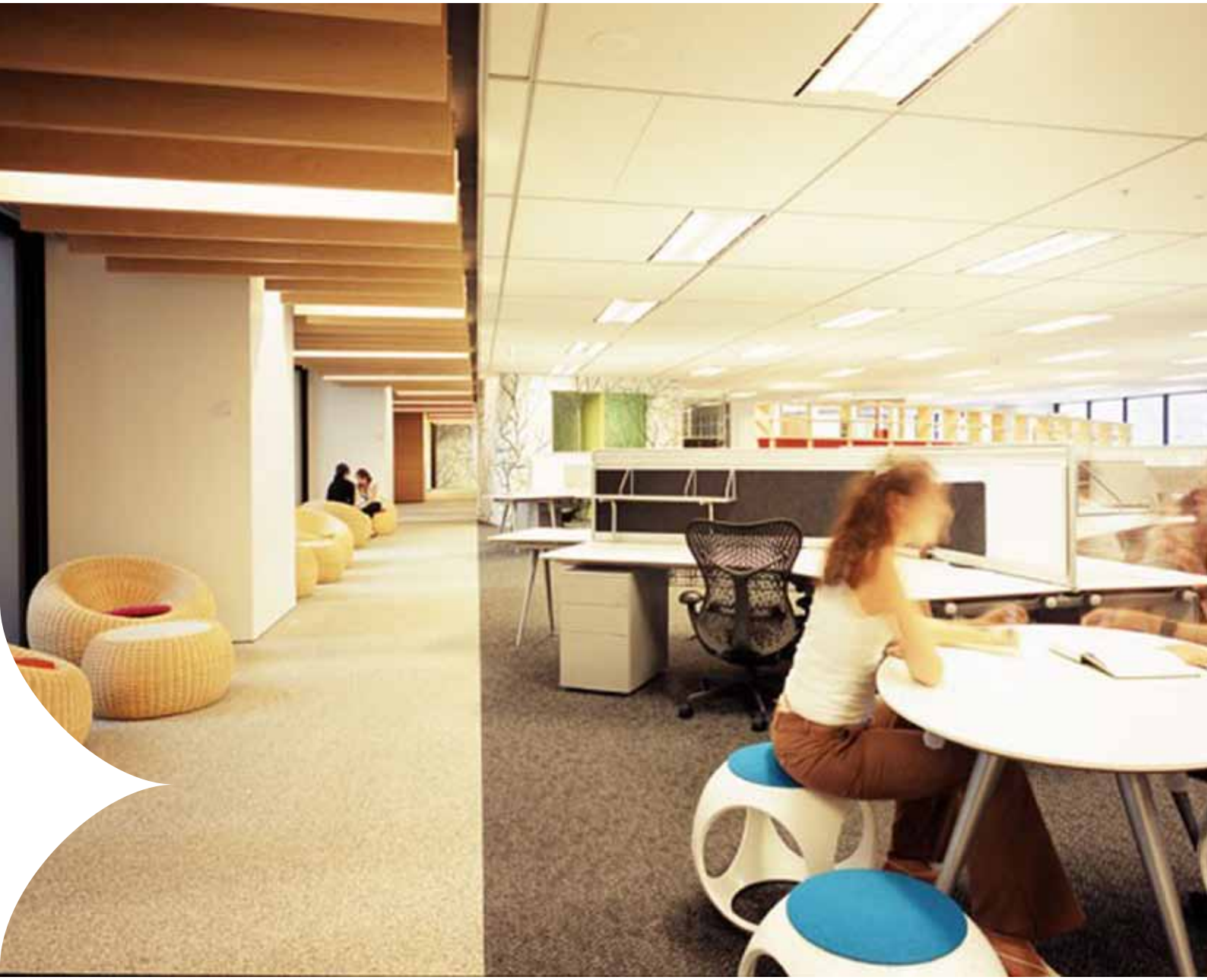
Building a sustainable future

GREEN STAR MATERIAL CALCULATOR GUIDE

Version 4 // November 2009



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CHANGELOG

Tool Version	Revision	Date Issued	Description
Material Calculator Guide – Release	A	June 2009	-
Material Calculator Guide – v2	B	July 2009	**5.1 Eco Preferred Content:** Expansion of definition to include independent verification of recycled content. **5.4 Product Stewardship:** Inclusion of alternative means of compliance requirements via independent verification. **5.6 Design for Disassembly:** Inclusion of exemption relating to flooring product as well as corresponding compliance requirements. **Appendix B -** Extended Supplier Responsibility - Supplier Contract Example: Correction of acknowledgment.
Material Calculator Guide – v3	C	October 2009	**5.1 Eco Preferred Content:** Addition of compliance requirements for a products timber components certified to a GBCA recognised Forest Certification Scheme.
Material Calculator Guide – v4	D	November 2009	**5.1 Eco Preferred Content:** Changes for auditor competency requirements in relation to independent verification of recycled content. **5.6 Design for Disassembly:** Changes for auditor competency requirements in relation to confirmation of a manufacturers/ suppliers access to specialist tools to achieve the claimed design for disassembly percentage. **5.4 Product Stewardship:** Addition of auditor competency requirements in relation independent verification of the manufacturer/supplier's product stewardship program

1.0 INTRODUCTION

This document explains the methodology behind the Green Star material calculators and clarifies the documentation requirements for each assessment criteria. This document supersedes the credit-specific calculator guidance found in the Green Star – Office Interiors v1.1 and Green Star – Education v1 Technical Manuals.

Table 1: Green Star Material credits, that use the Material calculators

Green Star – Office Interiors v1.1	Green Star – Educationv1 Green Star – Healthcarev1 Green Star – Multi-Unit Residential v1
• Mat-1 Workstations	
• Mat-2 Flooring	• Mat-11 Flooring
• Mat-3 Walls and Partitions	• Mat-14 Ceilings, Walls and Partitions
• Mat-4 Chairs • Mat-5 Tables • Mat-6 Storage	• Mat-13 Loose Furniture
• Mat-7 Joinery	• Mat-12 Joinery

In 2005 the Green Building Council of Australia developed a Building Materials and Product Calculator (Calculator) to assess the environmental impacts of fitout product categories based on a number of assessment criteria. The Calculator was informed by research commissioned from the Royal Melbourne Institute of Technology (RMIT) Centre for Design (CfD) for the development of Green Star – Office Interiors v1. The research indicated seven fitout product categories (e.g. furniture, flooring, walls and partitions) as representing the bulk of material flows in a typical office fitout. Materials used for fitout products experience the fastest churn rates in a building and therefore represent one of the shortest in-use materials phases of a building's lifecycle (Figure 1).

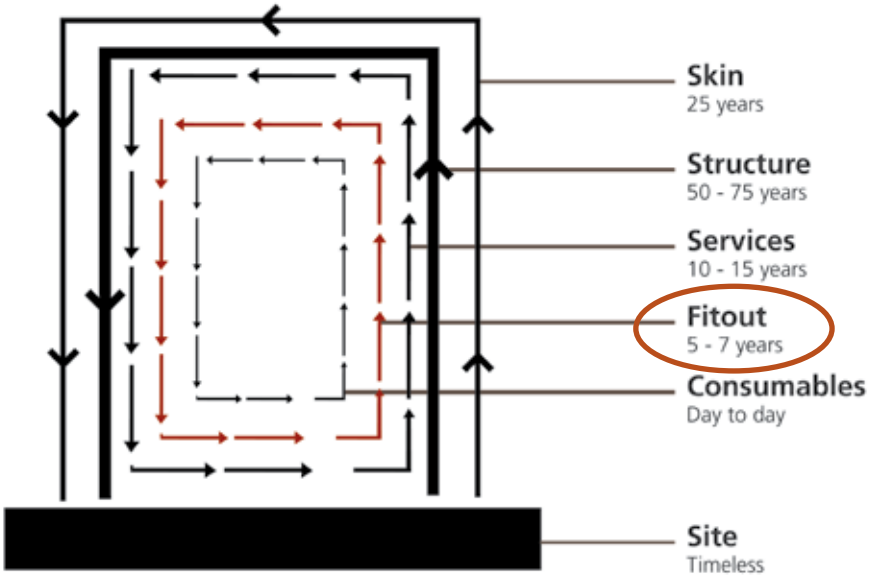

Figure 1- Adapted from Terry et al 2007

This expected lifespan of material flows can be applied to most property types. The information from this study has therefore continued to influence the development of material credits in Green Star tools for non-office property types. The calculators assume different configurations depending on the building type and type of fitout product being addressed yet still retain a consistent framework in the following Green Star rating tools and credits:

2.0 – How Items are Assessed by the Material Calculators

Products are assessed based on a common Material Calculators Assessment Framework. This framework assesses products based on the **Product Classification**, and six Assessment Criteria: **Eco Preferred Content**, Durability, **Environmental Management Systems**, **Product Stewardship**, **Modularity**, **Design for Disassembly**.

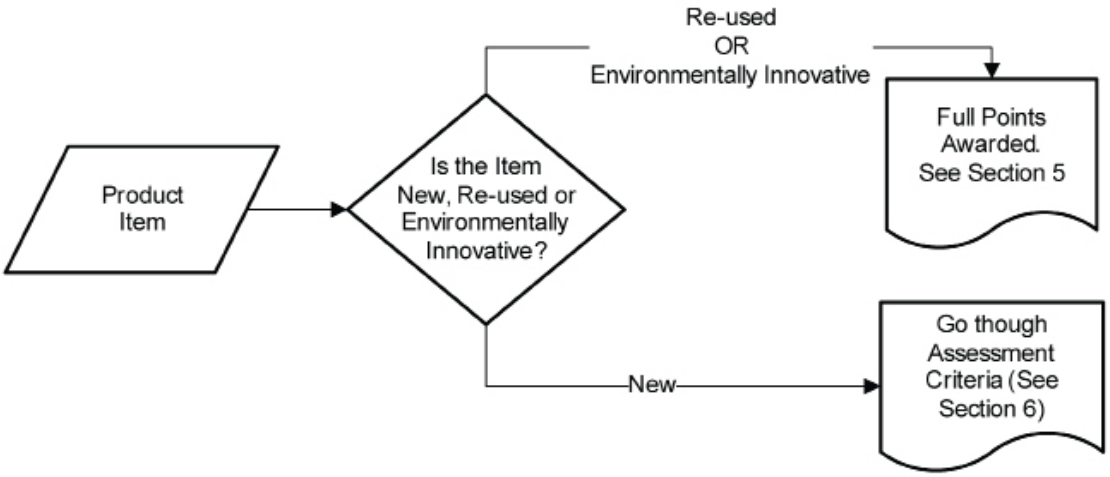

Figure 2: Material calculator assessment process

Products classified as 'Environmentally Innovative' or 'Re-used' automatically achieve all available points for its respective line item within all calculators. Products classified as 'New' must be assessed by all six assessment criteria.

The six assessment criteria within the calculators are classified into three categories: Resource Utilisation; Management; and Reusability. The points are split equally between each of the assessment criteria. For example, the 'Flooring' credit calculator is assessed under all six criteria, whereas the 'Joinery' credit calculator is only assessed by three. This results in each assessment criterion for 'Flooring' being worth 17%; while each assessment criterion for 'Joinery' is worth 33.3%.

3.0 – How to Use the Material Calculators

This section provides step-by-step guidance on how to document each item in the calculators. A separate line item must be used for each product entered into the calculator. The following steps should be repeated for each line item entered. For purposes of this guide, where the word 'Item' is used, it should be understood to mean the product item being assessed. For example, in the calculator 'Total Item area' may read 'Total Joinery Area' or 'Total Flooring Area'.

Each calculator is completed independently of all others. For each calculator, the user must complete the 'total area of items', or 'total number of items' used in the fitout in the field at the top of the calculator[1]. If this area is not filled in, the calculator will not work and no scores will be reported.

For each product item used, the following information must be entered:

Table 2: Step-by-step guide to information entered into the calculator

1. Complete the 'Product Classification' using the drop-down menu	**Section 4.0**
2. Complete the 'Name of Item supplier';	
3. Complete the 'Brief Description of Item' column;	
4. Enter appropriate 'Number of items' or 'Total Item area';	
5. Complete the 'Eco Preferred Content (%)' column by using the drop-down menu to nominate one of three available 'Eco Preferred Content' scores	**Section 5.1**
6. Complete the 'Durability' column by using the drop-down menu to nominate the length of the manufacturer's warranty	**Section 5.2**
7. Complete the 'EMS' column by using the Yes/No drop-down menu to nominate whether or not the manufacturer has implemented an in-house EMS 8. Complete the EMS ISO 14001 Certified column can be completed using the Yes/No drop-down menu to nominate whether or not the manufacturer's EMS is certified under the international standard ISO 14001:2004 or higher 9. Complete the four sub-columns under the 'EMS Includes' column by using the four Yes/No drop-down menus to nominate whether or not the manufacturer's EMS addresses the following aspects - 'Waste Minimisation' - 'Energy' - 'Emissions' - 'Materials Minimisation'	**Section 5.3**

Continued >

1 The material calculators measure total items in two ways: by number of items (e.g. the chair and loose furniture calculators); and by area in m² (e.g. the Ceilings or Walls and Partitions calculator).

10. Complete the 'Product Stewardship' column by using the Yes/No drop-down menu	**Section 5.4**
11. Complete the 'Modular' column by using the Yes/No drop-down menu to nominate whether or not the product is modular in its design	**Section 5.5**
12. Complete the 'Designed for Disassembly' column by using the drop-down menu to nominate one of three scores, based on the percentage mass of the product that is designed for disassembly	**Section 5.6**

4.0 – PRODUCT CLASSIFICATION

Items are initially assessed depending on their **Product Classification**. For purposes of Green Star, the following three types of product classes exist:

Environmentally Innovative: A product certified by a multi-criteria product certification scheme that is recognised as 'Environmentally Innovative' by the GBCA (list of GBCA recognised schemes is available on the GBCA website).

- Where 90% or more (by mass) of the components of an item can be categorised as 'Environmentally Innovative', the project may enter the entire item as 'Environmentally Innovative' in the calculator and may disregard any non-compliant components.

Re-used: A product that is sourced from another premises where the product has been previously installed, or was pre-existent in the same premises from a previous occupant, or purchased from a second-hand retailer. (See section 5.1 for more information).

- For a product to be classified as 'Re-used' at least 80% by area, length, volume or mass of the item must be retained (the metric chosen must be justified); the rest can be refurbished or new, as in the case of new upholstery, foam, painting, laminating, coating, etc.

Products classified as 'Environmentally Innovative' or 'Re-used' automatically achieve all available points for the respective line item within all calculators .

New: A product that is provided to the project in an un-used 'New' state (see section 5.1).

Products classified as 'New' must be assessed by all six assessment criteria.

4.1 – DOCUMENTATION REQUIREMENTS FOR EACH ITEM:

Re-used Product(s)

Submit all the evidence and ensure it readily confirms compliance.

☐ Confirmation from the interior designer

☐ Extract(s) from the specification OR schedule of furniture, fitting and finishes
-OR-
Purchase receipts
-OR-
Removalists inventory

Confirmation from the interior designer: A statement from the interior designer and supporting evidence that clearly demonstrates the items were previously used and that they were installed on site.
Extract(s) from the specification or schedule of furniture, fitting and finishes.
Purchase receipts, if the items have been acquired from a second-hand retailer.
Removalists inventory from the previous location of the item.

Environmentally Innovative Product(s)

Submit all the evidence and ensure it readily confirms compliance.

☐ Copy of the License Agreement
-OR-
Proof of certification
-OR-
Printout(s) from the product's listing on the GBCA recognised schemes' websites

Copy of the License Agreement current at the time of project registration.
Proof of certification officially issued by the scheme for the nominated product(s) current from time of registration.
Printout(s) from the product's listing on the GBCA recognised schemes' websites current from time of registration.

New Product(s)

NO DOCUMENTATION IS REQUIRED FOR PRODUCT CLASSIFICATION

Exposed Concrete

The following exception applies to Mat-2 'Flooring'(Office Interiors) and Mat-11 'Flooring' (All other tools).
A fourth product class exists for this credit 'Exposed Concrete'. It refers to all exposed concrete flooring including polished and sealed concrete floors where a floor covering has not been specified. This product class automatically achieves all available points for its respective line item within the calculator for this credit.

Confirmation from the architect specifying the total area of exposed concrete; and
Architectural drawings clearly correlating with the stated area of exposed concrete.

5.0 – ASSESSMENT CRITERIA FOR NEW PRODUCTS

The six calculator assessment criteria address environmental attributes relating to resource use, management and reusability of a product/item. Products must be demonstrated to comply with these criteria to receive points within the calculators.

5.1 – ECO PREFERRED CONTENT

For the purposes of the Green Star Material Calculators, eco-preferred content is defined as the amount of re-used content, GBCA-recognised third party certified content, or independently-verified recycled content in an item.

Re-used content is defined as the amount of an item by area, length, volume or mass (the metric chosen must be justified) that is sourced from a product or material that has already fulfilled its originally intended use.

Recycled content is defined as the amount of an item by area, length, volume or mass (the metric chosen must be justified) that is sourced from post-consumer and/or post-industrial recycled material. Independent verification of the percentage of recycled content in products will only be accepted from an auditor registered by RABQSA (in Australia) or other national or international auditor accreditation systems.

The percentage of eco-preferred content in a product, or product components is calculated by mass with three available options to choose from in the Material Calculators:

- <5% by mass;
- ≥5% and <20% by mass; or
- ≥20% by mass.

Table 3 provides an example of how the Eco Preferred Content of a workstation with multiple components is calculated. The worktop component of the workstation is made from timber that has been certified by a forest certification scheme that is recognised by the GBCA. This means that 100% of the worktop mass may be claimed as Eco Preferred Content.

Table 3: Example of the Eco Preferred Content Calculation for a Workstation

Component	Material	Total Product Mass	Eco Preferred Content	Eco Preferred Component Mass
Worktop	Timber	10kg	Yes	10kg
Frame	Aluminium	4.5kg	-	0kg
Screen	Polymer	3.4kg	-	0kg
TOTAL:		**17.9kg**		**10kg**
TOTAL PERCENTAGE OF ECO PREFERRED CONTENT (10kg/17.9kg)			**57%**	

The total mass of Eco Preferred Content in this product is **57%**. As such, for this product, an Eco Preferred Content of ≥ 20% by mass must be selected in the dropdown of the calculator assessment criteria.

Documentation requirements for each item:

Where the product contains re-used content

☐ Calculations

☐ Confirmation from the interior designer

Where the product contains third-party certified content

☐ Calculations

☐ Copy of the License Agreement
-OR-
Proof of certification
-OR-
Printout(s) from the product's listing
-OR-
Confirmation of third-party verification of recycled content

Where the product contains re-used content

Calculations: for each product item where the following are indicated:
- Individual components of a product;
- Mass of each component;
- Mass of eco-preferred content for each component; and
- Percentage of eco-preferred content for the product.

-AND-

Confirmation from the interior designer: A statement from the interior designer, as well as supporting evidence, that clearly demonstrates the items were previously used and that they were installed on site.

Where the product contains third-party certified content

Calculations: for each product item where the following are indicated:
- Individual components of a product;
- Mass of each component;
- Mass of eco-preferred content for each component; and
- Percentage of eco-preferred content for the product.

-AND-

Third-party certification of eco-preferred content (if applicable) - provide any one of the following:

For non timber components:

- **Copy of the License Agreement** current at the time of project registration; or
- **Proof of certification** officially issued by the scheme for the nominated product(s) current at the time of registration; or
- **Printout(s) from the product's listing** on the GBCA recognised schemes' websites current at the time of registration.

For timber components:

Chain of Custody (CoC) for timber components certified to a GBCA recognised Forest Certification Scheme, guidance pertaining to CoC compliance requirements can be found by following this link.

-OR-

Confirmation of third-party verification of recycled content (if applicable):
Statement confirming the percentage of recycled content in the product(s) from an auditor registered by RABQSA (in Australia) or other national or international auditor accreditation systems.

5.2 – DURABILITY

Durability is defined as the number of years covered by a manufacturer's warranty. It is calculated according to the length of the manufacturer or supplier's warranty of the product. There are three available options:

- <7 years;
- ≥7yrs and <10 years; or
- ≥10 years.

Documentation requirements for each item:

☐ Copy of the manufacturer's warranty

Copy of the manufacturer's warranty for the entire product. It must allow for repairs and/or replacement and correlate with the time period documented in the calculator.

5.3 – ENVIRONMENTAL MANAGEMENT SYSTEM

Environmental Management System (EMS) requires that the manufacturer of the product has an EMS that, as a minimum, includes the following components:

- An environmental policy;
- An environmental aspects analysis and/or identification and ranking of the environmental risks;
- Environmental objectives and targets;
- Monitoring of environmental impact criteria;
- Environmental auditing;
- Reporting of environmental performance;
- A review (undertaken as least annually) of the EMS and its components;
- Details of the relevant environmental roles and responsibilities of staff; and
- Details of the environmental training of staff.

Extra points are awarded for an ISO 14001:2004 'Environmental Management Systems' certified. Where the manufacturer's EMS is certified under the international standard ISO 14001:2004, this must be current at the time of registration.

Further points are awarded where the EMS addresses:

- 'Waste Minimisation' – whether or not the waste disposal and recycling rates of all waste generated from the product manufacturing process are measured, reviewed and reported no less than once every three months;
- 'Energy' – whether or not the energy consumption of the product manufacturing process is measured, reviewed and reported no less than once every three months;
- 'Emissions' – whether or not the gas and liquid emissions from the product manufacturing process are measured, reviewed and reported no less than once every three months; and
- 'Materials Minimisation' – whether or not product material inputs including packaging are measured, reviewed and reported no less than once every three months.

Documentation requirements for each item:

Where an EMS is provided

☐ Table of Contents from the Manufacturer's EMS Manual
-OR-
Extract(s) from the EMS

Where the EMS is certified

☐ Copy of the ISO 14001:2004 accreditation

To demonstrate specific inclusions within the EMS

☐ Table of Contents

☐ Extract(s) from the EMS

Where an EMS is provided
Table of Contents from the Manufacturer's EMS Manual confirming that the EMS includes the required components.
Extract(s) from the EMS demonstrating that the EMS requirements are included in the document.

Where the EMS is certified
Copy of the ISO 14001:2004 accreditation for the product manufacturing facility (not a distribution or warehouse facility).

To demonstrate specific inclusions within the EMS (waste, energy, emissions, or materials minimisation)
Table of Contents from the Manufacturer's EMS Manual confirming that the EMS includes the required components and the specific inclusions for waste, energy, emissions or materials minimisation.
Extract(s) from the EMS demonstrating that the EMS requirements and the relevant inclusions (for waste, energy, emissions or materials minimisation) are included in the document.

5.4 – PRODUCT STEWARDSHIP

Product Stewardship requires a contractual agreement from the product manufacturer with the project to take back the product at the end of its service life for re-use, recycling or re-processing. Product stewardship is a product-centred approach to environmental protection that requires the associated parties involved in the product's life cycle (e.g., manufacturers, retailers, users) to share responsibility for reducing the product's environmental impact. In practical terms, product stewardship is understood by the customer as the supplier's service to collect the product for re-use, recycling or reprocessing whenever the customer no longer requires its service.

Documentation requirements for each item:

☐ A contractual agreement between the manufacturer
-OR-
Independent verification of the manufacturer/supplier's product stewardship program (PSP)

☐ Copy of the Product Stewardship agreement/contractual arrangement.

A contractual agreement between the manufacturer and the project for the product to be taken back at the end of its service life for re-use, recycling or reprocessing;
Independent verification of the manufacturer/supplier's product stewardship program (PSP) confirming that the PSP is in place and operating at a capacity that can deliver the outcomes claimed by the manufacturer. Audits shall only be accepted from
auditors registered by RABQSA R (in Australia) or other national or international auditor accreditation systems.

Copy of the Product Stewardship agreement/contractual arrangement. A generic example and guide for a compliant product stewardship contract is provided in Section 10.0 Appendix B - *Extended Supplier Responsibility - Supplier Contract Example*[2] and may be of assistance to projects seeking further information.

2 The Extended Supplier Responsibility - Supplier Contract Example is intended to be used as a guide only. The GBCA assumes no liability for legal or contractual ramifications resulting from the use of any part of this document.

5.5 – MODULAR

Modular is defined as a product that is manufactured with standardised dimensions or designs that enable the item to be arranged, fitted or stacked together in various configurations. A modular design ensures the adjustment and replacement of the product is easy to manage and will more readily facilitate reuse.

Documentation requirements for each item:

☐ Confirmation from the manufacturer(s)

☐ Product description
-OR-
Diagrams

Confirmation from the manufacturer(s) that the product is modular.
Product description of how the product meets the parameters outlined.
Diagrams properly dimensioned showing how the product meets the parameters outlined.

5.6 – DESIGN FOR DISASSEMBLY

Design for Disassembly (DFD) requires products to be readily disassembled with the use of non-specialist tools where parts can be separated into elemental components for re-use, recycling or re-processing. An item is considered to be DFD when at least 50% of the item (by mass) can be readily disassembled. Extra points are awarded where the percentage exceeds 90%. Documentation of DFD criteria in Green Star is generally intended for product streams containing distinct components (e.g. furniture, partitions, storage). However, flooring product manufacturers may allow for the use of specialist tools to facilitate product component disassembly.

Documentation requirements for each item:

☐ Confirmation from the manufacturer(s)

☐ Product description
-OR-
Diagrams

Where DFD is claimed for flooring products that require specialist tools to facilitate product component disassembly

☐ Confirmation of third-party verification of DfD content (if applicable)

Confirmation from the manufacturer(s) that the product is designed for disassembly; and
Provide one of the following:
Product description of how the product can be disassembled; or
Diagrams or pictures showing how the product can be disassembled in line with assessment criteria.

Where DFD is claimed for flooring products that require specialist tools to facilitate product component disassembly

Confirmation of third-party verification of DfD content (if applicable):
Statement from an auditor registered by RABQSA (in Australia) or other national or international auditor accreditation systems, confirming that the manufacturer has access to, and uses, specialist tools to achieve the claimed DFD percentage of the product(s) (by mass) that can be disassembled.

6.0 – COMPLIANCE REQUIREMENTS

The Assessor(s) will not award points unless the line item inputs (e.g. quantities, descriptions) documented in the material calculator(s) by the project correlate with the manufacturer/supplier and sub-contractor documentation provided in the submission.
A copy of all completed material calculators and a Calculator Output Sheet must be provided in the submission along with the supporting documentation discussed in section 6.0.

7.0 – How Credit Points are Calculated

The following parameters are used by the Material Calculator in determining the award of credit points:

Total Items – The total number of units or area of items entered at the top of the Calculator.

Line Item Score – The score for each line item is based on data entered into the various calculator assessment criteria columns of the Material Calculator. The score is determined based on how the product/line item measures against the requirements of the calculator assessment criteria.
The line item score is calculated as follows:

Item Score X Total Item = Line Item Score

Total Percentage Score: is the sum of line items scores, divided by the total area/units in the fitout, multiplied by 100, or:

Total Percentage Score = ((Line Item 1 Score) + (Line Item 2 Score) + (Line Item 3 Score etc.) / Total Items) x 100

Note: the Total Percentage Score is automatically rounded to the nearest whole number by the calculators.

Award of Green Star Credit Points: is determined through the calculator by comparing the Total Percentage Score to set credit point benchmarks.

Table 4: Material Calculator Benchmarks

Green Star Credit Points Awarded:	1	2	3	4	5	6	7
Benchmark for a 1 point credit	50%						
Benchmarks for a 2 point credit	40%	70%					
Benchmarks for a 3 point credit	17%	50%	83%				
Benchmarks for a 4 point credit	15%	39%	63%	87%			
Benchmarks for a 5 point credit	10%	30%	50%	70%	90%		
Benchmarks for a 7 point credit	10%	22%	36%	50%	65%	78%	93%

Note: The guidance provided in this document is applicable to all Calculators and both clarifies and supersedes the guidance provided in the Green Star – Office Interiors v1.1 and Green Star – Education v1 Technical Manuals regarding how credit points are calculated by the material calculators. While guidance on this matter differs slightly in these various documents, all are still correct and following any of them will result in the same scores being achieved.

7.1 – WORKED EXAMPLE

Figure 2 shows the outputs of a completed Loose Furniture Calculator that has four Green Star points available, although only three points were actually achieved.

Number of Furniture Items in the fitout:		120	Total Percentage Score:		78	Points Awarded for this Credit:		3

		Resource Utilisation		Management							Reusability		Product Score (%)
						EMS Includes							
Brief Description of Loose Furniture	Number of Items	Eco Preferred Content	Durability	EMS	EMS ISO 14001 Certified	Waste Minimisation	Energy	Emissions	Materials Minimisation	Product Stewardship	Modular	Designed for Disassembly	
timber tables	35	≥5% and <20%	≥7yrs and <10yrs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	≥50 and <90	79
beds Workstation	33	<5%	>10yrs	No	No	No	No	No	No	No	Yes	≥50 and <90	44
chairs	52												100

Figure 2: Calculator Output for a Loose Furniture Calculator

The inputs and outputs in this example are as follows (colour coding is provided for ease of reference):
The total loose furniture items documented in this example, **120**;
Three line items documented in this example:

1. Timber tables ('new' products)
   Total in the fitout, **35**;
   Line item score, **79%**.

2. Workstation ('new' products)
   Total in the fitout, **33**;
   Line item score, **44%**.

3. Chairs ('Environmentally Innovative' products)
   Total in the fitout, **52**;
   Line item score, **100%**.

Total Percentage Score in this example is calculated as follows:

(((**0.79** x **35**) + (**0.44** x **33**) + (**1** x **52**)) / **120**) x 100 = **78%**

Points Awarded for the Credit are determined as follows:

There are four Green Star points available for this credit but a total percentage score of 78% achieves **three points**. This is illustrated in Table 4 (e.g. when the total percentage score is greater than 63% and less than 87% then three points are awarded for a four point calculator).

8.0 – UPDATES AND ADDITIONAL GUIDANCE

Materials Category credits, including those relevant to the calculators, are constantly evolving through the process of Technical Clarifications and Credit Interpretation Requests (CIR). Users of this document should refer to the Technical Clarifications and CIR database found in the Green Star section of the GBCA website to check for updates relevant to Material Calculator credits.

9.0 – REFERENCES

- Centre for Design (CfD) at RMIT, BIS Shrapnel, CSIRO, Deni Green Consulting Services & Syneca Consulting (2006), Scoping Study to Investigate Measures for Improving the Environmental Sustainability of Building Materials, Prepared for the Australian Greenhouse Office, Department of Environment and Heritage, Commonwealth of Australia, viewed January 2009, <www.environment.gov.au/settlements/energyefficiency/buildings/publications/building-materials.html>.

- Terry. A, Walker-Morison, A, Iyer-Raniga. U, and Bates. M, with Contribution by: Jackson. S, Andrews.P , King, T.R, and Roussac. C, 2008, "Products and materials for sustainable commercial buildings", published by Your Building, viewed October 2008, <http://www.yourbuilding.org/display/yb/Products+and+materials+and+sustainable+commercial+buildings#Productsandmaterialsandsustainablecommercialbuildings-Whatarethebenefitsofusingsustainableproductsandmaterials%3F>.

APPENDIX A: COVER SHEET TEMPLATES FOR DOCUMENTATION REQUIREMENTS

MATERIAL CALCULATOR COVER SHEET TEMPLATES FOR DOCUMENTATION REQUIREMENTS

The following four cover sheet templates can be used by project teams when submitting evidence for product items in the material calculators:

- For Re-Used Products
- For Environmentally Innovative Products
- For New Products
- For Exposed Concrete

Re-used Product(s)

Submit all the evidence and ensure it readily confirms compliance.

☐ Confirmation from the interior designer

☐ Extract(s) from the specification OR schedule of furniture, fitting and finishes
-OR-
Purchase receipts
-OR-
Removalists inventory

Environmentally Innovative Product(s)

Submit all the evidence and ensure it readily confirms compliance.

☐ Copy of the License Agreement
-OR-
Proof of certification
-OR-
Printout(s) from the product's listing on the GBCA recognised schemes' websites

New Product(s)

Submit all the evidence and ensure it readily confirms compliance.

ECO PREFERRED CONTENT

☐ Calculations

Where re-used content is present:

☐ Confirmation from the interior designer

Where third party certified content is present:

☐ Confirmation from the interior designer

DURABILITY

☐ Copy of the manufacturer's warranty

ENVIRONMENTAL MANAGEMENT SYSTEMS

☐ Table of Contents from the manufacturer's EMS manual
-OR-
Extract(s) from the EMS

Where the EMS is ISO 14001 certified:

☐ Copy of the ISO 14001:2004

To demonstrate specific inclusions within the EMS:

☐ Table of Contents

☐ Extract(s) from the EMS

PRODUCT STEWARDSHIP

☐ Copy of the Product Stewardship agreement/contractual arrangement

MODULARITY

☐ Confirmation from the manufacturer(s)

☐ Product description
-OR-
Diagrams

DESIGN FOR DISASSEMBLY

☐ Confirmation from the manufacturer(s)

☐ Product description
-OR-
Diagrams

Exposed Concrete

Submit all the evidence and ensure it readily confirms compliance.

EXPOSED CONCRETE

☐ Confirmation from the architect

☐ Architectural drawings

APPENDIX B: EXTENDED SUPPLIER RESPONSIBILITY - SUPPLIER CONTRACT EXAMPLE

Acknowledgments: The GBCA would like to thank Mr. John Gertsakis, WSP Environmental Pty Ltd for the development of this example. This example is based on WSP Environmental, "Extended Supplier Responsibility - Supplier Contract Template", which was developed on behalf of furniture, textiles and flooring suppliers/manufacturers.

Note to user: This example is intended to be used as a guide only. The GBCA assumes no liability for legal or contractual ramifications resulting from the use of any part of this document.

<Company> Product Stewardship Policy and Lifecycle Management Plan

<Company> and its manufacturing partners are committed to responsible life cycle management and the core principles of product stewardship and extended producer responsibility.

As a producer and supplier of <insert product details>, <Company> understands that corporate social and environmental responsibility goes beyond the point of sale and warranty periods.
Our Product Stewardship policy seeks to maximise <insert product details> life cycle environmental performance through very specific measures and customer-oriented services that are informed by the waste minimisation hierarchy, as well as related resource efficiency objectives. To this end, waste avoidance and resource recovery underpin our Product Stewardship policy and operations.

Our starting point is focussed on extending overall product life and ensuring reuse and refurbishment wherever possible and appropriate for customers. This includes offering remarketing and refurbishment solutions that enable an effective second and third leased life for our <insert product details> products.

In conjunction with our manufacturing partners and suppliers we will take back all <insert product details> products and recycle in the following ways, noting that wherever possible alternatives to sending products to landfill will be implemented.

More specifically our product stewardship options include **(select only those that apply)**:

- ☐ Refurbishment of <insert product details> products for possible reuse by existing customer or on selling/remarketing to new customers.
- ☐ On selling or donation of <insert product details> in existing condition to other commercial businesses or organisations.
- ☐ Disassembly of <insert product details> products for component and/or materials reuse in new product manufacturing.
- ☐ Disassembly of <insert product details> products for materials recycling by approved operators/recycling companies.

The <Company> Product Stewardship policy is very much about extending product life, maximising resource use efficiency, and diverting end-of-life <insert product details> product away from landfill.

We will continue to refine, improve and expand our Product stewardship initiatives to provide cost effective life cycle management solutions that are environmentally beneficial and economically sensible.

<Name> <Title>

<Company>

Approved <date>

Product Stewardship Agreement
<Project>

This Product Stewardship Agreement is in accordance with <Company> Product Stewardship Policy. <Company> recognises the environmental significance of product life cycle management and <insert product details> recovery and processing services reflect this approach. This document confirms the specific scope and extent of the product stewardship services offered/tendered in relation to <project name>.

SECTION 1: PRODUCTS SUBJECT TO THE AGREEMENT (Delete unnecessary fields/ Create new fields)

☐ Workstations	Quantity: _____
☐ Tables	Quantity: _____
☐ Storage units	Quantity: _____
☐ Partitions	Quantity: _____
☐ Ceilings	Quantity: _____
☐ Internal walls	Quantity: _____
☐ Seating	Quantity: _____
☐ Flooring	Quantity: _____
☐ <etc. insert>	Quantity: _____

SECTION 2 : EXTENT AND SCOPE OF SERVICES TO BE PROVIDED

☐ Coordinate de-installation

☐ Coordinate collection and removal from site

☐ Undertake remarketing of product under lease arrangements

☐ Coordinate resale/auctioning or remarketing of product

☐ Coordinate donation of product to socially oriented/community based organisation

☐ Coordinate full product refurbishment and/or remanufacturing for resale/

☐ Coordinate product disassembly for component/part reuse

☐ Coordinate product disassembly for materials recycling and processing

☐ Other:

SECTION 3: SPECIAL NOTES

1. The customer/tenant <insert organisation name> shall bear the full costs of any activity associated with de-installation, collection and removal of products as specified in Sections 1 and 2.

2. Standard labour rates (of the day) will be applied/charged to any activity specified in Section 2 and undertaken by <Company> in order to deliver the client sanctioned product stewardship service(s).

3. The customer/tenant <insert organisation name> will be responsible for the safe removal of all power, data and communications cables/wiring prior to <Company> de-installing any products subject to product stewardship services specified in Section 2. The customer/tenant <insert organisation name> shall bear the costs associated with undertaking such work.

4. Any and all proceeds arising from any of the product stewardship services specified in Section 2 remain under the control of <Company>.

5. Subject to agreement in writing by all parties, cost attribution other than that noted above can be negotiated between <Company> and the customer/tenant <insert organisation/customer name>.

6. The donation of product to socially oriented/ community based organisation must be conditional upon acceptance of these products by these organisations prior to the implementation of this contract.

Signed by:	Signed by: <name> <title>
<Customer representative name> <Company>	<Organisation>
Approved : <date>	Approved : <date>

Appendix C: Calculating Line Item Scores

The term 'line item' refers to each product that is entered into a calculator. Each line item is eligible to contribute to the achievement of points in the calculator via its 'line item score'.

There are three types of material calculators. Each type uses its own point allocation formula to calculate line item scores. Type I calculators include all six assessment criteria. This differs from Type II calculators which include five of the criteria and Type III calculators which includes only three assessment criteria.

The line item score is calculated as the sum of percentage points associated with each of the assessment criteria. For example, each of the five assessment criteria in a Type II calculator is worth 20 percentage points each (100 divided by 5 = 20).

Tables 2a, 2b and 2c detail the number of points available for all possible user response options to the assessment criteria in Types I, II and III calculators. The calculator will automatically allocate the values listed in the tables depending on the options selected by the user.

Section 7.0 *How Credit Points are Calculated* explains the interaction between the total percentage points achieved in a line item and the total number of Green Star points available for a given credit.

Table 2a: Type I Calculator Point Allocation

	Eco Preferred Content	Durability	Product Stewardship	Modularity	Design for Disassembly
User response options:	<5% = **0**	<7yrs = **0**	No = **0**	No = 0	<50 = **0**
	≥5% and <20% = **10**	≥7yrs and <10yrs = **10**			≥50 and <90 = **10**
	≥20%= **17**	≥10yrs= **17**	Yes = **17**	Yes = **17**	>90 = **17**

AND

User response options	In House EMS?	ISO 14001 Certified EMS	EMS Includes?			
			Waste Minimisation	Energy	Emissions	Materials Minimisation
Yes	**7**	**3**	**1**	**1**	**1**	**1**
No	**0**	**0**	**0**	**0**	**0**	**0**

Table 2b: Type II Calculator Point Allocation

	Eco Preferred Content	Durability	Design for Disassembly	Product Stewardship
User response options:	<5% = **0**	<7yrs = **0**	<50 = **0**	No = **0**
	≥5% and <20% = **12**	≥7yrs and <10yrs = **12**	≥50 and <90 = **12**	
	≥20% = **20**	≥10yrs = **20**	≥90 = **20**	Yes = **20**

AND

User response options	In House EMS?	ISO 14001 Certified EMS	EMS Includes?			
			Waste Minimisation	Energy	Emissions	Materials Minimisation
Yes	**8**	**4**	**2**	**2**	**2**	**2**
No	**0**	**0**	**0**	**0**	**0**	**0**

Table 2c: Type III Calculator Point Allocation

	Eco Preferred Content	Design for Disassembly	Modularity
User response options:	<5% = **0**	<50 = **0**	No = **0**
	≥5% and <20% = **20**	≥50 and <90 = **20**	
	≥20% = **33.333**	≥90 = **33.333**	Yes = **33.333**