this PAC requires:

- a. **Product Stewardship Program** – This Standard requires all suppliers and/or suppliers of certified products or materials to have a product stewardship program in place. This program shall be publicly available and entail providing contractual arrangements with their customers to take products back at the end of the product's in-use phase for some form of refurbishment and reuse, or recycling as deemed appropriate for the relevant product specific use and purpose.
- b. **Verification of Product Stewardship Program Arrangements** – Supplier is to demonstrate that necessary arrangements are in place to deliver the claims of the product stewardship program in accordance with Part a) requirements above including but not limited to: demonstration that contractual agreements exist between the supplier and/or supplier, wholesaler or retailer with third party recyclers, transport companies, charities, second-hand retailers and refurbishment companies.
- c. **Design for Disassembly** – Supplier is to demonstrate appropriate design for disassembly strategies that ensure products are designed in a way that enable their easy separation into base constituent materials to improve end of life recycling (where relevant).
 - o Level A = 90%, Level B= 50%, Level C = not required

PAC Assessment: Data collection and analysis process in accordance with GreenTag End of Life Assessment -Procedure 4, if required in accordance with performance requirements in Matrix 5 below.

5.1.08 PAC-8 Product Emissions

Low VOC Emissions –requires certified products with interior fitout applications (e.g. furniture, floor coverings) to comply with the Volatile Organic Compound (VOC) emission limit benchmarks stated in the various Green Star™ Technical Manuals (or other country based GBC rating tool requirements, e.g. LEEDv4) and editions in accordance with the Additional Guidance section from the IEQ-11 'VOC Minimisation' Credit Technical Clarification published on the GBCA website as an addendum to the Green Star – Office Interiors v1.1 Technical Manual and as shown in Supplementary Category Specific Product Standards as shown in Appendix 2.0).

PAC Assessment: Data collection and analysis process in accordance with GreenTag Product Emissions - Procedure 5, if required in accordance with performance requirements in Matrix 5 below.

5.2 Technical Standards relevant to Product Sub-components in Materials Calculators

This standard allows for the recognition and assessment of sub-component products that relate to the building elements, materials, joinery and furniture assessed under the Materials Calculators.

Subcomponents, cannot in themselves be attributed credit points, but they can be attributed a level of compliance that is consistent with a finished element or unit credit points score (this may require qualification to explain any conditions that would be required to be met for the finished element to achieve the credit points).

5.3 GreenRate Technical Standards relevant to Green Star Credits other than Materials Calculators

Products are to demonstrate compliance with the relevant Green Star™ Technical Manuals, USGBC LEEDv4® Reference Guides or other Green Building Scheme technical requirements in accordance with the most recent published requirements relating to the relevant issue of the tool.

Green Building Council of Australia recognition for Certification of Credit by GreenTag are:

- i. All Materials Calculator credits
- ii. All IEQ VOC Minimisation credits
- iii. All IEQ Formaldehyde Minimisation credits

Green Building Council of New Zealand recognition for Certification of Credit by GreenTag are:

- i. All Materials Calculator credits
- ii. All IEQ VOC Minimisation credits
- iii. All IEQ Formaldehyde Minimisation credits
- iv. Insulation Credit

Green Building Council of Australia Accreditation for Credits other than those containing Materials Calculators are subject to approval and in the meantime *have the status of a third party verified Technical Opinion* unless changes are made to the Third party Certification Scheme by GBCA and published on the GBCA website. This GreenRate Standard includes specific processes subsequently introduced by GBCA.

For GreenRate assessments relating to International Green Building Rating Schemes, evidence required to demonstrate compliance may change according to the Credits and the Scheme being assessed. Program assessments for non GBCA rating tools *have the status of a third party verified Technical Opinion*.

5.4 Determining Level Awards for Green Star™ Materials Calculator Credits

The GreenRate Materials Calculator Level Awards are determined by reference to Matrix 5 Series over page. Products that demonstrate that they meet each of the PAC requirements, as represented by the shaded sections of the Matrix under each scheme, are certified to the Level of the scheme. There are three levels of Certification, Level A, Level B and Level C, with each level having multiple schemes available to achieve that level.

GreenTag (the Conformity Assessment Body) will determine which scheme is applicable to the product based on the criteria with which the product complies. Applicants are required to submit evidence towards demonstrating compliance to all criteria. GreenTag will select the scheme that best fits the products compliance to the criteria.

Only the schemes identified in Matrix 5 below will be used, and the applicant may not customise or opt out of complying with any criteria identified in a scheme.

GBCA recognition of the Level Awards will attach specific credit points within the relevant credit. It is GBCA's sole authority to attribute Green Star™ Credit Points to the GreenRate Level Awards. See www.gbca.org.au to determine point allocations within Green Star™ tools.

5.5 Summary of Level A Schemes – Matrix 5.1

Products certified under a scheme listed in Matrix 5.1, will be awarded a GreenTag GreenRate Level A rating.

Minimum Requirements for all A level Schemes: All products certified under A level Schemes will have met the following requirements:

PAC 2: Toxicity

- Pass ESCAP with no 'Issues of Concern'
- Demonstrate Compliance to Supplementary Product Category Specific Standards (Appendix 2)

PAC 5: Social and Environmental Requirements

- Demonstrate Legal Compliance to Social and Environmental Legislation in the country of operation

PAC 6 Durability

- Comply with all relevant Fitness for Purpose requirements
- Provide replacement parts for the useful life of the product (where relevant)

PAC 7 End of Life

- Demonstrate design for disassembly of 90%

PAC 8 Product Emissions

- Comply with VOC emission levels

Level A schemes also assess additional criteria for compliance, and can be categorized as follows:

Original Approval Schemes A1 and A2

Previously identified as Level A and Level B respectively in GreenTag v2.4, these schemes are the original schemes approved by the GBCA. A1 is the most robust scheme and assesses products that demonstrate compliance to all criteria. A2 assesses products that demonstrate compliance to all criteria except Verification of Product Stewardship Program Arrangements, and additional requirements under PAC -5 (Compliant Supply Chain, Public Reporting, or SA8000).

Schemes A3-A17: Greenhouse Gas Emissions Accounting Plus Two PACs

These schemes assess products that comply with the minimum requirements for A level schemes, PAC-1 Greenhouse Gas Accounting and at least two of the following PACs:

PAC-3 Materials Extraction

- Data Collection
- Achieve 50% benchmark under one or more optimization options

PAC-4 Water

PAC -5 Social and Environmental Requirements

- Comply with 2 of the following 3 criteria
 - Compliant Supply Chain
 - Public Reporting
 - Compliant Environmental Claims
- OR Compliance to SA8000

PAC -7 End of Life

- Product Stewardship Program.

Scheme A18: Greenhouse Gas Accounting and Verification of Product Stewardship Program

This scheme assesses products that comply with the minimum requirements for Level A schemes, PAC-1 Greenhouse Gas Accounting, and under PAC-7 End of Life, Verification of Product Stewardship Arrangements.

Scheme A19: Verification of Product Stewardship and Materials Extraction

This scheme assesses products that comply with the minimum requirements for Level A schemes, under PAC-7 End of Life, Verification of Product Stewardship Arrangements, and the following:

- PAC-3 Materials Extraction
 - Data Collection
 - Achieve 50% benchmark under one or more optimization options

Scheme A20 Verification of Product Stewardship and Water Usage Accounting

This scheme assesses products that comply with the minimum requirements for Level A schemes, PAC -7 End of Life, Verification of Products Stewardship Arrangements, and PAC -4 Water.

Schemes A21 - A24: Verification of Product Stewardship & Social and Environmental Compliance

These schemes assess products that comply with the minimum requirements for Level A schemes, under PAC-7 End of Life, verification of product stewardship arrangements, and the following:

- PAC -5 Social and Environmental Requirements
 - Comply with 2 of the following 3 criteria:
 - Compliant Supply Chain
 - Public Reporting
 - Compliant Environmental Claims
 - OR Compliance to SA8000

Schemes A25 – A28: Verification of Materials Extraction, Water, CSR and End of Life

These schemes assess products that comply with the minimum requirements for Level A schemes and ALL of the following PACs:

- PAC-3 Materials Extraction
 - Data Collection
 - Achieve 50% benchmark under one or more optimization options
- PAC-4 Water
- PAC -5 Social and Environmental Requirements
 - Comply with 2 of the following 3 criteria
 - Compliant Supply Chain
 - Public Reporting
 - Compliant Environmental Claims
 - OR Compliance to SA8000
- PAC -7 End of Life
 - Product Stewardship Program

Matrix 5.1

Criteria		Green Tag GreenRate Level A Schemes																													
		Original Approval	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	
Sec 5.1.01	PAC -1 Greenhouse Gas Emissions	Greenhouse Gas Accounting																													
Sec 5.1.02	PAC - 2 Toxicity	No ES CAP 'Red Light' Comments No ESCAP 'Issue of Concern' Comments																													
Sec 5.1.03	PAC - 3 Materials Extraction	Data Collection Optimisation Achieve 50% benchmark under one or more options																													
Sec 5.1.04	PAC - 4 Water	Water Use Accounting																													
Sec 5.1.05	PAC - 5 Social and Environmental Requirements	Legal Compliance Compliant Supply Chain Public Reporting Environmental Claims SA 8000																													
Sec 5.1.06	PAC - 6 Durability	Fitness for Purpose Replacement Parts																													
Sec 5.1.07	PAC - 7 End of Life	Product Stewardship Program Verification of Product Stewardship Program Arrangements 90% Design for Disassembly																													
Sec 5.1.08	PAC - 8 Product Emissions	VOC Emissions																													

5.6 Summary of Level B Schemes - Matrix 5.2

Products certified under a scheme listed in Matrix 5.2 will be awarded a GreenTag GreenRate Level B rating.

Minimum Requirements for all B level Schemes:

All products certified under B level Schemes will have met the following requirements:

PAC 2: Toxicity

Pass ESCAP with no 'Issues of Concern'

Demonstrate Compliance to Supplementary Product Category Specific Standards (Appendix 2)

PAC 5: Social and Environmental Requirements

Demonstrate Legal Compliance to Social and Environmental Legislation in the country of operation

PAC 6 Durability

Comply with all relevant Fitness for Purpose requirements

Provide replacement parts for the useful life of the product (where relevant)

PAC 7 End of Life

Demonstrate design for disassembly of 50%

PAC 8 Product Emissions

Comply with VOC emission levels

Level B schemes also assess additional criteria for compliance, and can be categorized as follows:

Original Approved Scheme B1: Verification of Materials Extraction

This scheme originally identified as Level C under GreenTag v2.4 and approved by the GBCA, assesses products that comply with the minimum requirements for Level B schemes and meet the requirements of PAC -3 Materials extraction including data collection and 20% benchmark under at least one optimization option.

Scheme B2: Verification of Greenhouse Gas Accounting

This scheme assesses products that comply with the minimum requirements for Level B schemes and complies with PAC -1 Greenhouse Gas Accounting.

Scheme B3: Verification of Water Use Accounting

This scheme assesses products that comply with the minimum requirements for Level B schemes and complies with PAC -4 Water.

Scheme B4 – B7: Verification of CSR

These schemes assess products that comply with the minimum requirements for Level B schemes and achieve the following:

PAC -5 Social and Environmental Requirements

Comply with 2 of the following 3 criteria

Compliant Supply Chain

Public Reporting

Compliant Environmental Claims

OR Comply to SA8000

Scheme B8: Verification of End of Life and Product Stewardship

This scheme assesses products that comply with the minimum requirements for Level B schemes and comply with PAC-7 End of Life, demonstrating a Product Stewardship Program.

		Matrix 5.2							
Criteria	Original Approval	GreenRate Level B Schemes							
		B1	B2	B3	B4	B5	B6	B7	B8
Sec 5.1.01	PAC -1 Greenhouse Gas Emissions Greenhouse Gas Accounting								
Sec 5.1.02	PAC - 2 Toxicity No ESCAP 'Red Light' Comments No ESCAP 'Issue of Concern' Comments								
Sec 5.1.03	PAC - 3 Materials Extraction Data Collection								
	Optimisation Achieve 20% benchmark under one or more options								
Sec 5.1.04	PAC - 4 Water Water Use Accounting								
Sec 5.1.05	PAC - 5 Social and Environmental Requirements Legal Compliance Compliant Supply Chain Public Reporting Environmental Claims SA 8000								
Sec 5.1.06	PAC - 6 Durability Fitness for Purpose Replacement Parts								
Sec 5.1.07	PAC - 7 End of Life Product Stewardship Program Verification of Product Stewardship Program Arrangements 50% Design for Disassembly								
Sec 5.1.08	PAC - 8 Product Emissions VOC Emissions								

Matrix 5. vSummary of Level B Schemes

Products certified under a scheme listed in Matrix 5.2 will be awarded a GreenTag GreenRate Level B rating.

5.7 Summary of Level C Schemes – Matrix 5.3

Products certified under a scheme listed in Matrix 5.3 will be awarded a GreenTag GreenRate Level C rating.

Minimum Requirements for all C level Schemes:

All products certified under C level Schemes will have met the following requirements:

PAC 2: Toxicity

Pass ESCAP with no 'Red Light Comments'

Demonstrate Compliance to Supplementary Product Category Specific Standards (Appendix 2)

PAC 5: Social and Environmental Requirements

Demonstrate Legal Compliance to Social and Environmental Legislation in the country of operation

PAC 6 Durability

Comply with all relevant Fitness for Purpose requirements

Provide replacement parts for the useful life of the product (where relevant)

Level B schemes also assess additional criteria for compliance, and can be categorized as follows:

Scheme C1: Verification of Water Use Accounting

This scheme assesses products that comply with the minimum requirements of Level C schemes and complies with PAC – 4 Water.

Schemes C2 – C5: Verification of Social and Environmental Requirements

These schemes assess products that comply with the minimum requirements of Level C schemes and achieve the following:

PAC -5 Social and Environmental Requirements

Comply with 2 of the following 3 criteria

Compliant Supply Chain

Public Reporting

Compliant Environmental Claims

OR Comply to SA8000

Scheme C 6: Verification of Data Collection

This scheme assesses products that comply with the minimum requirements of Level C schemes and complies with the data collection requirement under PAC -3 Materials Extraction.

Scheme C7: Verification of Product Stewardship Program

This scheme assesses products that comply with the minimum requirements of Level C schemes and complies with the Product Stewardship criteria under PAC-7 End of Life.

Scheme C8: Verification of Product Emissions

This scheme assesses products that comply with the minimum requirements of Level C schemes and comply with VOC emission levels under PAC – 8 Product Emissions.

Criteria		GreenRate Level C Schemes																	
		C1	C2	C3	C4	C5	C6	C7	C8										
Sec 5.1.01	PAC -1 Greenhouse Gas Accounting																		
	Greenhouse Gas Accounting																		
Sec 5.1.02	PAC - 2 Toxicity																		
	No ESCAP 'Red Light' Comments																		
	No ESCAP 'Issue of Concern' Comments																		
Sec 5.1.03	PAC - 3 Materials Extraction																		
	Data Collection																		
	Optimisation																		
	Achieve 50% benchmark under one or more options																		
Sec 5.1.04	PAC - 4 Water																		
	Water Use Accounting																		
Sec 5.1.05	PAC - 5 Social and Environmental Requirements																		
	Legal Compliance																		
	Compliant Supply Chain																		
	Public Reporting																		
	Environmental Claims																		
	SA 8000																		
Sec 5.1.06	PAC - 6 Durability																		
	Fitness for Purpose																		
	Replacement Parts																		
Sec 5.1.07	PAC - 7 End of Life																		
	Product Stewardship Program																		
	Verification of Product Stewardship Program Arrangements																		
	90% Design for Disassembly																		
Sec 5.1.08	PAC - 8 Product Emissions																		
	VOC Emissions																		

Matrix 5.3. Summary of Level C Schemes –

Products certified under a scheme listed in Matrix 5.3 will be awarded a GreenTag GreenRate Level C rating.

5.8 Relationship limits between LCARate and GreenRate

- a) A product can be assessed for GreenRate Certification without LCARate Certification.
- b) It is possible to have a product assessed within LCARate alone (without GreenRate) without an LCA analysis as it means the product is scored as '1' in each case where an LCA is required for scoring.
- c) GreenRate Certified Products are automatically *deemed GreenTag Bronze* even if no complying LCA or LCARate assessment is provided or undertaken

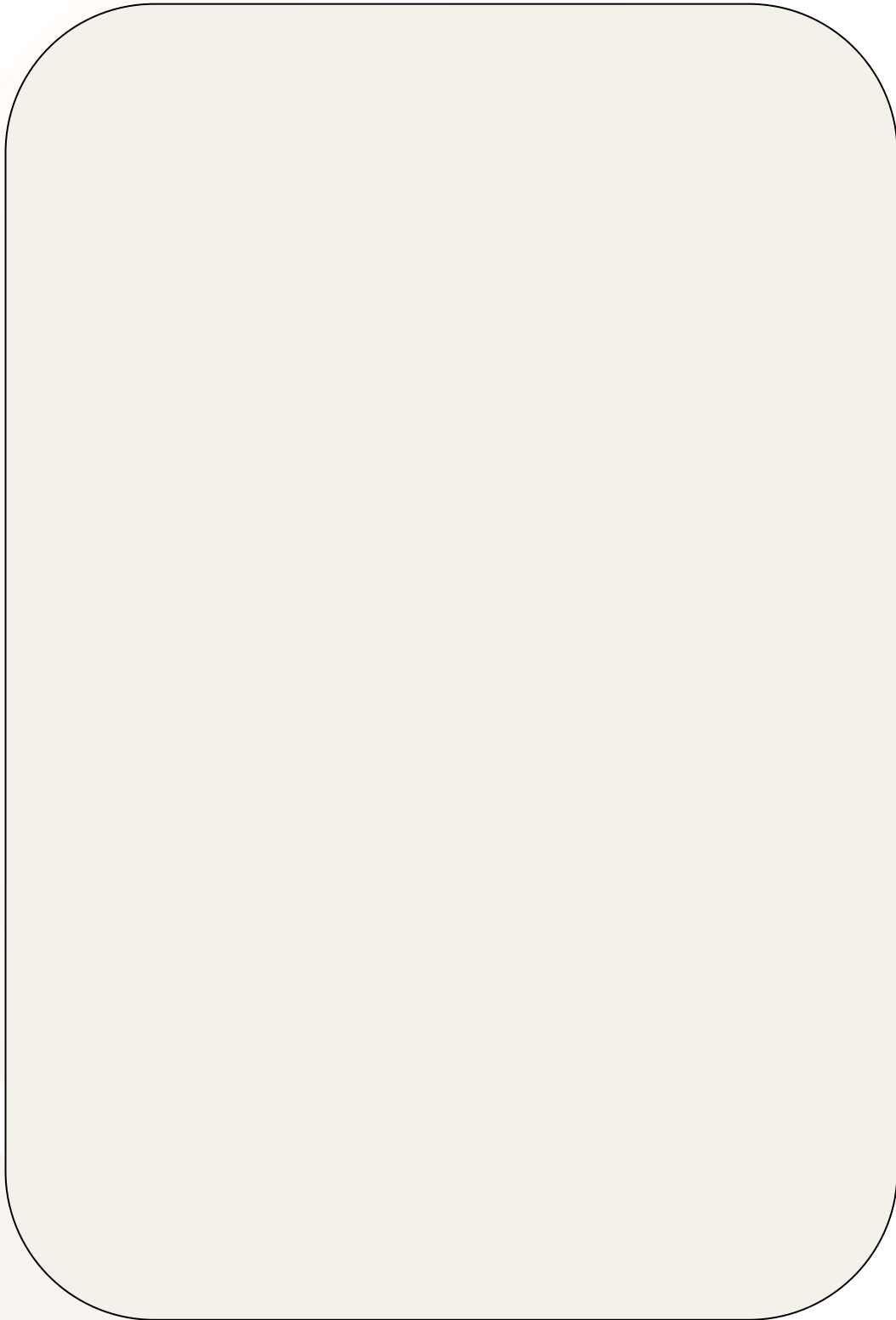


Figure 4:
GreenRateCertification Process

6.0 Appendix 1:

The Cautionary Assessment Process – ESCAP v.10

The Red Lights or Issues of Concern policy is based on the Precautionary Principle, hence the issues noted below are not the only basis on which Issues of Concern or Red Light Comments will be issued and worst-case assessments will be used where different information sources are in conflict. They are intended to be 'live' standards that will change as new information becomes available about impacts and levels of impacts of chemicals and processes over time.

All products will be assessed under ESCAP. GreenTag products will also be assessed under Appendix 2 Supplementary Product Standards.

If a product contains any of the following impacts, it will, subject to the Risk Analysis process require either an automatic Issue of Concern, a Red Light Comment or, as the strongest course of action, a Red Light Exclusion from being Certified:

- a) Timber material from a **non-FSC or non-PEFC certified source** requires an Issue of Concern. Note that both Forest Management (FM) and Chain-of-Custody (CoC) certification are required.
- b) If product contains **significant non-FSC or non-PEFC certified rainforest or potential high conservation value remnant ecosystem timber content**, this warrants a Red Light comment or possibly even a Red Light Exclusion subject to proof of legal sources.
- c) If the manufacture/use of a product involves significant environmentally damaging processes or emissions or Acute, Chronic, Long term Persistent, Bioaccumulating Toxics (PBT) or Carcinogenic, Mutagenic, Reprotoxic (CMR) or endocrine disrupting impacts, this warrants a Red Light comment or Exclusion (subject to section 6.7 process below).

6.1 Highly Hazardous Chemicals:

Persistent Organic Pollutants (POPs) from the Stockholm Convention:

These include:

- Aldrin
- Chlordane
- DDT
- Dieldrin
- Polychlorinated Dibenzo-p-dioxins and Furans
- Endrin
- Hexachlorobenzene
- Heptachlor
- Mirex
- Polychlorinated Biphenyls (PCBs)
- Toxaphene
- Polybrominated diphenyl ethers (Octa and Penta PBDE) – with the exception of products manufactured from recycled materials containing Octa and Penta PBDE

All of the above chemicals are considered **Level 0** category chemicals. If any of the above chemicals exist in a product, that product cannot be Certified, i.e. Red Light Exclusion.

Annex III of the Rotterdam Convention:

The chemicals listed in Annex III include highly hazardous pesticides and industrial chemicals that have been banned or severely restricted for health or environmental reasons by Parties. There are a total of 40 chemicals listed in Annex III, 29 are pesticides (including 4 severely hazardous pesticide formulations) and 11 industrial chemicals.

All of these chemicals are considered **Level 0** category chemicals in relation to the purposes specified in the Rotterdam Convention Prior Informed Consent Decision Guidance Documents (see <http://www.pic.int/home.php?type=t&id=29&sid=30>). If any of the above chemicals exist in a product at any concentration, that product cannot be certified at any level, i.e. Red Light Exclusion. See Table in Appendix 5 for current chemicals.

Additional Level 0 Chemicals

Substances of Very High Concern included in Annex XIV of REACH ("Authorisation List") and ("Candidate List").

APEOs – or *alkylphenol ethoxylates* are surfactants with R51/52/53 attributions that are also considered Level 0 Chemical dues to their high environmental impacts and ready availability of non-toxic alternatives in all applications.

6.2 Ionizing Radiation

Any product containing or responsible for ionizing radiation levels above background or healthy levels according to the calculations excerpted from EC Radiation protection 112 Standard: 'Radiological Protection Principles concerning the Natural Radioactivity of Building Materials' shown in Appendix 2 is also a Level 0 Red Light Exclusion.

6.3 Carcinogens- Substance ESCAPable of causing cancer

Any chemicals classified by IARC: Refer <http://www.iarc.fr/IARCPress/index.php>

Category 1	(Carcinogenic to humans)	Level 1
Category 2A	(Probably carcinogenic to humans)	Level 1
Category 2B	(Possibly carcinogenic to humans)	Level 1
Category 3A	(Not classifiable as to carcinogenicity to humans-tested)	Level 2
Category 3B	(Not classifiable as to carcinogenicity to humans-untested)	Level 2
Category 4	(Probably not carcinogenic to humans)	Level 3

Where any chemical or agent does not have a CAS number or is noted as '*not classifiable as to its carcinogenicity to humans*' other sources may be accessed and used to determine GreenTag Program Chemical Category number.

6.4 Mutagens – Substance ESCAPable of impairing or modifying genes

Any chemicals classified by EU Directive 2001/59/EC or subsequent amendments as:

Category 1	(Known to be mutagenic to humans)	Level 1
Category 2	(Should be regarded as if they are mutagenic to humans)	Level 1
Category 3	(Cause possible mutagenic concern for humans)	Level 1

6.5 Teratogens- Substances toxic to reproduction (developmental toxicity or impairment of fertility)

Any chemicals classified by EU Directive 2001/59/EC or subsequent amendments as:

Category 1	(Known to be toxic to reproduction in humans)	Level 1
Category 2	(Should be regarded as if they are toxic to reproduction in humans)	Level 1
Category 3	(Cause possible developmental toxicity for humans)	Level 1
Category 3	(Cause possible impairment of fertility for humans)	Level 2

6.6 RoHS

The following are considered hazardous substances under the European RoHS prohibited substances in electronic goods regulations:

• Lead	Level 1
• Cadmium	Level 1
• Mercury (excepting Lighting)	Level 0
• Hexavalent Chromium	Level 1
• Polybrominated biphenyl (PBB))- OctaPBB and PentaPBB	Level 0
• Polybrominated diphenyl ether (PBDE)- OctaBDE and PentaBDE	Level 0

6.7 R Phrase and S Phrase- Assessment

First, determine the Chemical Abstract Service (CAS) number and where relevant names as per The International Union of Pure and Applied Chemistry (IUPAC), then using the chemical databases proscribed by the Standard/s below determine the various R and S Phrases attributed to a chemical or mixture.

Australia: Safe Work Australia's Hazardous Substances Information System (HSIS) (UE Directive 67/548/EEC)

International: CLP Regulation (EC) 1272/2008 -EU Regulation on the Classification, Labelling and Packaging of Substances and Mixtures, United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) UN GHS Rev 2.

Using the R and S Phrase, Level 0,1, 2 and 3 chemical categorisation at Section 6.6, a chemical is classified according to their potentially adverse health and environmental effects.

Specific thresholds have been set for each level of chemical, in order to determine what action should be taken with a particular product based on NOAELs and NOAECs from GHS, in Table 1 below and where relevant to a Supplementary Product Category, in Appendix 2.

Example, a product that contains a Level 1 Chemical warrants an Issue of Concern if the chemical is greater than 0.1% of the products total mass, and warrants Red Light Exclusion if the chemical constitutes greater than 1% of the products total.

Note see Tables 1-3 below for R-Phrase Actions and Table 4 below for S-Phrase Actions.

Where any chemical or agent does not have a CAS, EINECS or ELINCS number or is noted as 'not classifiable' for other reasons, other sources may be accessed and used to determine GreenTag Chemical Category number. The classification will be based on the Precautionary Principle.

Step 1: Based on the level categorisation of the R-Phrase, determine whether the product is assessed as being excluded, if a Cautionary Comment is to be applied and if so at what level.

Table 1 - Preliminary categorization of hazardous substances based on R Phrases

ESCAP category	Hazardous substance R Phrase levels (and proportion required to trigger preliminary categorization)			
	Level 0 Very High Risk -Immediate exclusion	Level 1 High risk	Level 2 Medium - Low risk	Level 3 Low to no risk or safety concern
Issue of Concern	Always	≥0.1% <0.5%	≥1% <5%	No action required.
Red Light Comment		≥0.5% <1.0%	≥5% <10%	
Red Light Exclusion		≥1.0%	≥10%	

The above thresholds are based on REACH (Originally EU Directive 2001/59/EC: Clause 1.7.2.1. Classification of substances containing impurities, additives or individual constituents) and are GHS and OSHA compliant:

"Where impurities, additives or individual constituents of substances have been identified, they shall be taken into account if their concentration is greater than or equal to the limits specified:

- i. 0.1% for substances classified as very toxic, toxic, carcinogenic (category 1 or 2), mutagenic (category 1 or 2), toxic to reproduction (category 1 or 2), or dangerous for the environment (assigned the symbol .N. for the aquatic environment, dangerous for the ozone layer):
- ii. 1 % for substances classified as harmful, corrosive, irritant/sensitising, carcinogenic (category 3), mutagenic (category 3), toxic to reproduction (category 3), or dangerous for the environment (not assigned the symbol .N., i.e. harmful to aquatic organisms, may cause long-term adverse effects), unless lower values have been specified in Annex I."

Note: Where lower values have been set for chemicals under Annex 1, those lower values are to be used to assess the category.

These are further reinforced by the use of similar levels within REACH/GHS, e.g., the most recent GHS and OSHA compliant European community standards shown below is an extract from Annex 1 Table 1.1 of that document.

Table 1.1

Generic cut-off values

Hazard class	Generic cut-off values to be taken into account
Acute Toxicity:	
— Category 1-3	0,1 %
— Category 4	1 %
Skin corrosion/Irritation	1 % ⁽¹⁾
Serious damage to eyes/eye irritation	1 % ⁽²⁾
Hazardous to Aquatic Environment	
— Acute Category 1	0,1 % ⁽³⁾
— Chronic Category 1	0,1 % ⁽³⁾
— Chronic Category 2-4	1 %

⁽¹⁾ Or < 1 % where relevant, see 3.2.3.3.1.
⁽²⁾ Or < 1 % where relevant, see 3.3.3.3.1.
⁽³⁾ Or < 0,1 % where relevant, see 4.1.3.1.

Step 2: Determine the Hazardous substance risk categorisation, based on potential volume/s/extent of severity/size of the risk and likelihood. The data used to assess this matrix need not be fully quantified or quantifiable and may contain a mixture of quantitative and qualitative assessments.

Determine the Life Cycle Stage in Table 2.1 where the risk is most likely to occur, based on the route of exposure, emission and audit/test reports. Where the risk is related to the Product Stage and is covered under specific occupational health and safety requirements, quantitative data must be provided by the applicant to establish the risk categorization level.

Table 2.1 – Life Cycle Stages where risk is most likely to occur

Product Stage	Building Stage	End of Life Stage
Raw Material Supply	Transport to Building Site	Demolition
Transport to Production	Building Installation	Transport
Manufacturing	Use	Disposal/Recycling
	Maintenance & Repair	

Table 2.2 – Hazardous substance risk categorisation review and action required.

		Probability				
		Frequent	Likely	Occasional	Seldom	Unlikely
Severity	Catastrophe	Extremely High		High		Medium
	Critical	High		Medium		Low
	Moderate	Medium		Low		
	Negligible	Low				

Step 3: Determine if a Cautionary comment is required and if so at what level.

The tables below determine the appropriate level of comment regarding hazardous substances. Table 3.1 is to be used for all substances triggering a risk that is applicable to the Building Stage and End of Life Stages of the products' life cycle. Table 3.2 is to be used for all substances triggering a risk that is applicable to the Product Stage of the products' life cycle, where risks are controlled through regulations and occupational health and safety measures.

Table 3.1 – Cautionary Comment Application Determination – Building Stage and End of Life Stages

ESCAP Level as per Step 2	ACTION TO BE TAKEN			
	Likelihood of risk being realized			
	Extremely High	High	High/Medium	Low
Issue of Concern	Full 'Red Light Comment' required.	Full 'Issue of Concern' required.	State 'Issue of Concern' and include details of how concern can be minimised	Note hazardous substance in relevant area of assessment (e.g. Human Health – NOT in Issues of Concern) and give substantive reasons on the unlikelihood of risk.
Red Light Comment	'Red Light Exclusion' required.	Full 'Red Light Comment' required.	State 'Red Light Comment' and include details of how concern can be minimised.	Note 'Issue of Concern' Comment' and state unlikelihood of concern occurring giving substantive reasons.
Red Light Exclusion	'Red Light Exclusion' required.	'Red Light Exclusion' required.	'Red Light Exclusion' required.	State 'Red Light Comment' and include unlikelihood of concern occurring giving substantive reasons.

Table 3.2 - Cautionary Comment Application Determination – Product Stage

ESCAP Level as per Step 2	ACTION TO BE TAKEN			
	Likelihood of risk being realized			
	Extremely High	High	High/Medium	Low
Issue of Concern	Full 'Issue of Concern' required.	State 'Issue of Concern' and include details of how concern can be minimised	Note hazardous substance in relevant area of assessment and give substantive reasons on the unlikelihood of risk.	No comments required
Red Light Comment	Full 'Red Light Comment' required.	State 'Red Light Comment' and include details of how concern can be minimised.	State 'Issue of Concern' and include details of how concern can be minimised	Note hazardous substance in relevant area of assessment and give substantive reasons on the unlikelihood of risk.
Red Light Exclusion	'Red Light Exclusion' required.	Full 'Red Light Comment' required.	Full 'Issue of Concern' required.	Note hazardous substance in relevant area of assessment and give substantive reasons on the unlikelihood of risk.

Step 4: Safety Phrase assessment:

A one step process as depicted in the following table;

Table 4 - Action required for hazardous substance based on S Phrases

Hazardous substance S Phrase level		
Level 1	Level 2	Level 3
Strongly state safety concern in relevant heading on product listing and how it can be minimised.	Mention safety concern in relevant heading on product listing and how it can be minimised.	No action required.

6.7.1 Supplier to be notified

Once the ESCAP process has been completed, any adverse assessments will be notified to the supplier with full explanation and opportunity given for submission/s by the supplier as to why the assessment should be amended. Due consideration will be given to the Supplier submission before the assessment is finalised.

6.8 R-Phrase Chemical Categorisation in accordance with the UN Globally Harmonised System of Classification and Labelling of Chemicals:

6.8.1 Substances with the following R-Phrase attributions are GreenTag Level 1:

- Highly toxic, create acute reactions or have long term, accumulative, intergenerational or irreversible effects as per 6.9.1;
- GHS Category 1 and 2 from Table 5.
- Mutagenic substances with Classification in Categories 1,2 or 3.
- Reproduction Toxicity Effect Categories, 1, 2 or 3-Developmental Toxicity
- Except substances of Very High Concern included in Annex XIV of REACH ("Authorisation List") and ("Candidate List") that are nominated Level 0.

6.8.2 Substances with the following R-Phrase attributions are GreenTag Level 2:

- have mild to moderate toxicity, health or other effects such as long term chronic reactions as per 6.9.2;
- GHS Category 3 and 4 from Table 5.
- Unless the R Phrase toxicity concentrations of substances have been modified by EU Directive 2001/59/EC **Annex 1** or subsequent updates, Reproduction Toxicity Effect Category 3-Impaired Fertility

6.8.3 Substances with the following R-Phrase attributions are GreenTag Level 3:

- No harmful or toxic risk phrases applied for normal use as per 6.9.3;
- GHS Category 5 from Table 5.

Note: for the GreenTag R-Phrase/ H-Statement Translator Guide, please contact the Program Director.

Table 5:

Exposure route	Category 1	Category 2	Category 3	Category 4	Category 5
Oral (mg/kg bodyweight) <i>see: Note (a)</i>	5	50	300	2000	5000
Dermal (mg/kg bodyweight) <i>see: Note (a)</i>	50	200	1000	2000	See detailed criteria in Note (f) Ecospecifier GlobalGreenTagLevel 3
Gases (ppmV) <i>see: Note (a) Note (b)</i>	100	500	2500	20000	
Vapours (mg/l) <i>see: Note (a) Note (b) Note (c) Note (d)</i>	0.5	2.0	10	20	
Dusts and Mists (mg/l) <i>see: Note (a) Note (b) Note (e)</i>	0.05	0.5	1.0	5	
	Ecospecifier GlobalGreenTagLevel 1	Ecospecifier GlobalGreenTagLevel 2	Ecospecifier GlobalGreenTagLevel 2	Ecospecifier GlobalGreenTagLevel 3	

Note: Gases concentration are expressed in parts per million per volume (ppmV).

Acute toxicity hazard and acute toxicity estimate (ATE) Values defining the respective categories

Note (f) Summary: Category 5 chemicals are relatively low acute toxicity hazard risk-there are expected to have oral or dermal LD50 in the 2000-5000mg/kg bodyweight and equivalent dose for inhalation.

Source: UN Globally Harmonised System of Classification and Labelling of Chemicals
http://www.unece.org/trans/danger/publi/ghs/ghs_rev02/02files_e.html

6.8.4 Exceptions to ESCAP Process requirements:

LCARate and GreenRate: Products containing broadscale, endemic, naturally occurring content do not trigger Red Light Comments or Issues of concern. These materials include but are not limited to:

- i. Crystalline Silica;
- ii. Wood and other natural organic fibres;
- iii. Titanium Dioxide
- iv. Carbon Black
- v. Recycled materials that contain chemicals /components categorized as Level 1 or Level 2 may not trigger Red Light Exclusions, Red Light Comments or Issues of Concern, provided these chemicals/components were added in the previous life cycle of the material and have a Low risk according to the risk categorization procedure identified in Step 2 of ESCAP. This applies to post consumer recycled materials only; pre-consumer or post industrial recycled content does not qualify for an exception.

LCARate: Products containing broadscale, endemic, naturally occurring content are excluded from this assessment process. The materials excluded include but are not limited to:

- i. VOCs generated by direct derivatives of naturally occurring plant and animal compounds.

Other materials in this category may be determined by GreenTag Program Director in consultation with NAC and IEP.

6.9 R Phrase Chemical Categorisation

6.9.1 LEVEL 1 - Very Toxic or Acute

Intent: Products that contain chemicals/components that are, or probably are, highly toxic, create acute reactions or have long term, accumulative, intergenerational or irreversible effects.

6.9.2 LEVEL 2- Harmful or Toxic

Intent: Products that contain chemicals/components that have, may have or possibly have mild to moderate toxicity, health or other effects such as long term chronic reactions:

6.9.3 LEVEL 3- Not Harmful or Toxic within Green Building Context.

Intent: No harmful or toxic risk phrases applied for normal use after R & S Phrase assessment has been undertaken.

NOTE- This does not apply to products where statements like 'insufficient data' or similar, form the basis of the R Phrase assessment.

Where 'insufficient data' or similar, form the basis of the R Phrase assessment, GreenTag may use other sources of information to determine the Category.

NOTE 2: for the GreenTag R-Phrase/ H-Statement Translator Guide, please contact the Program Director.

6.10 S Phrases

6.10.1 LEVEL 1- Harmful or Toxic - Acute

Intent: Products that contain chemicals/components that present, or probably present, high safety risks, create acute reactions or have long term, accumulative or irreversible safety effects.

6.10.2 LEVEL 2- Harmful or Toxic - General

Intent: Products that contain chemicals/components that have, may have or possibly have, mild to moderate toxicity, health or other effects such as long term chronic reactions:

6.10.3 LEVEL 3- Not Harmful or Toxic within Green Building Context.

Intent: No harmful or toxic risk phrases applied after R & S Phrase assessment has been undertaken.

NOTE- This does not apply to products where statements like 'insufficient data' or similar, form the basis of the S Phrase/s.

Where 'insufficient data' or similar, form the basis of the S Phrase assessment, GreenTag may use other sources of information to determine the Category.

6.11 Low Concentration and Processing Use chemicals where a substance of Very High Concern is used

Low Concentration and Processing use chemicals including hexavalent chromium may be approved where an appropriate Precautionary Assessment process is applied and the context and conditions assessed on-site and approved as safe. This policy must be applied consistently across a range of relevant products and processes and is subject to a full risk analysis and demonstrated mitigation strategies. The ingredient must not appear in the end use product.

Hexavalent Chromium

It must be demonstrated by on site risk assessment that respirable Cr(VI) poses no risk such as in the case where the application is fully sealed and/or automated and/or monitored and/or is a low risk compound.

The ESCAP risk assessment will determine:

- a. likely exposure paths of Cr(IV) in respirable form or dermal absorption pathways;
- b. if respirable Cr(IV) is emitted or dermal absorption pathways established, determine the likelihood of exposure during the production process,
- c. the availability and applicability of emissions resulting from the processing of finished products such as welding, cutting, and grinding.

- d. whether the Cr(VI) compounds will be bound to other materials and thereby the potential bioavailability is reduced
- e. the length of time that is required for any exposed Cr(VI) compounds that are likely to be subject to natural degradation process to the less hazardous Cr(III), and therefore minimising the risk of hazardous exposure and harm;
- f. **Coated steel products using Hexavalent Chromium currently will be certified for one period provided that:**
 - i. it is understood that no further re-certification will (subject to a review or current alternatives at that time), be allowed after October 2015; and
 - ii. evidence is submitted as to why the conversion to an alternative technology is not able to be undertaken prior to this date..

7.0 Appendix 2: Supplementary Product Category Specific Standards

GreenTag has previously determined Product Category Specific Performance Standards for the following categories of products. Any person wishing to obtain these standards should contact GreenTag via its published contact details:

- Water and Energy Consumption Appliance and Equipment Standards;
- Windows and Glazed Doors
- Skylights

7.1 Required PLUS Rating level of Assessments

The following materials or product sectors will require PLUS level detailed LCA assessment in all instances for LCARate assessments:

- Polyvinyl chloride flooring, internal and external wall cladding and other plasticized PVC and UPVC products containing more than 5% PVC;

The following materials or product sectors will generally require PLUS level detailed LCA assessment:

- Paints
- Fabrics and textiles

It is at the Program Director's discretion as to when or if a product or material or supply chain requires auditing or PLUS level assessment.

7.2 Recognised Standards:

Certification under the following recognised schemes will be acknowledged as applicable to the relevant sections of assessment under this standard and evidence of compliance with required outcomes of nominated product testing Standards called up by these schemes:

- US Carpet and Rug Institute's GreenLabel Plus
- GreenGuard
- Australian Certified Organic (ACO),
- National Association for Sustainable Agriculture Australia (NASAA)
- Certified Organic and
- Demeter Certified Organic
- Fair Trade
- FSC
- PEFC

Others recognised subsequent to the publication of this version of the standard will be recognised on the GreenTag website.

7.3 Future Standards Development:

In assessing any future product specific standards the following process will be followed:

- A review of existing international ecolabelling and other standards, and
- A review of available LCI data
- A clear definition of the scope of the proposed standard, defining the function purpose of the products under consideration;
- A clear definition of the threshold standards that make the category ecologically or health preferred.

A literature review of the impacts on the environment from this product group will also be undertaken. Scientific research using internationally recognised methods will be given due consideration, preferably studies undertaken in compliance with the ISO 14040 series, in a qualified and representative manner. There is no requirement to undertake new research but rather to gather suitable material that is available.

7.4 Composite Wood: Formaldehyde Content Supplementary Standard

The Formaldehyde emission requirements for formaldehyde containing product under both LCARate and GreenRate (e.g. for composite wood and Agrifibre products) are in accordance with the Green Building Council of Australia’s (or country relevant GBC rating tool requirements) latest requirements as updated from time to time:

7.4.1 Engineered wood products:

Engineered wood products are defined as particleboard, plywood, veneer, Medium Density Fibreboard (MDF) and decorative overlaid wood and composite wood panels.

The following applications are excluded from assessment and do not require documentation:

- Engineered wood products used in exterior applications (e.g. decorative façade);
- Formwork;
- Internal car park applications;
- Re-used engineered wood products; and
- Raw timber.

Engineered wood products, must conform to formaldehyde testing outlined in AS4266.16-2004 ‘Method 16: Formaldehyde emission – Desiccator method’. Engineered wood products shall demonstrate a level equivalent to or below E1 limit values provided in Table 7.4.1.

7.4.2 Veneer and plywood:

Veneer and plywood must conform to formaldehyde testing outlined in Australian Standard – AS/NZS2098.11-2005 ‘Method 11: Methods of test for veneer and plywood – Determination of formaldehyde emissions for plywood’. These panels shall demonstrate a level equivalent to or below E1 limit values provided in Table 7.4.1

Table 7.4.1: Other internationally accepted test methods

Test Method	Limit Value		
	E1 – F**	E0 – F***	Super E0 – F****
AS2098.11 for plywood	<1.0mg/L	<0.5mg/L	<0.3mg/L
AS4266.16 for partide board	<1.0mg/L	<0.5mg/L	<0.3mg/L
For MDF	<1.5mg/L		
JIS A1460 not applicable to plywood	<1.0mg/L	<0.5mg/L	<0.3mg/L
JAS 233 for plywood <	<1.0mg/L	<0.5mg/L	<0.1mg/L
EN 120 for partide board and MDF	<9mg/(100g)	<6mg/(100g)	<6mg/(100g)
For plywood	<9mg/L	<2.8mg/(100g)	<2.4mg/(100g)
DIN EN 717-1	<0.12mg/m3h	<0.08mg/m3h	<0.04mg/m3h
DIN EN 717-2 not applicable to MDF	<0.12mg/m3h	<0.08mg/m3h	<0.12mg/m3h

Source: Table excerpt from GBCA Technical Manual and based on Good Environmental Choice Australia’s (GECA) Guidance Note on Formaldehyde Testing v0.1

7.4.3 Gold or Platinum LCARate Certification

Products assessed for Gold or Platinum LCARate Certification that contain composite wood components shall comply with E0 and SuperE0 (or E00) limits respectively where product is available in the market with that rating. Where SuperE0 is not available e.g. MDF, E0 is acceptable.

7.4.4 Materials Qualities

ESCAP:

In addition to the requirements above, products shall be assessed and pass the ESCAP process, shown in Appendix 1.

7.5 Textiles, Fibres, Skins and Leather Supplementary Standard

Textiles and leather for upholstery, curtains, blinds, screens and acoustic panels and fibres in related products like carpets (broadloom and modular), upholstery filling and mattresses, mattress pads and protectors and general textiles such, geotextiles etc shall be fit for purpose and comply with the requirements of ESCAP and this standard. This standard does not apply to insulation.

7.5.1 Fitness for Purpose

- i. Products for Certification shall comply with one or more of the relevant Australian Standards including:
 - a) AS/NZ 2001 Textile Testing Series
 - b) AS 2663.1-1997/Amdt 1-1999 Textiles-Woven and knitted fabrics for window furnishings - Uncoated fabrics
 - c) AS 2663.2-1999 Textiles - Fabrics for window furnishings - Coated curtain fabrics
 - d) AS 2663.3-1999 Textiles - Fabrics for window furnishings - Vertical and holland blinds
 - e) AS 2687-1997 Textiles - Upholstery fabrics for domestic and commercial use (excluding face-coated fabrics)
 - f) AS 3567-1988 Textiles - Cloth, duck- Cotton and polyester/cotton
 - g) Commercial Textile Association of Australia (CTA)
 - h) Association for Contract Textiles,
 - i) AFRDI Standard 146 – Leather Descriptions

OR
 - ii. Internationally recognized standards if no relevant Australian Standard exists

OR

 - iii. Product shall meet or exceed Internationally accepted standard/s relevant to any market/s the product is to be exported to

OR

 - iv. The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function including those shown in section v) and vi) below;
- and meet the following Life cycle related requirements:

The criteria in this section apply, where appropriate, to all stages of production of the product, including the production of the fibres. It is nevertheless accepted that recycled fibres may contain some of the dyes or other substances excluded by these criteria, but only if they were applied in the previous life-cycle of the fibres.

v. Insect Resistance:

Fabrics required or claimed to be insect resistant shall comply with Woolmark/Woolmark Blend E10 Specification relevant to the country of use (4 in Australia, 3 in New Zealand) or Wools of NZ rating 3.

vi. GreenTag fitness for purpose requirements:

The following are minimum fitness for purpose standards for fabrics:

Dimension Changes During Washing and Drying Criteria:

Information on dimensional changes (%) shall be stated on the care label and on the packaging and/or other product information if the dimensional changes exceed:

- 2% (warp and weft) for curtains and for furniture fabric that is washable and removable,
- 6% (warp and weft) for other woven products,
- 8% (length and width) for other knitted products,
- 8% (length and width) for terry toweling.

This criterion does not apply to:

- fibres or yarn,
- products clearly labeled 'dry clean only' or equivalent,
- furniture fabrics that are not removable and washable.

According to test method: ISO 5077 modified as follows: 3 washes at temperatures as indicated on the product, with tumble drying after each washing cycle unless other drying procedures are indicated on the product, at temperatures as marked on the product, wash load (2 or 4 kg) depending on wash symbol. Should any of the abovementioned limits be exceeded, a copy of the care-label and of the packaging and/or product information shall be provided.

Colour Fastness to Washing:

The colour fastness to washing shall be at least level 3 to 4 for colour change and at least level 3 to 4 for staining. This does not apply to products clearly labeled 'dry clean only' or equivalent, white products or products that are neither dyed nor printed, or to non-washable furniture fabrics according to test method: ISO 105 CO6.

Colour Fastness to Perspiration:

The colour fastness to perspiration (acid and alkaline) shall be at least level 3 to 4 (colour change and staining). A level of 3 is nevertheless allowed when fabrics are both dark coloured (standard depth > 1/1) and made of regenerated wool or more than 20% silk.

This does not apply to white products or products that are neither dyed nor printed, to furniture fabrics, curtains or similar textiles intended for interior decoration according to test method: ISO 105 E04.

Colour Fastness to Wet Rubbing:

The colour fastness to wet rubbing shall be at least level 2 to 3. A level of 2 is nevertheless allowed for indigo dyed denim according to test method: ISO 105 X12.

This does not apply to white products or products that are neither dyed nor printed.

Colour Fastness to Dry Rubbing:

The colour fastness to dry rubbing shall be at least level 4. A level of 2-4 is nevertheless allowed for indigo dyed denim. This criterion does not apply to white products or products that are neither dyed nor printed, or to curtains or similar textiles intended for interior decoration according to test method: ISO 105 X12.

Colour Fastness to Light:

For fabrics intended for furniture, curtains or drapes, the colour fastness to light shall be at least level 5. For all other products the colour fastness to light shall be at least level 4.

A level of 4 is nevertheless allowed when fabrics intended for furniture, curtains or drapes are both light coloured (standard depth < 1/12) and made of more than 20% wool or other keratin fibres, or more than 20% silk, or more than 20% linen or other bast fibres. Testing to show compliance with test method: ISO 105 B02.

This requirement does not apply to mattress ticking or mattress protection.

7.5.2 Life Cycle Issues:

i) Emissions to Air: General

Acrylic:

The emissions to air of acrylonitrile (during polymerisation and up to the solution ready for spinning), expressed as an annual average, shall be less than 1 g/kg of fibre produced.

Elastane:

Emissions to air of aromatic diisocyanates during polymerisation and fibre production, measured at the process steps where they occur, including fugitive emissions as well expressed as an annual average, shall be less than 5 mg/kg of fibre produced.

Viscose:

The sulphur content of the emissions of sulphur compounds to air from the processing during fibre production, expressed as an annual average, shall not exceed 120 g/kg filament fibre produced and 30 g/kg staple fibre produced.

Polyamide:

The emissions to air of N₂O during monomer production, expressed as an annual average, shall not exceed 10 g/kg polyamide 6 fibre produced and 50 g/kg polyamide 6,6 produced.

Polyester:

The emissions of VOCs during polymerisation and fibre production of polyester, measured at the process steps where they occur, including fugitive emissions as well, expressed as an annual average, shall not exceed 1.2 g/kg of produced polyester resin.

Polyurethane Coatings, laminates and membranes: aromatic diisocyanates measured at the process steps where they occur, including fugitive emissions as well expressed as an annual average, shall be less than 5 mg/kg of fibre produced

ii) Emissions to Air: Internal

General Purpose Textiles

Emissions acceptable for the following purposes shall be limited to the relevant levels shown below:

- a) Drapery, acoustic panels, wall and general interior textiles < 0.5 mg/m²/hr
- b) Upholstery < 0.25 mg/m²/hr

Testing shall be in accordance with ASTM D5116-97, Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Material/Products and AS2986.3-2003/ISO 16200-2:2000, Workplace air quality – sampling and analysis of volatile organic compounds by solvent desorption/gas chromatography, Part 2: Diffusive sampling methods.

OR

As in GreenGuard Standard shown in b) below.

Mattresses and Bedding textiles

The VOC emission of the mattress textiles shall not exceed half the following emissions values in the test chamber by analogy with either:

- a) the AgBB "Health risk assessment process for emissions of volatile organic compounds (VOC) from building products" (2005) as follows:

Substance	Final value 7th day	Final Value 28th day
Formaldehyde	< 60 µg/m ³ (< 0.05 ppm)	< 60 µg/m ³ (< 0.05 ppm)
Other aldehydes	< 60 µg/m ³ (< 0.05 ppm)	< 60 µg/m ³ (< 0.05 ppm)
TVOCs (retention range: C6-C16)	< 500 µg/m ³	< 200 µg/m ³
TVOCs (retention range above C16)	< 100 µg/m ³	< 40 µg/m ³

According to test chamber analysis, based on the standards EN 13419-1 and EN 13419-2. The analysis of the VOC content should comply with the ISO 16000-6.

(source: www.umweltbundesamt.de/building-products/agbb.htm)

OR

As in GreenGuard Standard shown in b) below.

- b) The GreenGuard IAQ Standard for Building Materials Finishes and Furnishings

General Textiles: The minimum standard for any Level A, B or C8 Certified textile product is GreenGuard equivalent or less than the emission criteria for GGPS.001 or GGPS.002/ GGPS.EC.003 as detailed below:

Products assessed for Silver, Gold or Platinum LCARate Certification shall also comply with all individual VOC limits required by GreenGuard (or country based GBC rating tool requirement) and shown below or demonstrate the product does not contain the compounds required to generate the VOCs listed .

Individual VOCs ¹	General Textiles Upholstery, Drapery, Acoustic, etc. ≤1/10 TLV and ≤CA chronic REL GGPS.001	Children's Textile Products ≤1/100 TLV and ≤½ CA chronic REL GGPS.002/ GGPS.EC.003
Formaldehyde	≤0.05 ppm	≤0.0135 ppm (≤0.0165 mg/m ³)
Total VOCs ²	≤0.5 mg/m ³	≤0.22 mg/m ³
Total Aldehydes ³	≤ 0.1 ppm	≤0.043 ppm
Total Phthalates ⁴	≤0.01 mg/m ³	≤0.01 mg/m ³

¹For Adults, any VOC not listed must produce an air concentration level no greater than 1/10 the Threshold Limit Value (TLV).

For Child products VOCs not listed must produce an air concentration level no greater than 1/100 the TLV industrial work place standard and/or no greater than 1/2 the CA Chronic Reference Exposure Level (CREL)

(References: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, Cincinnati, Ohio 45211-4438) and http://www.oehha.ca.gov/air/chronic_rels/AllChrels.html - (CRELs) Adopted by the State of California Office of Environmental Health Hazard Assessment (OEHHA), February 2005).

²Defined to be the total response of measured VOCs falling within the C 6 – C16 range, with responses calibrated to a toluene surrogate.

³Defined to be the total response of a specific target list of aldehydes (2-butenal; acetaldehyde; benzaldehyde; 2,5-dimethylbenzaldehyde, 2-methylbenzaldehyde;3-and/or 4-methylbenzaldehyde; butanal; 3-methylbutanal; formaldehyde; hexanal; pentanal; propanal), with each individually calibrated to a compound specific standard.

⁴Total phthalates include dibutyl (DBP), diethylhexyl (DEHD), diethyl (DEP), butylbenzyl (BBP), di-octyl (DOP), and dimethyl (DMP) phthalates.)..

Source: <http://www.aqsgreenguard.com/uploads/EmissionsCriteria/UpdatedLogos/GGPS.EC.003EmissionCriteriaBedding.pdf>

http://www.greenguard.org/en/technicalCenter/tech_standards.aspx#2

iii) Emissions to Water:

Wool:

Wool shall be sourced only from wool scours which comply with the following requirements.

- a) Heavy effluent shall be discharged either:
 - (i) to a municipal sewage treatment plant where the sewage is physically separated and receives secondary and tertiary treatment before discharge, and the appropriate permit is held,

OR

 - (ii) to an appropriate contained treatment system where effluent cannot flow directly into water bodies and any discharge is of a suitable quality for the receiving environment. Suitable treatment systems are anaerobic digestion, evaporation/incineration or land disposal covered by a Discharge Consent (or equivalent). This option can apply to pretreatment processes employed at scours serviced by municipal treatment plants that do not have the level of treatment required for option (i).
- b) Rinse water effluent shall only be discharged directly into water bodies if the discharge is covered by an Environment Protection Authority (or equivalent) Licence and if the discharge when fully mixed does not raise the BOD5 level of the water body by more than 2.5mg/l. In a flowing water body, full mixing shall be considered to have occurred at a point downstream of the discharge equivalent to 10 times the width of the water body. In a static water body, full mixing shall be considered to have occurred at a point 200m from the discharge.
- c) For scouring effluent treated on-site and discharged to surface waters, the COD discharged to surface waters shall not exceed 45 g/kg greasy wool.
- d) The pH of the effluent discharged to surface waters shall be between 6 and 9 (unless the pH of the receiving waters is outside this range), and the temperature shall be below 40 °C (unless the temperature of the receiving water is above this value).
- e) The wool scouring plant shall describe, in detail, their treatment of the scouring effluent and continuously monitor the COD-levels and provide relevant data and test reports related to this criterion, using ISO 6060.

Wastewater discharges from wet-processing:

- (a) Waste water from wet-processing sites (except greasy wool scouring sites) shall, when discharged after treatment (whether on-site or off-site), have a COD content of less than 20 g/kg and a BOD content of less than 20 g/kg (BOD5 Test) expressed as an annual average. The applicant shall provide detailed documentation and test reports, using ISO 6060, showing compliance with this criterion, together with a declaration of compliance.
- (b) If the effluent is treated on site and discharged directly to waters, it shall also have a pH between 6 and 9 (unless the pH of the receiving water is outside this range) and a temperature of less than 40 °C (unless the temperature of the receiving water is above this value).

Insect Treatment of Yarn or Fabric:

If permethrin or bifenthrin insect resist agents are used, the levels of these agents in total factory effluent shall not exceed:

Permethrin 9.5g/tonne of treated wool
Bifenthrin 0.1g/tonne of treated wool

For wet-processing sites, compliance may also be demonstrated by providing evidence that the annual average application efficiency of permethrin is at least 90%, and the application temperature is greater than 90°C.

Cupro:

For cupro fibres, the copper content of the effluent water leaving the site, expressed as an annual average, shall not exceed 0.1 ppm.

Viscose:

Emission to water of zinc from the production site, expressed as an annual average, shall not exceed 0,3 g/kg.

Flax and other bast fibres (including hemp, jute, and ramie)

Flax and other bast fibres shall not be obtained by water retting, unless the waste water from the water retting is treated so as to reduce the COD or TOC by at least 75 % for hemp fibres and by at least 95 % for flax and the other bast fibres. The applicant shall provide detailed documentation and test reports, using ISO 6060 (COD), showing compliance with this criterion, together with a declaration of compliance.

Skins and Leather:

- a) Wastewater from leather tanneries released after processing must not contain more than 1 mg/l of chromium (III) according to tests showing compliance with ISO 9174 or EN 1233 or EN ISO 11885 for chromium.
- b) Wastewater released by the tannery must be treated either in the tannery's treatment plant or in a municipal treatment plant, so that a reduction in COD content of at least 85% is achieved according to tests taken showing compliance with ISO 6060 Water quality – determination of the chemical oxygen demand.

Metal complex dyes:

If metal complex dyes based on copper, chromium or nickel are used: emissions to water after treatment (fibre, yarn or fabric) shall not exceed: Cu 75 mg/kg; Cr 50 mg/kg; Ni 75 mg/kg based on test reports using the following test methods: ISO 8288 for Cu, Ni; EN 1233 for Cr. or a Declaration of Non-use.

iv) Resource Consumption**Greasy wool and other keratin fibres (including wool from sheep, camel, alpaca, goat):**

Water consumption: The total water use measured at the water intake shall not exceed 20KL/tonne of greasy wool scoured. Measurement of water use shall be continuous.

Energy Consumption: The total useful energy use shall not exceed 10 GJ/tonne of greasy wool scoured.

7.5.3 Fibre Qualities

- a) Fibres for which no fibre-specific criteria are set may be used, with the exception of mineral fibres, glass fibres, metal fibres, carbon fibres and other inorganic fibres.
- b) At least 85% by weight of all fibres in the product must be either in compliance with the corresponding fibre-specific criteria, if any, or of recycled origin.

i) Residual Chemicals:**Natural Cellulosic Seed Fibres (including cotton and kapok) and Flax and other bast fibres (including hemp, jute, and ramie) :**

Fibres must not contain more than 0.05 ppm (sensitivity of the test method permitting) of each of the following substances:

Aldrin, captafol, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, hexachlorocyclohexane (total isomers), 2, 4, 5-T, chlordime-form, chlorobenzilate, dinoseb and its salts, monocrotophos, pentachlorophenol, toxaphene, methamidophos, methylparathion, parathion, phosphamidon.

Australian Certified Organic (ACO), National Association for Sustainable Agriculture Australia (NASAA) Certified Organic or Demeter Certified Organic seed fibres or other international certified organic schemes recognized by GreenTag are deemed to have fulfilled this requirement.

Greasy wool and other keratin fibres (including wool from sheep, camel, alpaca, goat):

- a. The sum total content of the following substances shall not exceed 0.5 ppm: γ -hexachlorocyclohexane (lindane), α -hexachlorocyclohexane, β -hexachlorocyclohexane, δ -hexachlorocyclohexane, aldrin, dieldrin, endrin, p,p'-DDT, p,p'-DDD.
- b. The sum total content of the following substances shall not exceed 2 ppm: diazinon, propetamphos, chlorfenvinphos, dichlofenthion, chlorpyrifos, fenchlorphosq, ethion, pirimphos-methyl.

- c. The sum total content of the following substances shall not exceed 0.5 ppm: cypermethrin, deltamethrin, fenvalerate, cyhalothrin, flumethrin.
- d. The sum total content of the following substances shall not exceed 2ppm: diflubenzuron, triflumuron, dicyclanil.

The test should be made on raw wool, before it comes through any wet treatment, for each lot of wool or two times a year if more than two lots of wool per year are received.

These requirements (as detailed in points a), b), c) and d) and taken separately, do not apply if documentary evidence can be presented that establishes the identity of the farmers producing at least 75 % of the wool or keratin fibres in question, together with a declaration from these farmers that the substances listed above have not been applied to the fields or animals concerned.

Sampling must be taken on a representative basis as outlines in International Wool Textile Organisation (IWTO) Standard 59 -(IWTO-59) Method for Determination of Chemical Residues on Greasy Wool.

Demeter Certified Organic (DCO), National Association for Sustainable Agriculture Australia (NASAA) Certified Organic or Australian Certified Organic (ACO) fibres are deemed to have fulfilled this requirement.

Acrylic fibres:

Residual acrylonitrile content in raw fibres leaving the fibre production plant shall be less than 1,5 mg/kg

Man-made cellulose fibres (including viscose, lyocell, acetate, cupro, triacetate)

The level of AO_x in the fibres shall not exceed 250 ppm according to test method: ISO 11480.97 (controlled combustion and microcoulometry).

Polyester:

The amount of antimony in the polyester fibres shall not exceed 260 ppm.

Polypropylene:

Lead-based pigments shall not be used.

Skins and Leather

- a) The average concentration of chromium (VI) in finished skins and leather must not exceed 3 ppm according to test analysis performed using ISO 14062:2005 – 5.1, or equivalent;
- b) No residual concentrations of arsenic, cadmium or lead must be present in the end product according to test analysis performed using ISO 14062:2005 – 5.2, or equivalent;
- c) Formaldehyde levels shall not exceed 30 ppm for products in contact with skin and 300ppm for all other products according to test analysis performed using EN 14602 – 5.3 and ISO/TS 17226.

7.5.4 Controlled Substances and Processes

i) Restricted Processes and Chemicals:

Yarn scouring surfactants:

Yarn scouring surfactants shall be readily biodegradable.

Sizing, Spinning and Preparation agents and Detergents, Fabric Softeners and Complexing Agents:

Shall not include formaldehyde based compounds and shall be 'sufficiently biodegradable or eliminable in waste water treatment plants' according to relevant international Standards.

Elastane:

Organotin compounds shall not be used.

Formaldehyde:

The amount of free and partly hydrolysable formaldehyde in the final fabric shall not exceed 20 ppm in products for babies and young children under 3 years old, 30 ppm for products that come into direct contact with the skin, and 75 ppm for all other products according to test method: EN ISO 14184-1.

Printing pastes:

Shall not contain more than 5 % volatile organic compounds such as white spirit.

Flame retardants:

Only flame retardants that are chemically bound into the polymer fibre or onto the fibre surface (reactive flame retardants) may be used in the product. If the flame retardants used are assigned any ESCAP Category 1 R-phrases these reactive flame retardants should, on application, change their chemical nature to no longer warrant classification under any of these R-phrases. (Less than 0.1 % of the flame retardant on

the treated yarn or fabric may remain in the form as before application.) Flame retardants which are only physically mixed into the polymer fibre or into a textile coating are excluded (additive flame retardants).

Fabrics Finishes:

The word "finishes" covers all physical or chemical treatments (except Insect Resist Treatments) giving to the textile fabrics specific properties such as softness, waterproof, easy care. No use is allowed of finishing substances or of finishing preparations containing more than 0.1 % by weight of substances that are assigned or may be assigned at the time of application any ESCAP Category 1 R-phrases classified as very toxic, toxic, carcinogenic, mutagenic or toxic for reproduction.

- Anti felting finishes: Halogenated substances or preparations except if applied to wool slivers and loose scoured wool;

ii) Banned Processes and Chemicals

- a) Short-chained chlorinated paraffins of carbon chain length C10- C13 atoms;
- b) Perfluorinated alkyl sulfonates (PFAS): perfluorinated carboxylic acids (PFCA) including Perfluorooctanoic Acid (PFOA) and related substances listed in the OECD "Preliminary lists of PFOS, PFAS, PFOA, PFCA, related compounds and chemicals that may degrade to PFCA (as revised in 2007)" are not permitted in the product;
- c) Sulphonated phenolic stainblockers shall not be used;
- d) Brominated paraffin flame retardants;
- e) Organic tin compounds and antimony oxides;
- f) Phthalates DEHP, DBP, BBP or DAP;
- g) Chlorophenols (their salts and esters), PCB and organotin compounds shall not be used during transportation or storage of products and semi-manufactured products;
- h) Heavy metal salts (except of iron) or formaldehyde shall not be used for stripping or depigmentation;
- i) Alkylphenolethoxylates (APEOs), linear alkylbenzene sulfonates (LAS), bis(hydrogenated tallow alkyl) dimethyl ammonium chloride (DTDMAC), distearyl dimethyl ammonium chloride (DSDMAC), di(hardened tallow) dimethyl ammonium chloride (DHTDMAC), ethylene diamine tetra acetate (EDTA), and diethylene triamine penta acetate (DTPA) shall not be used and shall not be part of any preparations or formulations used;
- j) Chlorine agents are excluded for bleaching yarns, fabrics and end products. This requirement does not apply to the production of man-made cellulose fibres;
- k) Chrome Mordant Dyeing;
- l) Halogenated carriers for polyester;
- m) Plastisol-based printing is not allowed. Fillings: Criterion for fillings and filling processes or treatments shall comply with all above requirements;
- n) Coatings, laminates and membranes: Products made of polyurethane shall not contain organic tin; Products shall also not contain plasticisers or solvents that are assigned any ESCAP Category 1 R-phrases.

iii) Dyes:

- a) All Dyes used shall comply with ESCAP as per Appendix 1. This ensures that there is no use of Dyes that are carcinogenic, mutagenic or toxic to reproduction. The following dyes shall not be used:

C.I. Basic Red 9	C.I. Direct Black 38
C.I. Disperse Blue 1	C.I. Direct Blue 6
C.I. Acid Red 26	C.I. Direct Red 28
C.I. Basic Violet 14	C.I. Disperse Yellow 3
C.I. Disperse Orange 11	

b) **Potentially Sensitising Dyes:** No use of Dyes that are potentially sensitising. The following dyes shall not be used:

Dye Name	CI -No
—C.I. Disperse Blue 3	C.I. 61 505
—C.I. Disperse Blue 7	C.I. 62 500
—C.I. Disperse Blue 26	C.I. 63 305
—C.I. Disperse Blue 35	
—C.I. Disperse Blue 102	
—C.I. Disperse Blue 106	
—C.I. Disperse Blue 124	
—C.I. Disperse Brown 1	
—C.I. Disperse Orange 1	C.I. 11 080
—C.I. Disperse Orange 3	C.I. 11 005
—C.I. Disperse Orange 37	
—C.I. Disperse Orange 76 (previously designated Orange 37)	
—C.I. Disperse Red 1	C.I. 11 110
—C.I. Disperse Red 11	C.I. 62 015
—C.I. Disperse Red 17	C.I. 11 210
—C.I. Disperse Yellow 1	C.I. 10 345
—C.I. Disperse Yellow 9	C.I. 10 375
—C.I. Disperse Yellow 39	
—C.I. Disperse Yellow 49	

Assessment and verification: The applicant shall provide a declaration of non-use of these dyes.

c) **Metal complex dyes:** based on copper, lead, chromium or nickel shall not be used for any fabrics used in mattresses or bedding materials

d) **Impurities in dyes:** Colour matter with fibre affinity (soluble or insoluble)

The levels of ionic impurities in the dyes used shall not exceed the following:

Ag 100 ppm; As 50 ppm; Ba 100 ppm; Cd 20 ppm; Co 500 ppm; Cr 100 ppm; Cu 250 ppm; Fe 2500 ppm; Hg 4 ppm; Mn 1000 ppm; Ni 200 ppm; Pb 100 ppm; Se 20 ppm; Sb 50 ppm; Sn 250 ppm; Zn 1500 ppm

Any metal that is included as an integral part of the dye molecule (e.g. metal complex dyes, certain reactive dyes, etc.) shall not be considered when assessing compliance with these values, which only relate to impurities.

e) **Impurities in Pigments:** Insoluble colour matter without fibre affinity:

The levels of ionic impurities for pigments used shall not exceed the following: As 50 ppm; Ba 100 ppm, Cd 50 ppm; Cr 100 ppm; Hg 25 ppm; Pb 100 ppm; Se 100 ppm Sb 250 ppm; Zn 1000 ppm.

7.5.5 GreenRate Matrix 5 PAC Assessment – Relevant Sections

Products must comply with the following criteria at a minimum:

Minimum Compliance	
GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.02	PAC 2 Toxicity - ES CAP and Supplementary Product Category Rules
	No ES CAP Red Light Comments
5.1.05	PAC 5 Social and Environmental Compliance
	Legal Compliance
5.1.06	PAC 6 Durability
	Fitness for Purpose
	Replacement Parts

Depending on the level of assessment, applicants should submit evidence towards complying with the following criteria:

GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.01	PAC 1 Greenhouse Gas Accounting
5.1.01	PAC 2 Toxicity - No ES CAP Issues of Concern
5.1.03	PAC 3 - Materials Extraction
	Data Collection
	At least one Optimisation Option
5.1.04	PAC 4 - Water Use Accounting
5.1.05	PAC 5 - Social and Environmental Compliance
	Compliant Supply Chain
	Public Reporting
	Environmental Claims
5.1.07	SA 8000
	PAC 7 End of Life
	Product Stewardship Program
	Verification of Product Stewardship Program
5.1.08	90% Design for Disassembly
	PAC 8 Product VOC Emissions

Compliance with these criteria will determine the scheme to which the product is assessed, see the Matrix 5 Series under section 5.4 for a list of schemes available to product assessors.

7.6 Carpets and Floor Coverings Supplementary Standard

Broadloom and modular carpets and underlays shall comply with the relevant standards relating to the Product Supplementary Standard elsewhere in Appendix 2 and one or more of the following requirements:

7.6.1 Fit for Purpose:

i) Carpets and Underlays:

Shall meet the one or more of the following standards:

- a) AS 2454 Textile floor coverings – Terminology;
- b) ACCS Technical Specifications for its intended application
- c) Woolmark or Woolmark Blend Technical Specifications for its intended application; or
- d) Fernmark Technical Specifications for its intended application or
- e) AS/NZS 2455 Textile floor coverings where relevant
- f) AS 4288 Soft underlays for textile floor coverings where relevant OR
- g) meets or exceeds other internationally accepted standard relevant to any market/s it is to be exported to.
- h) AS 4288-2003 Soft underlays for textile floor coverings
- i) AS ISO 9239-1 2010 – Reaction to fire tests for floorings -- Part 1: Determination of the burning behaviour using a radiant heat source
- j) BCA section C1.10a Fire Hazard Properties-Floors Walls and Ceilings
- k) AS/NZS 4586:2004 Slip resistance classification of new pedestrian surface materials
- l) EN 649 - Resilient floor coverings - Homogeneous and heterogeneous polyvinyl chloride floor coverings – Specification.

and meet the following Life cycle related requirements:

- m) Evidence of Certification must be less than 2 years old or demonstrate that the main construction parameters of the product remain within 5% manufacturing tolerance of the original specification registered with the ACCS or other schemes. This requires the licensee to have the product tested at a NATA registered laboratory to the requirements of the ACCS Abbreviated Quality Assurance Test Package or other system considered equal by GreenTag.

OR

- n) The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

ii) Hard Flooring:

Ceramic tiles, natural stone, terrazzo, agglomerated stone and clay, concrete and cement based tiles, shall meet or exceed the fit for purpose requirements of 2009/607/EC, or other relevant internationally recognised fit-for purpose standard relevant to the product segment including:

AS/NZS 4586:2004 Slip resistance classification of new pedestrian surface materials

AND

Accelerated wear testing of materials to minimum 1000 cycles using a Taber wear testing apparatus in accordance with AS/NZS 2001.2.28-1992 or ASTM C1353 or using a Gardco testing apparatus as per Safe Environments Pty Ltd's 'Slip Resistance Testing using Accelerated Wear Conditioning Procedure', Version 3 or later.

AND

Subsequent verification of final slip ratings according to:

- a) Table 3 of HB 197:1999 Introductory Guide to the Slip Resistance of Pedestrian Surface Materials using the Pendulum Test and Ramp Test from Appendix A of HB 197:1999.

OR

- b) Dry Slip friction profile recorded using a Tortus II Model Mark 2 friction tester in accordance with method specified in AS4586-2004 Appendix B.

iii) Resilient Flooring:

Shall meet or exceed relevant internationally recognised fit-for purpose standard relevant to the product segment including:

AS/NZS 4586:2004 Slip resistance classification of new pedestrian surface materials

7.6.2 Life Cycle Issues:**i) Emissions to Air: Manufacturing**

In accordance with limits for Textiles as shown in section 7.5.2 i).

ii) Emissions to Air: Indoor**VOCs:**

All Level A, B, or C8 Certified carpet, underlay and flooring product(s) must comply as a minimum with TVOC emissions limits in the following limits (or country based GBC rating tool requirements):

- a) Total VOC limit 0.5mg/m² per hour
- b) 4-PC (4-Phenylcyclohexene) 0.05mg/m² per hour
- c) Adhesives: shall meet Adhesives and Sealants section 7.8 requirements

7.6.3 Gold or Platinum LCARate Certification

Products assessed for Gold or Platinum LCARate Certification shall also comply with all individual VOC limits required by ACCS or GreenLabel Plus or other country based GBC rating tool requirements, e.g. LEEDv4, (note this is not to imply they are exactly equal standards).

Testing must be undertaken according to the test method required by the ACCS:

-ISO/DIS 10580 – Resilient, Textile and Laminate Floor Coverings Evaluation of Volatile Organic Compounds (VOC) Emissions. This standard method provides a 24 hour emission rate for VOC emissions immediately after carpet manufacture. The emission rate is measured as an emission factor (EF in micro gram per square meter of floor covering per hour) OR Carpet and Rug Institute Green Label Plus (US) OR American Society for Testing and Materials (ASTM) D5116 Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products.

7.6.4 Emissions to Water

For natural fibre based products in accordance with limits for Textiles as shown in section 7.5.2 iii). Resilient and Polymer floors excepted.

7.6.5 Carpet and Underlay Fibre Qualities

In accordance with limits for Textiles as shown in section 7.5.3.

7.6.6 Hard Flooring Qualities

Ceramic tiles, natural stone, terrazzo, agglomerated stone and clay, concrete and cement based tiles, shall meet or exceed the general requirements of this section and the Emission to Air and Water requirements of 2009/607/EC.

7.6.7 Warranty**i) Carpet**

- a) Certified new and re-used modular carpet products must carry a minimum two-year warranty for color fastness.
- b) Wool & all Residential Grade Broadloom carpets shall offer a standard product warranty of 10 years.
- c) All Modular & Commercial Grade Broadloom carpets shall offer a standard product warranty of 12 years Insect Resistance
- d) Wool carpets must be treated against carpet moth and carpet beetle attack to the minimum requirements of the ACCS or Woolmark/ Woolmark Blend E10 specification, the Wool Interiors specification or required Wools of NZ rating.
- e) Carpets to be Certified for Green Star NZ™ must provide minimum 15 year warranty.

ii) Hard Floor Finishes

- a) Products assessed for Platinum LCARate Certification shall provide a min 15 year warranty;
- b) Products assessed for Gold LCARate Certification shall provide a min 10 year warranty.
- c) Products assessed for Silver LCARate Certification shall provide min 7 year warranty.

iii) **Resilient Floor Finishes**

- a) Products assessed for Platinum LCARate Certification shall provide a min 10 year warranty with extended no waxing/ no polish guarantee or 15 year warranty;
- b) Products assessed for Gold LCARate Certification shall provide a min 10 year warranty.
- c) Products assessed for Silver LCARate Certification shall provide min 7 year warranty.

7.6.8 GreenRate Matrix 5 PAC Assessment – Relevant Sections

Products must comply with the following criteria at a minimum:

Minimum Compliance	
GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.02	PAC 2 Toxicity - ES CAP and Supplementary Product Category Rules
	No ES CAP Red Light Comments
5.1.05	PAC 5 Social and Environmental Compliance
	Legal Compliance
5.1.06	PAC 6 Durability
	Fitness for Purpose
	Replacement Parts

Depending on the level of assessment, applicants should submit evidence towards complying with the following criteria:

GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.01	PAC 1 Greenhouse Gas Accounting
5.1.01	PAC 2 Toxicity - No ES CAP Issues of Concern
5.1.03	PAC 3 - Materials Extraction
	Data Collection
	At least one Optimisation Option
5.1.04	PAC 4 - Water Use Accounting
5.1.05	PAC 5 - Social and Environmental Compliance
	Compliant Supply Chain
	Public Reporting
	Environmental Claims
5.1.07	PAC 7 End of Life
	Product Stewardship Program
	Verification of Product Stewardship Program
	90% Design for Disassembly
5.1.08	PAC 8 Product VOC Emissions

Compliance with these criteria will determine the scheme and level to which the product is assessed, see the Matrix 5 Series under section 5.4 for a list of schemes.

7.7 Mattress and Related Products Supplementary Standard

Mattresses, Mattress Pads and Mattress Protectors and associated items shall comply with the following requirements:

7.7.1 Fit for Purpose:

Mattresses shall meet the one or more of the following criteria:

- i. where required under legislation, products for Certification shall comply with relevant Australian or other required standards;
- ii. where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;

OR

- iii. The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

AND

- iv. product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

and meet the following Life cycle related requirements:

7.7.2 Life Cycle Issues:

Emissions to Air: Manufacturing

In accordance with Textiles and Fibres requirements as noted in section 7.5.2.

7.7.3 Emissions to Air: Indoor

i) VOCs:

Mattresses: The minimum standard for any Level A, B, or C8 Certified whole mattress product is GreenGuard equivalent or less than the emission criteria for bedding GGPS.001 or GGPS.002/ GGPS.EC.003 as detailed below: Products assessed for Silver, Gold or Platinum LCARate Certification shall also comply with all individual VOC limits required by GreenGuard and shown below or demonstrate the product does not contain the compounds required to generate the VOCs listed.

Individual VOCs ¹	Adult Mattress and Bedding Products ≤1/10 TLV and ≤CA chronic REL GGPS.001	Children’s Mattress and Bedding Products ≤1/100 TLV and ≤½ CA chronic REL GGPS.002/ GGPS.EC.003
Formaldehyde	≤0.05 ppm	≤0.0135 ppm (≤0.0165 mg/m ³)
Total VOCs ²	≤0.5 mg/m ³	≤0.22 mg/m ³
Total Aldehydes ³	≤ 0.1 ppm	≤0.043 ppm
Total Phthalates ⁴	≤0.01 mg/m ³	≤0.01 mg/m ³

¹For Adults, any VOC not listed must produce an air concentration level no greater than 1/10 the Threshold Limit Value (TLV). For Child products VOCs not listed must produce an air concentration level no greater than 1/100 the TLV industrial work place standard (Reference: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, Cincinnati, Ohio 45211-4438) and/or no greater than 1/2 the CA Chronic Reference Exposure Level (CREL) http://www.oehha.ca.gov/air/chronic_rels/AllChrels.html - (CRELs) Adopted by the State of California Office of Environmental Health Hazard Assessment (OEHA), February 2005).

²Defined to be the total response of measured VOCs falling within the C 6 – C16 range, with responses calibrated to a toluene surrogate.

³Defined to be the total response of a specific target list of aldehydes (2-butenal; acetaldehyde; benzaldehyde; 2,5-dimethylbenzaldehyde, 2-methylbenzaldehyde;3-and/or 4-methylbenzaldehyde; butanal; 3-methylbutanal; formaldehyde; hexanal; pentanal; propanal), with each individually calibrated to a compound specific standard.

⁴Total phthalates include dibutyl (DBP), diethylhexyl (DEHD), diethyl (DEP), butylbenzyl (BBP), di-octyl (DOP), and dimethyl (DMP) phthalates.)..

Source: <http://www.aqsgreenguard.com/uploads/EmissionsCriteria/UpdatedLogos/GGPS.EC.003EmissionCriteriaBedding.pdf>
http://www.greenguard.org/en/technicalCenter/tech_standards.aspx#2

ii) Glues: The glues containing organic solvents shall not be used. (This criterion does not apply to glues used for occasional repairs). In this context, VOCs are any organic compound having at 293.15 K, a vapour pressure of 0,01 kPa or more, or having a corresponding volatility under the particular conditions of use. The adhesive shall

not be used that, at the time of application fulfil the classification criteria of ESCAP Level 1 for Human Health R-Phrases.

iii) Formaldehyde emission from untreated raw wood-based materials:

Composite wood-based materials are allowed in a mattress ensemble if they comply with the following requirements:

Particleboard or MDF: the emission of formaldehyde from particle boards in their raw state, i.e. prior to machining or coating, shall not exceed 50 % of the threshold value that would allow it to be classified as E1 according to standard EN 312-1 (equivalent to the minimum E0 threshold value)

7.7.4 Emissions to Water

In accordance with Textiles and Fibres requirements as noted in section 7.5.2

7.7.5 Material Qualities

In accordance with Textiles and Fibres requirements as noted in section 7.5.2 and as follows:

i) ESCAP:

In addition to the requirements above, products shall be assessed and pass the ESCAP process, shown in Appendix 1.

ii) Latex and Coconut Fibre:

Where a mattress has greater than 5% latex foam or coconut fibre the following shall apply:

a) Extractable heavy metals:

The concentrations of the following metals shall not exceed the following values:

Table 7.5.1 Extractable Heavy metal content not to be exceeded:

Heavy Metal	Limit Concentration
— Antimony	0.5 ppm
— Arsenic	0.5 ppm
— Lead	0.5 ppm
— Cadmium	0.1 ppm
— Chromium (total)	1.0 ppm
— Cobalt	0.5 ppm
— Copper	2.0 ppm
— Nickel	1.0 ppm
— Mercury	0.02 ppm

Testing in accordance with the following test method: Milled sample extracted according to DIN 38414-S4, L/S = 10. Filtration with 0,45 µm membrane filter. Analysis by means of atomic emission spectroscopy with inductive coupled plasma (ICP-AES) or with hydride or cold vapour technique

b) Chlorophenols:

No chlorophenol (salts and esters) shall be present in concentrations exceeding 0,1 ppm, except mono- and di-chlorinated phenols (salts and esters) which shall not exceed 1 ppm. Assessment and verification: The applicant shall provide a test report, using the following test method: Milling of 5 g sample, extraction of the chlorophenol or sodium salt. Analysis by means of gas chromatography (GC), detection with mass spectrometer or ECD

c) Butadiene:

The concentration of butadiene shall not exceed 1 ppm. Assessment and verification: The applicant shall provide a test report, using the following test method: Milling and weighing of sample. Sampling by headspace sampler. Analysis by gas chromatography, detection by flame-ionisation detector.

d) Nitrosamines:

The concentration of N-nitrosamines shall not exceed 0.0005 mg/m³ as measured with the chamber test. Assessment and verification: The applicant shall provide a test report, using the following test method: the chamber test (with conditions as in criterion 1(2) on formaldehyde)

iii) **PUR Foam**

Where a mattress has greater than 5% PUR foam section 7.7.5 i) shall apply together with the following:

Blowing agents:

Halogenated organic compounds shall not be used as blowing agents or as auxiliary blowing agents in PUR foams.

7.7.6 Resource Efficiency

Products for Certification will focus on reducing their life cycle impacts via collection of data on and progressive improvement of waste minimisation, increasing recycled content, creating or maintaining recyclability, including rapidly renewable resource content where possible, increasing materials efficiency and minimising harmful sourcing of raw materials.

7.7.7 Warranty

- a) Products assessed for Platinum LCARate Certification shall provide a min 7 year non pro-rata'd warranty;
- b) Products assessed for Gold LCARate Certification shall provide a min 5 year non pro-rata'd warranty;
- c) Products assessed for Silver LCARate Certification shall provide a min 4 year non pro-rata'd warranty;
- d) Products assessed for Bronze LCARate Certification shall provide a min 2 year non pro-rata'd warranty

7.8 Adhesives and Sealants Supplementary Standard

7.8.1 Fit for Purpose:

Adhesives and Sealants as noted in Table 7.8.1 shall meet the one or more of the following criteria:

- i. where required under legislation, products for Certification shall comply with relevant Australian or other required standards;
 - ii where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;
- OR
- iii The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

AND

- iv. product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

and meet the following Life cycle related requirements:

7.8.2 Life Cycle Issues:

i) Emissions to Air: Indoor

VOCs:

The minimum standard for any Level A, B or C8 Certified product detailed below:

VOCs are to be in conformance with the grams per litre (g/L) content limits set out in the table below which have been adopted from South Coast Air Quality Management District (California, US) – Rule 1168 (or other country based GBC rating tool requirements, e.g. LEEDv4).

Table 7.8.1 Maximum TVOC Limits for Adhesives and Sealants

Maximum TVOC content*	Product Type (g/L of product)
Indoor carpet adhesive	50
Carpet pad adhesive	50
Wood flooring and laminate adhesive	100
Rubber flooring adhesive	60
Sub-floor adhesive	50
Ceramic tile adhesive	65
Cove base adhesive	50
Dry wall and panel adhesive	50
Multipurpose construction adhesive*	70
Structural glazing adhesive	100
Architectural sealants*	250

* Sealants used to enhance the fire- and water-proofing properties are included

Emissions to Water

Compliance Testing: Refer to South Coast Air Quality Management District Rule 1168 for testing methods.

Exempt compounds must not be subtracted in the calculation of VOC content.

Values should reflect the final product as mixed.

The TVOC content of the ready-to-use product may also be calculated theoretically as the sum total of the VOCs of each of the raw material components comprising the product

Where the TVOC content of individual components is not known, it must be determined experimentally by ASTM D3960, which is comprised of four individual testing procedures that measures TVOC (D2369) as well as density (D1475), water content (D4017) but not excluding exempt compounds (D4457).

7.8.3 Material Qualities

ESCAP: In addition to the requirements above, products shall be assessed and pass the ESCAP process, shown in Appendix 1.

7.9 Paints and Coatings Supplementary Standard

7.9.1 Fit for Purpose:

Paints and coatings as noted in Table 7.9.1 shall meet the one or more of the following criteria:

- i. where required under legislation, products for Certification shall comply with relevant Australian or other required standards;
- ii where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;

OR

- iii the product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other appropriate criteria.

AND

- iv product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

and meet the following Life cycle related requirements:

7.9.2 Life Cycle Issues:

Emissions to Air: Manufacturing

Ozone-depleting Substances in Industrial Solvents and Cleaning Agents: The solvents used to clean the production equipment of architectural coatings must not contain ozone depleting substances.

Emissions to Air: Indoor

VOCs:

The minimum standard for any Level A, B or C8 Certified product is equivalent or less than the following emission levels for the various uses noted below:

Paint shall comply with the TVOC content as required by the most current version of GBCA Green Star requirements currently as follows (or other country based GBC rating tool requirements, e.g. LEEDv4):

The TVOC content of the 'ready-to-use' paint shall be theoretically calculated as the sum total of the VOCs of each of the raw material components comprising the paint. Where the TVOC content of individual components is not known, it must be determined experimentally by one of the following testing methods as appropriate:

- ISO Method 17895 (2005), for a material with a presumed VOC content <1%;
- ISO Method 11890-2 (2006), for a material with a presumed VOC <15%;
- ISO Method 11890-1 (2007), for a material with a presumed VOC content >15%;

OR

- ASTM D3960, which is comprised of four individual testing procedures that measures TVOC (D2369) as well as density (D1475), water content (D4017), but not excluding exempt compounds (D4457).

The product(s) must comply with the following table:

Table 7.9.1: Max Paints and Coatings TVOC content.

Product Type/Sub Category	(g/L of ready-to-use product)
Walls and ceilings –interior semi gloss	16
Walls and ceilings –interior low sheen	16
Walls and ceilings –interior flat washable	16
Ceilings –interior flat	14
Trim – gloss, semi gloss, satin, varnishes and woodstains	75
Timber and binding primers*	30
Latex primer for galvanized iron and zincalume	60
Interior latex undercoat	65
Interior sealer	65
One and two pack performance coatings for floors*	140
Any solvent-based coatings whose purpose is not covered in table	200

7.9.3 Material Qualities:

i) **ESCAP:**

In addition to the requirements above, products shall be assessed and pass the ESCAP process, shown in Appendix 1.

ii) **White pigments:**

White pigment content (white inorganic pigments with a refractive index higher than 1.8): Paints shall have a white pigment content lower or equal to 40 g per m² of dry film, with 98 % opacity. This requirement does not apply to varnishes and woodstains.

iii) **Banned Ingredients**

- a) All products and tints shall comply with ESCAP
- b) Heavy metals: The following heavy metals or their compounds shall not be used as an ingredient of the product or tint (if applicable) (whether as a substance or as part of any preparation used): cadmium, lead, chromium VI, mercury, arsenic, barium (excluding barium sulphate), selenium, antimony.
- c) Cobalt shall also not be added as an ingredient with the exception of cobalt salts used as a siccative in alkyd paints. These may be used up to a concentration not exceeding 0.05 % (m/m) in the end product, measured as cobalt metal. Cobalt in pigments is also exempted from this requirement.
- d) It is accepted that ingredients may contain traces of these metals up to 0.01 % (m/m) deriving from impurities in the raw materials.
- e) Perfluorinated alkyl sulfonates (PFAS): perfluorinated carboxylic acids (PFCA) including Perfluorooctanoic Acid (PFOA) and related substances listed in the OECD "Preliminary lists of PFOS, PFAS, PFOA, PFCA, related compounds and chemicals that may degrade to PFCA (as revised in 2007)" are not permitted in the product.
- f) Formaldehyde: Free formaldehydes shall not be added. Formaldehyde donors may only be added in such quantities as will ensure that the resulting total content after tinting (if applicable) of free formaldehyde will not exceed 0.001 % (m/m) according to raw materials suppliers using the VdL-RL 03 test method (VdL Guide-line 03) "In-can concentration of formaldehyde determined by the acetyl-acetone method" and calculations relating the data from these tests to the final product in order to indicate that the final maximum possible concentration of formaldehyde released by formaldehyde releasing substances is not higher than 0.001 % (m/m). Alternatively formaldehyde resulting from formaldehyde donors can be measured in the end product by using a standard based on High-performance liquid chromatography.
- g) Alkylphenolethoxylates (APEOs): APEOS shall not be used in the product before or during tinting (if applicable).
- h) Isothiazolinone compounds: The content of isothiazolinone compounds in the product shall not exceed 0.05 % (m/m) before or after tinting (if applicable). Likewise the content of the mixture of 5-chloro-2-methyl-2H-isothiazol-3-one (EC No 247-500-7) and 2-methyl-2H-isothiazol-3-one (EC No 220-239-6) (3:1) shall not exceed 0.0015 % (m/m).

Packaging

All plastic packaging containers must have a plastic resin identification code clearly imprinted on each container, comprised entirely of materials able to be recycled and must not be treated in any manner that would prevent recycling.

7.10 Furniture Supplementary Standard

7.10.1 Fit for Purpose:

Furniture and Furniture components shall meet the relevant standards relating to the Product Supplementary Standard elsewhere in Appendix 2 and one or more of the following criteria:

- i. where required under legislation, products for Certification shall comply with relevant Australian or other required standards, e.g.;
 - AFRDI 109 - Components for Chairs
 - AS/NZS 3813: Plastic Monobloc Chairs (Commercial level)
 - AS/NZS 4438: Height Adjustable Swivel Chairs (Level 6)
 - AS/NZS 4442: Office Desks
 - AS/NZS 4443: Office Panel Systems - Workstations
 - AS/NZS 4610.2 School and Educational - Chairs (Severe)
 - AS/NZS 4610.3 School and Educational - Tables and Storage Furniture (Severe)
 - AS/NZS 4688: Fixed Height Chairs (Level 6)
 - AS 5079: Filing Cabinets
 - Leather Components: AFRDI Standard 146
 - Timber Components: FSC, Post Consumer Recycled Certified, AFS or PEFC
 - Formaldehyde: As per section 7.4 Formaldehyde
 - Fabric or Textile Components: As per section 7.5 Textiles
 - Adhesives and Sealants: As per Section 7.8 Adhesives and Sealants
 - Timber and Metal Coatings: As per section 7.9 Paints and Coatings and as below as relevant.
 - ii where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;
- OR
- iii The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.
- AND
- iv. product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

and meet the following Life cycle related requirements:

7.10.2 Life Cycle Issues:

i) Emissions to Air: Indoor

VOCs:

The minimum standards relevant to any Level A, B or C8 Certified product are:

VOCs- Components:

ASTM D5116-06 Small Scale Environment Chamber determination of organic emissions from indoor materials/products

VOCs- Whole Items:

ASTM D6670-01 or US EPA's Environment Technology Verification (ETV) Test Method 'Large Chamber Test Protocol for Measuring Emissions of VOCs and Aldehydes - Sept 1999.

Or other country based GBC rating tool requirements, e.g. LEEDv4.

Table 7.1: Limit benchmarks for total VOCs in furniture items

Accepted Test Method		Small Chamber	Large Chamber	Large Chamber
Testing Method		ASTM D5116-06	ASTM D6670-01	US EPA ETV Test Method
Fitout Item	Workstation	< 0.5 mg/item/hr	< 0.5 mg/item/hr	< 0.5 mg/item/hr
	Wall	< 0.5 mg/m ² /hr	< 0.5 mg/m ² /hr	< 0.5 mg/m ² /hr
	Panel	< 0.5 mg/m ² /hr	< 0.5 mg/m ² /hr	< 0.5 mg/m ² /hr
	Table	< 0.5 mg/item/hr	< 0.5 mg/item/hr	< 0.5 mg/item/hr
	Chair	< 0.5 mg/item/hr	< 0.5 mg/item/hr	< 0.5 mg/item/hr
	Storage Unit	< 0.5 mg/item/hr	< 0.5 mg/item/hr	< 0.5 mg/item/hr

Formaldehyde:

Formaldehyde emissions shall be limited to the requirements shown in section 7.4.4 Composite Wood: Formaldehyde emissions.

7.10.3 Resource Efficiency

Products for Certification will focus on reducing their life cycle impacts via collection of data on and progressive improvement of waste minimisation, increasing recycled content, creating or maintaining recyclability, including rapidly renewable resource content where possible, increasing materials efficiency and minimising harmful sourcing of raw materials. For Certification above Bronze LCARate level, they will also offer the following:

- a) Product Stewardship: A contractual agreement to take back the furniture at the end of its service life for re-use, recycling or re-processing is required; and
- b) Design for Disassembly: loose furniture that can be readily disassembled, using non-specialist tools, into elemental components for re-use, recycling or re-processing.

7.10.4 Gold or Platinum LCARate Certification

- a) A product or item is considered for Platinum LCARate when:
 - i. it is designed for disassembly and at least 90% of the item (by mass) can be readily disassembled;
 - ii. Any upholstered furniture must include GreenTag Certified Fabrics or fabrics approved by other recognized ecolabel;
- b) A product or item is considered for Gold LCARate when:
 - i. it is designed for disassembly and at least 50% of the item (by mass) can be readily disassembled;
 - ii. Furniture submitted is 'white' or non-finished/upholstered furniture.

7.10.5 GreenRate 'White Furniture' or 'Finished Product' Certification

- a) A product can be considered for GreenRate Level A when it is upholstered in GreenTag Certified Fabrics or fabrics approved by other recognized ecolabel;
- b) A product can be considered for GreenRate Level B or C when furniture submitted is 'white' or non-finished/upholstered furniture.

7.10.6 Warranty

i) **Indoor Furniture Warranties:**

- GreenRate Level C - 5 years
- GreenRate Level B - 7 years
- GreenRate Level A - 10 years

on the quality of the entire product provided the product is used as per its intended functional use.

ii) **Indoor/Outdoor Furniture Warranty:**

A 10 Year warranty is required with no exclusions relating to potential degradation due to environmental factors e.g. UV, corrosion due to moisture, temperature variation etc.

7.10.7 GreenRate Matrix 5 PAC Assessment – Relevant Sections

Products must comply with the following criteria at a minimum:

Minimum Compliance	
GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.02	PAC 2 Toxicity - ES CAP and Supplementary Product Category Rules
	No ES CAP Red Light Comments
5.1.05	PAC 5 Social and Environmental Compliance
	Legal Compliance
5.1.06	PAC 6 Durability
	Fitness for Purpose
	Replacement Parts

Depending on the level of assessment, applicants should submit evidence towards complying with the following criteria:

GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.01	PAC 1 Greenhouse Gas Accounting
5.1.01	PAC 2 Toxicity - No ES CAP Issues of Concern
5.1.03	PAC 3 - Materials Extraction
	Data Collection
	At least one Optimisation Option
5.1.04	PAC 4 - Water Use Accounting
5.1.05	PAC 5 - Social and Environmental Compliance
	Compliant Supply Chain
	Public Reporting
	Environmental Claims SA 8000
5.1.07	PAC 7 End of Life
	Product Stewardship Program
	Verification of Product Stewardship Program
	90% Design for Disassembly
5.1.08	PAC 8 Product VOC Emissions

Compliance with these criteria will determine the scheme and level to which the product is assessed, see the Matrix 5 Series under section 5.4 for a list of schemes.

7.11 Walls, Partitions and Ceilings Supplementary Standard

7.11.1 Fit for Purpose:

- i. where required under legislation, products for Certification shall comply with relevant Australian or other required standards e.g.;

- BCA section C1.10a Fire Hazard Properties-Floors, Walls and Ceilings:
- ii. all components comprising Certified walls, partitions and ceilings shall meet the relevant standards relating to that component as noted in the Product Supplementary Standard elsewhere in Appendix 2;
- iii. where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;

OR

- iii The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

AND

- iv product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

and meet the following Life cycle related requirements:

7.11.2 Life Cycle Issues:

i) **Emissions to Air: Indoor**

VOCs:

Adhesives and Sealants:

The minimum standard for any Level A, B or C8 Certified product is as per section 7.8 Adhesives and Sealants:

Wall and Partition elements and finishes:

Materials comprising over 5% of a wall or partition by mass or paints and coatings shall comply, for Level A, B or C8 with the GreenGuard Indoor Air quality standard materials thresholds as follows (or other country based GBC rating tool requirements, e.g. LEEDv4):

Parameter	Limits
Total VOCs (TVOC) ¹	≤ 0.5 mg/m ³
Total Aldehydes ²	≤ 0.1 ppm
Individual VOCs ³	≤ 0.1 TLV

¹Defined to be the total response of measured VOCs falling within the C6 – C16 range, with responses calibrated to a toluene surrogate.

²Defined to be the total response of a specific target list of aldehydes (2-butenal; acetaldehyde; benzaldehyde; 2, 5-dimethylbenzaldehyde; 2-methylbenzaldehyde; 3-and/or 4-methylbenzaldehyde; butanal; 3-methylbutanal; formaldehyde; hexanal; pentanal; propanal), with each individually calibrated to a compound specific standard.

³Any VOC not listed must produce an air concentration level no greater than 1/10 the Threshold Limit Value (TLV) industrial workplace standard (Reference: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, and Cincinnati, OH 45211-4438).

Fibre-based Components:

Fibre based components including textiles and ceiling tiles shall meet or exceed the minimum standard for any Certified product as per section 7.5.2.ii), 7.6.2 ii) and 7.6.3 Carpets:

Formaldehyde:

Structural and cladding products shall comply with section 7.4 Composite Wood: Formaldehyde minimisation.

Gold or Platinum LCARate Certification formaldehyde emission limits:

- a) A product or item is considered for Platinum LCARate when it has a formaldehyde emission rate less than or equal to Super E0 (E00 or F****).
- b) A product or item is considered for Gold or Silver LCARate when it has a formaldehyde emission rate less than or equal to E0 (or F***).

- c) A product or item is considered for Bronze LCARate when it has a formaldehyde emission rate less than or equal to E1 (F**).

Ionising Radiation:

All materials shall comply with Appendix 8 radiation protection safety requirements.

ii) **Emissions to Water**

Fibre-based Components:

The minimum standard for any fibre based components within a Certified product is as per section 7.5.2iii)

7.11.3 Material Qualities

Timber components:

Timber components within a Certified product shall be post consumer recycled, FSC, AFS or PEFC Certified.

Fibre-based Components:

The minimum standard for any fibre based components within a Certified product is as per section 7.14 Insulation.

Wall and Partition elements and finishes:

Polymer Elements: e.g. polymer panels or sheet insulation in accordance with section 7.14 Insulation

7.11.4 Resource Efficiency

Products for Certification will focus on reducing their life cycle impacts via collection of data on and progressive improvement of waste minimisation, increasing recycled content, creating or maintaining recyclability, including rapidly renewable resource content where possible, increasing materials efficiency and minimising harmful sourcing of raw materials.

For Certification above Bronze LCARate level, they will also offer the following:

- a) Product Stewardship: A contractual agreement to take back the furniture at the end of its service life for re-use, recycling or re-processing is required; and
- b) Design for Disassembly: can be readily disassembled, using non-specialist tools, into elemental components for re-use, recycling or re-processing.

7.11.5 Gold or Platinum LCARate Certification

- a) A product or item is considered for Platinum LCARate when it is designed for disassembly and at least 90% of the item (by mass) can be readily disassembled.
- b) A product or item is considered for Gold LCARate when it is designed for disassembly and at least 50% of the item (by mass) can be readily disassembled

7.11.6 GreenRate Matrix 5 PAC Assessment – Relevant Sections

Products must comply with the following criteria at a minimum:

Minimum Compliance	
GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.02	PAC 2 Toxicity - ES CAP and Supplementary Product Category Rules
	No ES CAP Red Light Comments
5.1.05	PAC 5 Social and Environmental Compliance
	Legal Compliance
5.1.06	PAC 6 Durability
	Fitness for Purpose
	Replacement Parts

Depending on the level of assessment, applicants should submit evidence towards complying with the following criteria:

GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.01	PAC 1 Greenhouse Gas Accounting
5.1.01	PAC 2 Toxicity - No ES CAP Issues of Concern
5.1.03	PAC 3 - Materials Extraction
	Data Collection
	At least one Optimisation Option
5.1.04	PAC 4 - Water Use Accounting
5.1.05	PAC 5 - Social and Environmental Compliance
	Compliant Supply Chain
	Public Reporting
	Environmental Claims
5.1.07	PAC 7 End of Life
	Product Stewardship Program
	Verification of Product Stewardship Program
	90% Design for Disassembly
5.1.08	PAC 8 Product VOC Emissions

Compliance with these criteria will determine the scheme and level to which the product is assessed, see the Matrix 5 Series under section 5.4 for a list of schemes.

7.12 Joinery Supplementary Standard

7.12.1 Fit for Purpose:

- i. where required under legislation, products for Certification shall comply with relevant Australian or other required standards e.g.;
- ii. all components comprising Joinery shall meet the relevant standards relating to that component as noted in the Product Supplementary Standard elsewhere in Appendix 2;
- iii. where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;

OR

- iii The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.

AND

- iv product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

and meet the following Life cycle related requirements:

7.12.2 Life Cycle Issues:

- i) **Emissions to Air: Indoor**

VOCs:

Adhesives and Sealants:

The minimum standard for any Certified product is as per section 7.8 Adhesives and Sealants:

Joinery and finishes:

Materials comprising over 5% of joinery by mass or paints and coatings shall comply with the GreenGuard Indoor Air quality standard materials thresholds as noted in section 7.11.2 Walls and Partitions.

Fibre-based Components:

Fibre based components including acoustic panels etc if relevant shall meet or exceed the minimum standard for any Certified product as per section 7.6.2 ii) and 7.6.3 Carpets:

Formaldehyde:

All joinery products shall comply with section 7.4 Composite Wood: Formaldehyde minimisation.

7.12.3 Gold or Platinum LCARate Certification formaldehyde emission limits:

- a) A product or item is considered for Platinum LCARate when it has a formaldehyde emission rate less than or equal to Super E0 (E00 or F****).
- b) A product or item is considered for Gold or Silver LCARate when it has a formaldehyde emission rate less than or equal to E0 (or F***).
- c) A product or item is considered for Bronze LCARate when it has a formaldehyde emission rate less than or equal to E1 (F**).

7.12.4 Material Qualities

Timber components:

Timber components shall be post consumer recycled, FSC, AFS or PEFC Certified.

7.12.5 Resource Efficiency

Products for Certification will focus on reducing their life cycle impacts via collection of data on and progressive improvement of waste minimisation, increasing recycled content, creating or maintaining recyclability, including rapidly renewable resource content where possible, increasing materials efficiency and minimising harmful sourcing of raw materials.

For Certification above Bronze LCARate level, they will also offer the following:

- a) **Product Stewardship:** A contractual agreement to take back the furniture at the end of its service life for re-use, recycling or re-processing is required; and

- b) Design for Disassembly: can be readily disassembled, using non-specialist tools, into elemental components for re-use, recycling or re-processing.

7.12.6 Gold or Platinum LCARate Certification

- a) A product or item is considered for Platinum LCARate when it is designed for disassembly and at least 90% of the item (by mass) can be readily disassembled.
- b) A product or item is considered for Gold LCARate when it is designed for disassembly and at least 50% of the item (by mass) can be readily disassembled.

7.12.7 GreenRate Matrix 5 PAC Assessment – Relevant Sections

Products must comply with the following criteria at a minimum:

Minimum Compliance	
GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.02	PAC 2 Toxicity - ES CAP and Supplementary Product Category Rules
	No ES CAP Red Light Comments
5.1.05	PAC 5 Social and Environmental Compliance
	Legal Compliance
5.1.06	PAC 6 Durability
	Fitness for Purpose
	Replacement Parts

Depending on the level of assessment, applicants should submit evidence towards complying with the following criteria:

GreenTag Section	GreenRate Priority Areas of Concern (PACs)
5.1.01	PAC 1 Greenhouse Gas Accounting
5.1.01	PAC 2 Toxicity - No ES CAP Issues of Concern
5.1.03	PAC 3 - Materials Extraction
	Data Collection
	At least one Optimisation Option
5.1.04	PAC 4 - Water Use Accounting
5.1.05	PAC 5 - Social and Environmental Compliance
	Compliant Supply Chain
	Public Reporting
	Environmental Claims
	SA 8000
5.1.07	PAC 7 End of Life
	Product Stewardship Program
	Verification of Product Stewardship Program
	90% Design for Disassembly
5.1.08	PAC 8 Product VOC Emissions

Compliance with these criteria will determine the scheme and level to which the product is assessed, see the Matrix 5 Series under section 5.4 for a list of schemes.

7.13 Radiation Protection- Supplementary Standard

The following exclusion level calculation for natural radionuclides applies to all building materials:

7.13.1 Gamma exposure due to building materials:

The EU publication Radiation Protection 112, Radiological protection principles concerning the natural radioactivity of building materials (1999), using well-established results of room models, states a dose criterion.

In general products should emit natural levels approximately equal to the Typical activity concentration in Table 7.13 below.

Table 7.13.1 Typical activity concentrations of Common Building Materials

Material	Typical activity concentration (Bq kg ⁻¹)			Maximum activity concentration (Bq kg ⁻¹)		
	²²⁶ Ra	²³² Th	⁴⁰ K	²²⁶ Ra	²³² Th	⁴⁰ K
Most common building materials (may include by-products)						
Concrete	40	30	400	240	190	1600
Aerated and light-weight concrete	60	40	430	2600	190	1600
Clay (red) bricks	50	50	670	200	200	2000
Sand-lime bricks	10	10	330	25	30	700
Natural building stones	60	60	640	500	310	4000
Natural gypsum	10	10	80	70	100	200
Most common industrial by-products used in building materials						
By-product gypsum (Phosphogypsum)	390	20	60	1100	160	300
Blast furnace slag	270	70	240	2100	340	1000
Coal fly ash	180	100	650	1100	300	1500

Source: http://ec.europa.eu/energy/nuclear/radiation_protection/doc/publication/112.pdf

Investigation levels can be derived for practical monitoring purposes. Because more than one radionuclide contribute to the dose, it is practical to present investigation levels in the form of an activity concentration index. The activity concentration index should also take into account typical ways and amounts in which the material is used in a building.

7.13.2 Calculation Methodology:

A methodology which can be used to derive such indexes is described in Annex I of EU 112. The following activity concentration index (*I*) is derived for identifying whether a dose criterion is met:

$$I = \frac{C_{Ra}}{300 \text{ Bq kg}^{-1}} + \frac{C_{Th}}{200 \text{ Bq kg}^{-1}} + \frac{C_K}{3000 \text{ Bq kg}^{-1}}$$

Where C_{Ra} , C_{Th} , C_K are the radium, thorium and potassium activity concentrations (Bq kg⁻¹) in the building material.

The activity concentration index of a material shall not exceed the values shown in Table 7.13.2 below depending on the dose criterion and the way and the amount the material is used in a building (as described in Annex I of EU 112).

Dose criterion	0.3 mSv a ⁻¹	1 mSv a ⁻¹
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Materials used in bulk amounts, e.g. concrete	$I \leq 0.5$	$I \leq 1$
Superficial and other materials with restricted use tiles, boards, etc.	$I \leq 2$	$I \leq 6$

Table 7.13.2 Dose Criterion Values not to be exceeded

If this condition for the index is verified, the radon concentration due to that building material is estimated to be less than the safe level of 200 Bq m⁻³.

7.13.3 Specific materials of note:

- a) Flyash/slag and cement based mass materials such as concrete, blocks or bricks with Flyash or slag levels over 30% by mass;
- b) By product phosphogypsum based products

7.14 Insulation Supplementary Standard

This standard is a re-statement of standards previously distributed through several standards. It applies to both thermal and acoustic insulation used in buildings, for plant and equipment, pipes, ducts, walls, partitions and ceilings, joinery and other assemblages and is recognised by GBCA for Green Star[®] Materials Calculator (or other country based GBC rating tool requirements, e.g. LEEDv4), VOC and Formaldehyde credit certification:

7.14.1 Fit for Purpose:

This standard applies to thermal, acoustic and vibration damping insulation used in buildings, for plant and equipment, pipes, ducts, walls, partitions, roofs and ceilings, joinery and other assemblages:

- i. where required under legislation, products for Certification shall comply with relevant Australian or other required standards e.g.:

thermal insulation:

- a) Australian National Construction Code;
- b) AS/NZS 4859.1:- Materials for the thermal insulation of buildings Part 1: 2002 General criteria and technical provisions, and
- c) AS 2462: Cellulosic fibre thermal Insulation
- d) AS2627.1: Thermal insulation of dwellings. Thermal insulation of roofs & ceilings and walls in dwellings
- e) AS 3999: Thermal insulation of dwellings – Bulk Insulation – Installation requirements
- f) AS/NZS 4200.1: Pliable building membranes and underlays – Materials
- g) AS/NZS 4200.2: Pliable building membranes and underlays – Installation requirements
- h) AS 4426: Thermal insulation of pipework, ductwork and equipment – Selection, installation and finish.
- i) AS 4508: Thermal resistance of insulation for ductwork used in building air conditioning

acoustic insulation:

- a) AS/NZS 1276.1:1999 Acoustics- Rating of sound insulation in buildings and of building elements.
 - b) AS/NZS 2499:2000 Acoustics – Measurements of sound insulation in buildings and of building elements – Laboratory measurement of room-to-room airborne sound insulation of a suspended ceiling with plenum above it.
- ii. all components comprising insulation shall meet the relevant standards relating to that component as noted in the Product Supplementary Standard elsewhere in Appendix 2 subject to the application of specific clauses in this standard;
 - iii. where not required by legislation to meet specific standards, the application should state this and the product may comply with Australian or relevant international or other recognised standards;
- OR
- iii The product must provide independent reporting demonstrating it meets health, safety and consumer performance needs, by means of market acceptance, engineering, internal or external audits or testing, case studies, quality or other criteria appropriate to its use and function.
- AND
- iv product shall comply with accepted standard/s relevant to any market/s the product is to be exported to, or demonstrate fit-for purpose as above;

and meet the following Life cycle related requirements:

7.14.2 Life Cycle & Material Quality Issues:

Certified insulation products will:

- a) exhibit one or more environmental or health benefit compared to a business as usual product that performs the same function;
- b) comply with section 4.00 LCARate and/or Section 5.00 GreenRate requirements; and
- c) unbound fibre based insulation materials shall comply with the relevant clauses of the Textiles, Fibres, Skins and Leather or Walls Partitions and Ceilings Supplementary Standards subject to all aspects of these standards being passed through a full ESCAP and Risk Analysis process.

Exemptions: As per ESCAP recycled content is exempt from these requirements.

Ozone Depleting Potential: As per ESCAP, no insulant shall contain ozone depleting compounds.

Greenhouse Potential: As per SAC 5 Biodiversity and ESCAP, products containing blowing agents with high greenhouse gas impacts (ie those with a GWP of more than 140, measured over a 100 year timerame), without effective mitigation strategies will not be certified.

Appendix 3: GreenTag Label 'Tag' Variant

(Note each element of this Tag is also provided individually and in different combinations as a certificate)



Appendix 4: Certification Disclaimer

GreenTag^{Cert™} warrants only that any product that has been Certified in accordance with this Standard meets the GreenTag^{Cert™} LCARate or GreenRate Certification Program criteria and except as expressly set out herein, GreenTag:

- i) Makes no warranty, express or implied as to any product that has been certified under the GreenTag^{Cert™} LCARate or GreenRate Certification program, including any warranty as to merchantability or fitness for any particular purpose and GreenTag expressly disclaims all other warranties.
- ii) Shall not be liable for any loss, injury, claim, liability or damage of any kind resulting in any way from any errors, omissions, content, information, opinions, or assessments contained in the GreenTag^{Cert™} LCARate or GreenRate Certification program, and
- iii) Shall not in any event be liable for any incidental, consequential, special, exemplary or punitive damages (including without limitation for lost data, lost profits or loss of goodwill) of any kind or nature arising out of the Certification of any product under the GreenTag^{Cert™} LCARate or GreenRate Certification program, whether such liability is asserted on the basis of contract, tort or otherwise, even if GreenTag has been made aware of the possibility of such loss or damage in advance.

Appendix 5: Rotterdam Convention Chemicals

Rotterdam Convention Chemical	(CAS number(s))
2,4,5-T and its salts and esters	(93-76-5) *
Aldrin	(309-00-2)
Binapacryl	(485-31-4)
Captafol	(2425-06-1)
Chlordane	(57-74-9)
Chlordimeform	(6164-98-3)
Chlorobenzilate	(510-15-6)
DDT	(50-29-3)
Dieldrin	(60-57-1)
Dinitro-ortho-cresol (DNOC) and its salts (such as ammonium salt, potassium salt and sodium salt)	(534-52-1; 2980-64-5; 5787-96-2; 2312-76-7)
Dinoseb and its salts and esters	(88-85-7)
1,2-dibromoethane (EDB)	(106-93-4)
Ethylene dichloride	(107-06-2)
Ethylene oxide	(75-21-8)
Fluoroacetamide	(640-19-7)
HCH (mixed isomers)	(608-73-1)
Heptachlor	(76-44-8)
Hexachlorobenzene	(118-74-1)
Lindane	(58-89-9)
Mercury compounds including inorganic mercury compounds, alkyl mercury compounds and alkylalkyl and aryl mercury compounds	(CAS numbers)
Monocrotophos	(6923-22-4)
Parathion	(56-38-2)
Pentachlorophenol (PCP) and its salts and esters	(87-86-5)
Toxaphene	(8001-35-2)
Tributyltin compounds	
Dustable powder formulations containing a combination of: benomyl at or above 7 per cent, carbendazim at or above 10 per cent, thiram at or above 15 per cent	(17804-35-2; 1563-66-2; 137-26-8)
Methamidophos (Soluble liquid formulations of the substance that exceed 600 g active ingredient/l)	(10265-92-6)
Phosphamidon (Soluble liquid formulations of the substance that exceed 1000 g active ingredient/l)	13171-21-6 (mixture, (E)&(Z) isomers), 23783-98-4 ((Z)-isomer), 297-99-4 ((E)-isomer))
Methyl-parathion (emulsifiable concentrates (EC) at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)	(298-00-0)
Asbestos	
Crocidolite	(12001-28-4)
Actinolite	(77536-66-4)
Anthophyllite	(77536-67-5)
Amosite	(12172-73-5)
Tremolite	(77536-68-6)
Polybrominated biphenyls (PBB)	(36355-01-8 (hexa-), 27858-07-7 (octa-), 13654-09-6 (deca-))
Polychlorinated biphenyls (PCB)	(1336-36-3)
Polychlorinated terphenyls (PCT)	(61788-33-8)
Tetraethyl lead	(78-00-2)
Tetramethyl lead	(75-74-1)
Tris (2,3-dibromopropyl) phosphate	(126-72-7)

Source: <http://www.pic.int/home.php?type=t&id=29&sid=30>.

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