

GREEN STAR – DRAFT MATERIAL CALCULATORS 2.0 GUIDE

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CHANGE LOG

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1.0 INTRODUCTION

The material calculators in Green Star rating tools are used to describe the environmental characteristics of materials used in building fitouts. Information about the fitout items used in a building project or an interior fitout project is recorded in a material calculator. A completed material calculator is provided as part of the required documentation for some Green Star credits.

A unique material calculator has been designed for each Green Star credit. The points awarded for each material calculator are determined by the 'credit criteria' specific to the Green Star credit. Aside from how the points are awarded, all of the material calculators work in a similar way.

There are three types of material calculators:

- furniture calculators
- assemblies calculators
- flooring calculators.

1.1 ABOUT THIS GUIDE

This guide explains how to prepare documentation for Green Star credits that use a material calculator.

- Section 2 provides an overview of documentation requirements and an example of a completed material calculator.
- Section 3 explains how to use the furniture, assemblies and flooring calculators.
- Section 4 describes the way information must be entered to show how fitout items address particular environmental criteria. All material calculators give scores to fitout items based on the following five criteria:

- 1) Re-use of items
- 2) Use of items with product stewardship contracts
- 3) Use of items certified by relevant product certification standards
- 4) Use of items with re-used, recycled or certified content
- 5) Implementation of an ISO 14001 certified environmental management systems.

- Section 5 explains how material calculators convert the scores for fitout items into an overall score. The method is common to all Material Calculators 2.0. Completed example calculations are provided using the furniture calculator.

A material calculator converts a project's overall score into the number of points awarded. The requirements for points awarded are determined by the credit criteria of the relevant Green Star credit.

2.0 DOCUMENTATION GUIDELINES

This section outlines the documentation required for Green Star credits that use a material calculator. An example of a completed material calculator is also provided.

2.1 WHEN A CREDIT IS NOT APPLICABLE

If the material cost of assemblies, furniture or flooring represents less than 0.01% of the project's total contract value, the relevant credit does not apply. The points available for that credit are excluded from calculations for the 'Materials' category score.

DOCUMENTATION GUIDELINES - NOT APPLICABLE

Submit all the evidence and ensure it readily confirms that the credit is not applicable.

- ☐ Statement written by a quantity surveyor comparing the total cost of furniture, assemblies or flooring specified, with the total contract value of the project.
- ☐ Extracts from the contract that state the project's total value.

2.2 DESIGN RATING

DOCUMENTATION GUIDELINES - DESIGN RATING

Submit all the evidence and ensure it readily confirms compliance.

- ☐ Statement written by a quantity surveyor comparing the total cost of furniture, assemblies or flooring specified, with the total contract value of the project.
- ☐ Extracts from the contract that state the project's total value.
- ☐ A completed copy of the relevant material calculator. This should be completed as per the instructions in this guide. All data entered should be based on the project's tender specification.
- ☐ The project's tender fitout schedule. This must describe all items in the project that are relevant to the submitted material calculator. Depending on which calculator is submitted, all furniture, all assemblies or all flooring in the project may be relevant. The schedule must state the type and quantity of these items.
- ☐ Extracts from the project's tender specification. These must stipulate how all relevant fitout items will address the criteria that are measured by the material calculator. For detailed information about these criteria and the documentation required, refer to Section 4.

OR

Where items and their suppliers have been stipulated in the tender specification, project teams may choose to submit the following evidence instead of extracts from the tender specification:

- ☐ Evidence that correlates with data entered in the submitted material calculator. This evidence is described in the 'As Built' documentation requirements for each criterion outlined in Section 4.

2.3 AS BUILT RATING

DOCUMENTATION GUIDELINES - AS BUILT RATING

Submit all the evidence and ensure it readily confirms compliance.

- ☐ Statement written by a quantity surveyor comparing the total cost of furniture, assemblies or flooring specified, with the total contract value of the project.
- ☐ Extracts from the contract that state the project's total value.
- ☐ A completed copy of the relevant material calculator. This should be completed as per the instructions in this guide. All data entered should be based on the project's construction or as-built specification.
- ☐ The project's fitout schedule. This must describe all items in the project that are relevant to the submitted material calculator. Depending on which calculator is submitted, all furniture, all assemblies or all flooring in the project may be relevant. The schedule must state the type and quantity of these items.
- ☐ Evidence that correlates with data entered in the submitted material calculator. This evidence is described in the 'As Built' documentation requirements for each criterion outlined in Section 4.

2.4 MULTIPLE BUILDING PROJECTS

If a project is registered for a Green Star multiple building rating, the above documentation requirements apply. In addition, the documentation must address every building in the project.

When a 'multiple building' project involves buildings with similar systems, geometry, construction and size, they can be represented by a 'typical building'. Material calculators and supporting evidence can be provided, for the 'typical building' instead of the group. In this situation, documentation must be submitted that clearly demonstrates:

- which buildings are in the group represented by the 'typical building'
- that all buildings in the group have equal or better performance than the 'typical building'.

2.5 COMPLETED MATERIAL CALCULATOR EXAMPLE

EXAMPLE 1: GREEN STAR – FURNITURE CALCULATOR

The following example shows a completed material calculator.

The equations used to determine scores for this example are shown in Section 5.

<div> <div>Total number of furniture items in the project: 1250</div> <div>Points awarded: 4</div> <div>Overall score: 87 %</div> </div>								
<div> <div>Overall score \geq 80%, 4 points have been awarded</div> <div>Total items documented 1200 items</div> </div>								
			Criterion-1	Criterion-2	Criterion-3	Criterion-4	Criterion-5	
#	Name of Supplier and Brief Description of Item	Total Number of items	Re-used Item	Product Stewardship	Certified Product	Re-used, Recycled or Certified Content	Environmental Management Systems	Item score (%)
1	Furnco, Z10 task chair	250		Yes – purchased product	Level B			100
2	Furnco, A6 task chair	250			Level A			100
3	Vandaley Industries, Lisa chair	120				Yes	Yes	70
4	Under the Hammer Auction House, variety of workstations	60	Yes					100
5	Furnco, Live workstations	200		Yes – purchased product		Yes	Yes	100
6	Task, Hang On storage units	200			Level C			60
7	Snow Gum Design, 180° tables	120		Yes – purchased product		Yes	Yes	100

For a project containing 1250 individual furniture items, 1200 individual items have been entered in this furniture calculator. The types of furniture item entered are as follows:

- Item entry 1: 'Z10' task chairs supplied by 'Furnco'
- Item entry 2: 'Z6' task chairs supplied by 'Furnco'
- Item entry 3: 'Lisa' chairs supplied by 'Vandaley Industries'
- Item entry 4: A variety of workstations, purchased from 'Under the Hammer Auction House'
- Item entry 5: 'Live' workstations supplied by 'Furnco'
- Item entry 6: 'Hang On' storage units supplied by 'Task'
- Item entry 7: '1800' tables supplied by 'Snow Gum Design'

The furniture calculator has generated an 'item score' for each item entry, based on their performance under the five criteria used by material calculators.

The 'overall score' is **87%**.

The 'points awarded' are determined by the credit criteria for the relevant Green Star credit.

In this example, the 'credit criteria' award **4 points** for overall scores of 80–89%.

3.0 HOW TO USE THE MATERIAL CALCULATORS 2.0

Figure 1 shows the steps to take when using a material calculator.

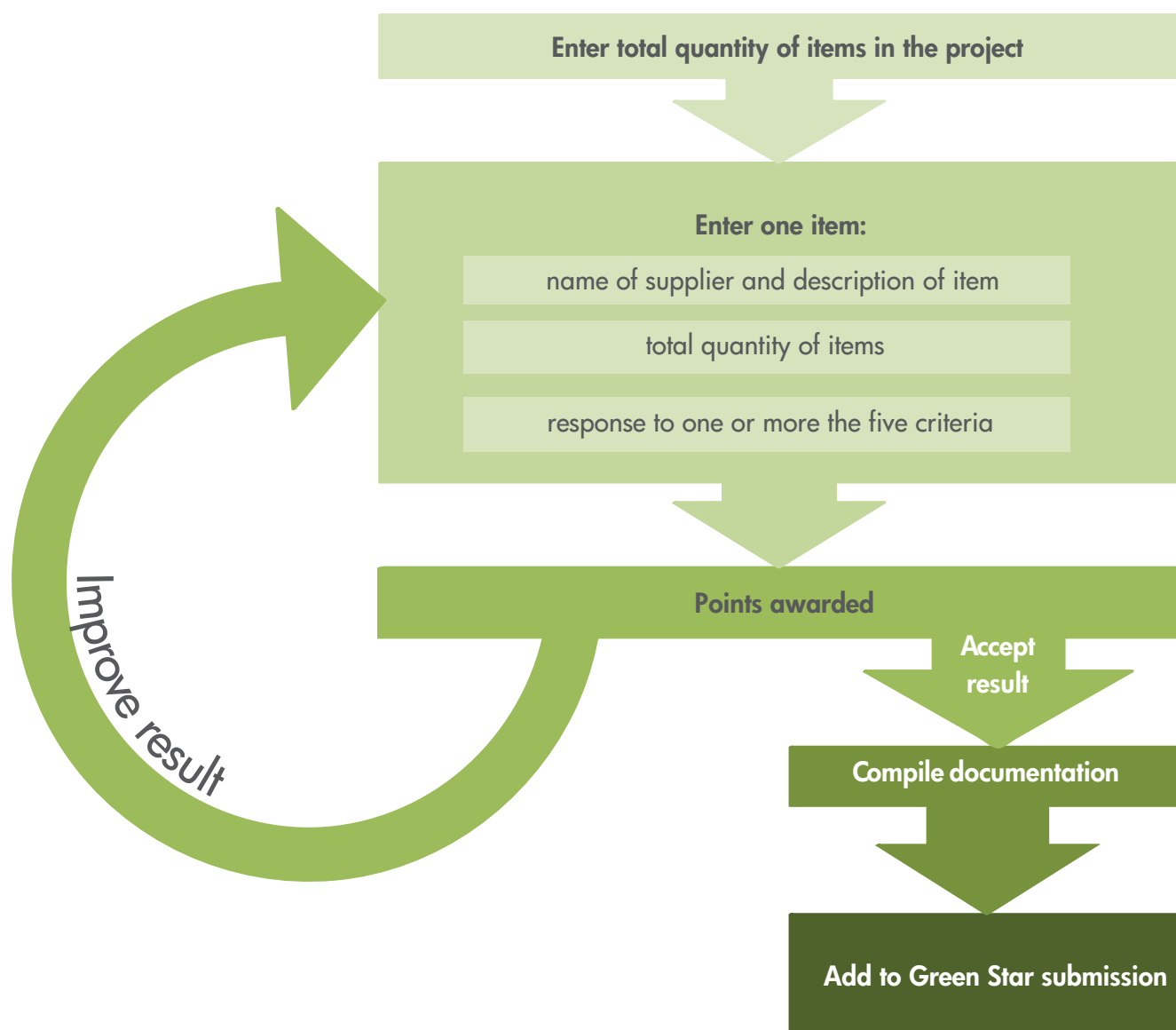


Figure 1: How to use a material calculator.

This section explains the furniture, assemblies and flooring calculators. Definitions and examples are provided. The steps required to complete the calculators are also described:

- Step 1: entering the total items in the project.
- Step 2: entering a description of the item's type and the name of the supplier.
- Step 3: entering the total number of items of that type.

Section 4 explains the fourth step, which involves entering a response to one or more of the five criteria.

3.1 HOW TO USE A FURNITURE CALCULATOR

STEP 1: Enter the total number of furniture items in the project. 'Total number of furniture items in the project' is displayed at the top centre of each furniture calculator.

Here, we describe which items are relevant and the method for counting furniture items.

Scope and definitions

Furniture items in the project should include all furniture within project floor areas that are permanently covered and protected from the elements.

The furniture calculators define furniture as chairs, tables, work settings and storage units.

The following definitions apply:

- Chairs
Chairs that are joined together, such as theatre or auditorium seating should be counted as one chair for every seat.
- Work settings
A work setting is a desk, workbench or workstation. A work setting includes both the work surface and the structure supporting the work surface. Elements that are attached to a work setting should be treated as part of the work setting. This includes attached storage, shelving and screening elements.
A work setting designed to accommodate more than one user should be counted as one work setting per user.
- Storage units
Storage units are items intended to be used as storage, which are not custom made. These include items which are purchased 'off-the-shelf', whether they are assembled offsite or onsite. Examples include filing cabinets, stationery cabinets, compactus units, tambour cabinets and shelving units.
- Exclusions
Furniture in areas that are not permanently covered and that cannot be protected from the elements is excluded. Furniture in car parks, plant rooms, waste collection areas and loading docks are also excluded.

Stools and lounges can be excluded. These are defined as:

- Stool
A seat without back support used for informal seating for short periods.
- Lounge
An upholstered seat for one or more person used for informal seating or reclining. Some examples of lounges include sofas and chaise lounges.

Name of supplier and brief description of item

STEP 2: Enter information about the project's furniture items in the column called 'Name of Supplier and Brief Description of Item'.

One entry may represent a single item of furniture or a group of similar furniture items. Each entry must represent furniture items that are sourced from the same supplier.

For projects applying for a Green Star – Design rating

If the supplier has not been specified, enter a brief description of the item type.

If the supplier has been specified, enter the supplier's name, followed by the item description.

For projects applying for a Green Star – As Built rating

Enter the supplier's name, followed by a brief description of the item.

If various components of an item are sourced from different suppliers, the item entry should include all of the suppliers' names, followed by a brief description of the item.

Definition of supplier

For the purposes of the furniture calculators, the supplier is the maker or distributor of a finished item.

EXAMPLE 2: NAME OF SUPPLIER AND BRIEF DESCRIPTION OF ITEM

This is an example of how the 'Name of Supplier and Brief Description of Item' column may look when completed for three furniture items. Data entered is in blue text.

- 'Lisa Chair' supplied by 'Vandaley Industries'
- A variety of workstations are supplied by 'Under the Hammer Auction House'
- 'Funky' table tops are supplied by 'Superb Surfaces'
- 'Sturdy' table legs are supplied by 'Legs Eleven Inc.'

#	Name of Supplier and Brief Description of Item
1	Vandaley Industries, Lisa chair
2	Under the Hammer Auction House, variety of workstations
3	Superb Surfaces, Funky table top; Legs Eleven Inc., Sturdy table legs

Total number of items

STEP 3: Enter information in the column called 'Total Number of Items'. A total must be entered for each item listed in a furniture calculator.

For projects applying for a Green Star – Design rating

If the supplier has not been specified, enter a brief description of the item type.

If the supplier has been specified, enter the supplier's name, followed by the item description.

For projects applying for a Green Star – As Built rating

Enter the supplier's name, followed by a brief description of the item.

If various components of an item are sourced from different suppliers, the item entry should include all of the suppliers' names, followed by a brief description of the item.

Five criteria

STEP 4: Enter information about an item type under one or more of the five criteria columns. For information about this step, please refer to Section 4.

3.2 HOW TO USE AN ASSEMBLIES CALCULATOR

STEP 1: Enter the total area of assembly items in the project in square metres. The following sections define which items are relevant and the method for calculating the area of assembly items.

'Total Area of Assembly Items in the Project' is displayed at the top centre of each assemblies calculator.

Scope and definitions

Assembly items in the project should include all assemblies within project floor areas that are permanently covered and protected from the elements.

Assemblies include internal walls, partitions, ceilings and joinery.

The following definitions apply:

- Internal walls and partitions
Internal walls and partitions are non-load bearing space dividers that are not part of the building envelope.
- Joinery
Joinery only includes the following items, which must be custom made:
Toilet partitions; shower partitions including shower screen doors; bench seats; vanities; lockers; kitchens; laundry cupboards; shelving units; bumper rails; decorative trims; built-in wardrobes; cupboards; internal stairs.

- Exclusions

Assemblies in areas that are not permanently covered and that cannot be protected from the elements are excluded. This includes assemblies in car parks, plant rooms, waste collection areas and loading docks.

Assemblies that form part of the building envelope are also excluded.

Definition of area

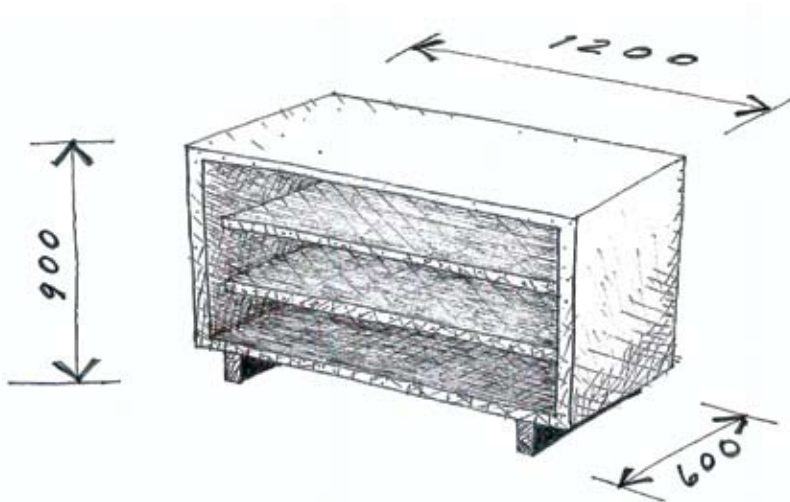
For the purposes of an assemblies calculator, the area of an assembly item is defined as:

- Area of ceilings = area shown in plan view.
- Area of walls, partitions and joinery = area shown in largest elevation.

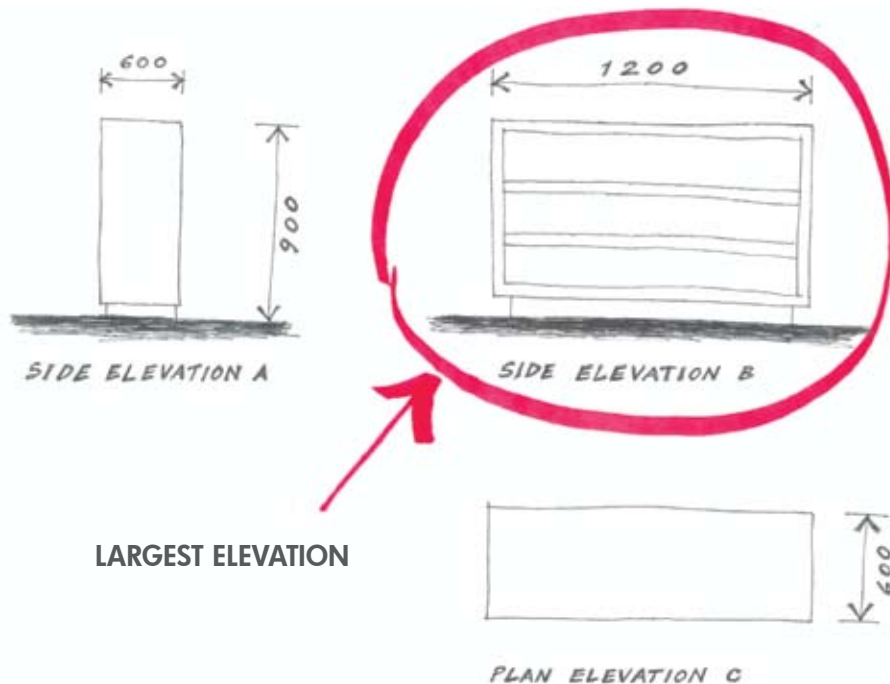
An item's 'largest elevation' is its largest two-dimensional face. Example 3 illustrates this term

EXAMPLE 3: LARGEST ELEVATION – ASSEMBLIES CALCULATOR

A rectangular shelving unit is 900mm high, 600mm deep and 1200mm wide.



The 'largest elevation' is Side Elevation B: 1200mm x 900mm.



The area of the shelving unit = 1.2m x 0.9m = 1.08m²

Name of supplier and brief description of item

STEP 2: Enter information about the project's assembly items in the column called 'Name of Supplier and Brief Description of Item'. One entry may represent a single assembly or a group of similar assemblies. Each entry must represent assemblies that are sourced from the same supplier.

For projects applying for a Green Star – Design rating

Enter a brief description of the item type.

If the supplier has been specified, please enter the supplier's name, followed by the item description.

For projects applying for a Green Star – As Built rating

Enter the supplier's name, followed by a brief description of the item.

If various components of an item are sourced from different suppliers, all of the suppliers are relevant. The item entry should include all of the suppliers' names, followed by a brief description of the item.

Definition of supplier

For the purposes of the assemblies calculators, the supplier is the maker or distributor of a finished item.

Total area of items

STEP 3: Enter information in the column called 'Total Area of Items'. A total must be entered for each item listed in an assemblies calculator.

Enter the total area in square metres for each group of similar assemblies as follows:

- Area of ceilings = area shown in plan view.
- Area of walls, partitions and joinery = area shown in largest elevation.

For the purposes of the assemblies calculators, an item's 'largest elevation' is its largest two-dimensional face. For further information refer to Example 3: Largest elevation – assemblies calculator.

Five criteria

STEP 4: Enter information about an item type under one or more of the five criteria columns. For information about this step please refer to Section 4.

3.3 HOW TO USE A FLOORING CALCULATOR

STEP 1: Enter the total area of flooring items in the project in square metres. The following sections define which items are relevant and the method for calculating the area of flooring items.

'Total Area of Flooring Items in the Project' is displayed at the top centre of each flooring calculator.

Scope and definitions

Flooring items in the project should include all flooring within project floor areas that are permanently covered and protected from the elements.

For the purposes of the flooring calculators, flooring is defined as exposed concrete, floor coverings and backing materials for floor covering.

The following definitions also apply:

- Exposed concrete
Exposed concrete is an area of concrete floor surface that is not covered.
- Floor covering:
Floor covering may be fixed or supported or floating. Floor covering includes carpet, carpet tiles, timber, resilient flooring, hard flooring and other floor covering.
Floor covering excludes rugs and paint finishes.
- Backing materials for floor covering:
Carpet underlay is one example of a backing material for floor covering.
Backing materials should be counted as a separate item to the floor coverings.
The area of a backing material should be counted separately to the area of a floor covering.
- Exclusions:
Exclude flooring in areas that are not permanently covered and that cannot be protected from the elements. Exclude flooring in car parks, plant rooms, waste collection areas and loading docks. Rugs and paint finishes are also excluded.

Definition of area

For the purposes of a flooring calculator, the area of a flooring item is the area shown in plan view. The plan view is a two dimensional drawing of an object that shows how it would look from above. If there are multiple layers of flooring material, such as carpet with backing, the total area is equal to the sum of the area of each layer. In this example, the total area would equal the sum of the areas of carpet plus the area of backing.

Name of supplier and brief description of item

STEP 2: Enter information about the project's flooring items in the column called 'Name of Supplier and Brief Description of Item'. One entry may represent a single flooring area or a group of similar flooring areas. Each entry must represent flooring that is sourced from the same supplier.

For projects applying for a Green Star – Design rating

Enter a brief description of the item type.

If the supplier has been specified, please enter the supplier's name, followed by the item description.

For projects applying for a Green Star – As Built rating

Enter the supplier's name, followed by a brief description of the item.

If various components of an item are sourced from different suppliers, all of the suppliers are relevant. In this case, the item entry should include all of the suppliers' names, followed by a brief description of the item.

Definition of supplier

For the purposes of the flooring calculators, the supplier is the maker or distributor of a finished item.

Total area of items

STEP 3: Enter information in the column called 'Total Area of Items'. A total must be entered for each item listed in a flooring calculator.

Enter the total area in square metres for each type of flooring including the area of:

- flooring
- underlay and other backing materials, as well as the area of floor finishes
- exposed concrete floor surfaces.

EXAMPLE 4: TOTAL AREA OF ITEMS

This is an example of how the 'Total Number of Items' column will look when completed for three flooring items:

- 1100m² of Greentuft carpet supplied by Co-Name
- 1100m² of Softfriendly underlay supplied by Underlay Experts
- 750m² of exposed concrete floor.

#	Name of Supplier and Brief Description of Item	Total Area of Items
2	Co-Name, Greentuft carpet	1100
3	Underlay Experts, Softfriendly underlay	1100
4	Existing, exposed concrete floor	750

Five criteria

STEP 4: Enter information about an item type under one or more of the five criteria columns. For information about this step please refer to Section 4.

4.0 THE FIVE CRITERIA

The fourth step when completing a material calculator is to enter a response to the following five criteria for each item type:

- 1) Re-used item
- 2) Product stewardship
- 3) Certified product
- 4) Re-used, recycled or certified content
- 5) Environmental management systems.

Positive responses to any of the five criteria add to an 'item score'. A high item score indicates preferred environmental attributes.

It is possible to respond to more than one criterion. It is not necessary to respond to all five criteria.

The maximum item score is 100%. If responses made to the five criteria add up to an item score greater than 100%, an item score of 100% will be recorded.

The following sections explain how responses should be entered and documented for each of the five criteria. Item score weightings for responses are also explained.

4.1 CRITERION 1: RE-USED ITEMS

How to enter re-used items

- Select **Yes** for items that are re-used.
- Select **Yes** in a flooring calculator for areas of exposed concrete floor, as defined in 'Scope and definitions' in Section 3.3.
- Select **No** (or leave blank) for all other items.

Item score

- Selecting **Yes** adds 100% to the item score.

Definition of re-used items

For the purposes of the material calculators, re-used items include items:

- purchased from a second-hand retailer, e.g. an auction house
- that were used on the current site by a previous occupant
- relocated to the site from the new tenant's or occupant's previous fitout.

Re-used items may be refurbished as required for 'make good', e.g. painting or reupholstering.

Documentation requirements

DOCUMENTATION GUIDELINES - DESIGN RATING

Submit all the evidence and ensure it readily confirms compliance.

Re-used items

- ☐ An extract from the specification, stipulating that the items will be re-used and that any substitutes for these items must also be re-used.

Exposed concrete (flooring calculator only)

- ☐ Written statement from the architect or interior designer confirming that the 'exposed concrete' area entered in the flooring calculator will be provided without any floor covering.

OR

- ☐ Tender or as-built drawings that clearly indicate the area of exposed concrete. These must correlate with the 'exposed concrete' area entered in the flooring calculator.

DOCUMENTATION GUIDELINES - AS BUILT RATING

Submit all the evidence and ensure it readily confirms compliance.

Re-used items

- ☐ A furniture schedule, assemblies schedule or flooring schedule showing clearly that the items are re-used. Supporting evidence that demonstrates that the items are re-used. Evidence should take the following forms:
 - For products purchased from a second-hand retailer:
 - Purchase receipts, removalist's inventory or delivery receipts.
 - For products that were used on the current site by a previous tenant or occupant:
 - A statement from the interior designer or architect declaring that the items were in use onsite prior to the project works and that it has now been re-installed onsite.
 - For products relocated to the site from the new occupant's previous fitout:
 - Removalist's inventory from the previous location.

OR

- Furniture inventory from the previous fitout showing clearly the items that have been re-used in the new fitout.

Exposed concrete (flooring calculator only)

- ☐ Written statement from the architect confirming that the 'exposed concrete' area entered in the flooring calculator has been provided without any floor covering.

OR

- ☐ As-built architectural drawings that clearly indicate the area of exposed concrete. These must correlate with the 'exposed concrete' area entered in the flooring calculator.

4.2 CRITERION 2: PRODUCT STEWARDSHIP

How to enter product stewardship

- Select **Yes – Leased Item** for leased items with a product stewardship contract.
- Select **Yes – Purchased Item** for purchased items with a product stewardship contract.
- Select **No** (or leave blank) for all other items.

Item score

- Selecting **Yes – Leased Item** adds 40% to the item score.
- Selecting **Yes – Purchased Item** adds 30% to the item score.

Definition of product stewardship

Product stewardship is a product-centred approach to environmental protection. It requires all of the parties involved in a product's life cycle to share responsibility for that product's environmental impacts. These parties include product manufacturers, suppliers and users.

Product stewardship is demonstrated in the form of product stewardship contracts. An example of a compliant product stewardship contract can be downloaded from the [GBCA website](#).

Leased items with a product stewardship contract

For the purposes of the material calculators, a product stewardship contract for a leased item is a contractual agreement between the supplier and the occupant or tenant. The supplier agrees to collect the item when it is no longer needed, for re-lease, re-use or recycling.

Purchased items with a product stewardship contract

For the purposes of the material calculators, a stewardship contract for a purchased item is a contractual agreement between the manufacturer or supplier and the occupant or tenant. The manufacturer or supplier agrees to collect the item when it is no longer needed, for re-use or recycling.

Product stewardship agreements should not include any limiting conditions or restrictions related to timing of product return or minimum quantity of product to be returned.

Documentation requirements

DOCUMENTATION GUIDELINES - DESIGN RATING

Submit all the evidence and ensure it readily confirms compliance.

Leased items:

- ☐ An extract from the specification, stipulating that the items will be leased under an agreement that includes a product stewardship contract.

Purchased items:

- ☐ An extract from the specification, stipulating that the items will be purchased under an agreement that includes a product stewardship contract.

DOCUMENTATION GUIDELINES - AS BUILT RATING

Submit all the evidence and ensure it readily confirms compliance.

Leased items:

- ☐ A copy of the product stewardship contract. This must show that the items have been leased by the building occupant or tenant. .

Purchased item

- ☐ A copy of the product stewardship contract. This must show that the items have been purchased by the building occupant or tenant.

4.3 CRITERION 3: CERTIFIED PRODUCTS

How to enter certified products

- Select **Level A** for items that are certified by a product certification standard that is recognised as Level A by the GBCA.
- Select **Level B** for items that are certified by a product certification standard that is recognised as Level B by the GBCA.
- Select **Level C** for items that are certified by a product certification standard that is recognised as Level C by the GBCA.
- Select **No** (or leave blank) for all other items.

Item score

- Selecting **Level A** adds 100% to the item score.
- Selecting **Level B** adds 80% to the item score.
- Selecting **Level C** adds 60% to the item score.

Definition of certified products

For the purposes of the material calculators, certified products are items certified by a product certification standard that is recognised by the GBCA as being compliant with the GBCA's 'Assessment Framework for Product Certification Schemes'.

The GBCA recognises product certification standards at Level A, B or C.

Where at least 90% of an item's total mass is certified to a GBCA-recognised standard, the item can be entered as a certified product at Level A, B or C.

An item with at least 90% of its total mass made from components that are certified to different levels of GBCA-recognised standards may be entered as a certified product. However, the certification level of the component achieving the lowest level of recognition must be entered for the entire item.

A list of the GBCA-recognised product certification standards can be found on the [GBCA website](#).

GBCA Assessment Framework for Product Certification Schemes

In order to be classified and recognised, each product certification standard has undergone independent assessment against the 'GBCA Assessment Framework for Product Certification Schemes'. This framework is described in detail on the [GBCA website](#).

4.4 DOCUMENTATION REQUIREMENTS

DOCUMENTATION GUIDELINES - DESIGN RATING

Submit all the evidence and ensure it readily confirms compliance.

Level A, B or C certified items:

- ☐ An extract from the specification, stipulating that the items will be certified by a GBCA-recognised product certification scheme at the level entered in the material calculator.
- ☐ An extract from the specification, stipulating that any substitutes for these items must be certified to a recognised standard at the same recognised level.

DOCUMENTATION GUIDELINES - AS BUILT RATING

Submit all the evidence and ensure it readily confirms compliance.

Level A, B or C certified items:

- ☐ A copy of the certification licence(s) for the item. The licence and certification standard must be current at the time of project submission. The certification standard must be recognised by the GBCA at the level entered in the material calculator.
- OR
- ☐ Printout of product certification listing(s) from the certification scheme website (current at the time of submissions) which identify the item and state the relevant level of certification.

4.5 CRITERION 4: RE-USED, RECYCLED OR CERTIFIED CONTENT

How to enter re-used, recycled or certified content

- Select **Yes** for items where at least 40% of the item's mass consists of any combination of the following:
 - re-used components
 - independently verified recycled content
 - components certified by a GBCA-recognised product certification standard
 - timber components that are certified by a GBCA-recognised forest certification scheme.
- Select **No** (or leave blank), for all other items.

Item score

- Selecting **Yes** adds 50% to the item score.

Definition of re-used components

For the purposes of the material calculators, re-used components include components:

- purchased from a second-hand retailer, e.g. an auction house
- that were used on the current site by a previous occupant
- relocated to the site from the new occupant's previous fitout.

An example of re-used components is re-used storage and screening components supplied as components of new workstations. Likewise, re-used wall framing deployed in new internal walls is considered as a re-used component.

Re-used materials may be refurbished as required for 'make good'. For instance, they may be painted, laminated or reupholstered.

Definition of recycled content

For the purposes of the material calculators, recycled content is material that has been diverted from landfill Materials such as rework, regrind or scrap generated in a manufacturing process and capable of being reclaimed within the same process that generated it are excluded.

Independent verification of recycled content

To be recognised as recycled content, evidence of independent verification must be provided from a qualified environmental auditor. The auditor must have 'Environmental Auditor' certification issued by RABQSA or equivalent. Please note that Provisional Auditor grade will not be accepted.

To find a certified Environmental Auditor, please refer to the 'Find a Professional' section of the RABQSA website www.rabqsa.com.

Independent verification of recycled content requires a signed letter from the qualified environmental auditor confirming the manufacturer's claimed percentage of recycled material content in the product. This letter must include an expiry date 12 months from the date of issue.

For products that have been manufactured for at least 12 months, this verification must be based on documentation of inputs of recycled material content in the product production over the past 12 months, as well as projected 12-month material inputs.

For products that are new in the market, this verification must be based on documentation of inputs of recycled material content in the product production over at least 3 months, as well as projected 12 months material inputs.

When documenting material inputs, the auditor shall ensure that records of supply of recycled and virgin material are kept and substantiate the manufacturers claimed recycled content in the item.

Definition of certified components

for the purposes of the material calculators, certified components are defined as:

- timber and timber products that are 'chain of custody' certified by a [GBCA-recognised forest certification schemes](#).
- item components that are certified by a [GBCA-recognised product certification schemes](#).

Chain of custody

Evidence of chain of custody certification must demonstrate a complete chain of custody from the forest, through the supply chain, to the building project.

Guidelines for demonstrating a complete chain of custody are set by forest certification schemes. When documenting chain of custody for timber products, relevant information resources developed by GBCA-recognised forest certification schemes must be followed.

GBCA-recognised product certification standards

As mentioned in Section 4.3, the GBCA recognises product certification standards at Level A, B or C for Criterion 3 (Certified Products). However, for Criterion 4, content certified by a GBCA-recognised product certification standard will be rewarded regardless of its recognised level.

GBCA-recognised forest certification schemes

The forest certification schemes recognised by the GBCA are listed in Table 1.

FOREST CERTIFICATION SCHEME	CHAIN OF CUSTODY GUIDELINES
Forest certification schemes accredited by the Forest Stewardship Council International (FSC)	FSC Guidelines
Forest certification schemes accredited by the Programme for Endorsement of Forest Certification Schemes (PEFC)	Individual Scheme Guidelines

Table 1: Forest certification schemes recognised by the GBCA

The PEFC-accredited Australian Scheme is the Australian Forestry Standard Limited (AFSL). The relevant chain of custody guidelines for the AFSL scheme are the 'AS 4707 Chain of Custody for Certified Wood and Forest Products Standard'.

Please refer to the '[Forest Certification Schemes](#)' page on the GBCA website for further information.

Documentation requirements

DOCUMENTATION GUIDELINES - DESIGN RATING

Submit all the evidence and ensure it readily confirms compliance.

- For items with at least 40% re-used, recycled or certified content:
- ☐ An extract from the specification, stipulating that at least 40% of the item's mass is re-used, recycled or certified by a forest- or product-certification scheme.
 - ☐ An extract from the specification, stipulating that any substitutes for these items must also have at least 40% of their mass made from content that is re-used, recycled or certified by a forest- or product-certification scheme.
 - ☐ Specification extracts must include commitments to provide independent verification for all products with recycled content.

DOCUMENTATION GUIDELINES - AS BUILT RATING

Submit all the evidence and ensure it readily confirms compliance.

For all items with at least 40% re-used, recycled or certified content:

- ☐ Calculations showing how the proportion of re-used, recycled or certified content was derived. An example of acceptable calculations is shown below. A uniform method of measurement and calculation must be applied to all items documented for this criterion. The method of calculation must include the following information:
 - All components in the item.
 - Mass of each component.
 - Mass of re-used, recycled or certified content in each component.
 - Percentage of re-used, recycled or certified content for an item.

For each re-used component:

- ☐ Supporting evidence that clearly demonstrates the item's content is re-used. Evidence should take the following forms:
 - For components purchased from a second-hand retailer:
 - Purchase receipts
 - For components that were otherwise re-used and delivered as part of a new item by the supplier:
 - A removalist's inventory from the previous location and a statement from the supplier detailing which components in the new products have been derived from a re-used item. The statement and the removalist's inventory must correlate.
 - For components relocated to the site, or pre-existing onsite from the new tenant or occupant's previous fitout:
 - An inventory of furniture, assemblies or flooring which shows clearly that the components were part of a previous fitout, and have been re-used in the new item.

For recycled content:

- ☐ Supporting evidence that clearly demonstrates the item's content is recycled. Evidence should take the following forms:
 - Manufacturer's or supplier's declaration of the mass of recycled content in the item.
 - Documentation and a signed letter by a qualified auditor, that provides independent verification of the mass of recycled content in the item. Confirmation that the auditor has 'Environmental Auditor' certification issued by RABQSA or equivalent current at the time of project registration, Please note that Provisional Auditor grade will not be accepted.

For all components certified by a product certification scheme:

- ☐ A copy of the product certification license for the component. This must be current at the time of project registration and must be issued in accordance with a GBCA-recognised certification standard as level A, B or C

OR

- ☐ A printout of product certification listings from the certification scheme website, current at the time of registration.

For all timber and timber products sourced from a GBCA-recognised certified forest management operation:

- ☐ Chain of custody evidence

Calculating the proportion of re-used, recycled and certified content

Example 5 shows how to calculate the proportion of re-used, recycled and certified content for a workstation made from several component parts.

EXAMPLE 5: CALCULATING THE PROPORTION OF RE-USED, RECYCLED AND CERTIFIED CONTENT

Each 'Live' workstation from 'Holesail Furniture' is made up of the following components:

Worktop made from timber that has a chain of custody certification from a forest certification scheme.

100% of the worktop's mass is counted towards re-used, recycled or certified content calculations.

New aluminium frame with no recognised documentation to show that it contains re-used, recycled or certified content.

0% of the frame's mass is counted towards re-used, recycled or certified content calculations.

Polymer screens supplied as part of each workstation, containing 20% independently verified recycled content.

20% of the screen mass is counted towards re-used, recycled or certified content calculations.

Storage unit as part of each workstation, certified by a GBCA-recognised product certification scheme.

100% of the storage component's mass is counted towards re-used, recycled or certified content calculations.

Furniture calculator				
Criterion 4: Re-used, recycled and certified content calculation				
Holesail Furniture's 'Live' workstation				
All components	Material	Mass (kg)	Re-used, recycled or certified content	Mass of re-used, recycled and certified content (kg)
worktop	timber	8	Yes	8
frame	aluminium	6.5	-	-
screens	polymer	9	Yes	1.8
storage unit	steel	9	Yes	9
TOTAL:		32.5		18.8
TOTAL PERCENTAGE OF RE-USED, RECYCLED OR CERTIFIED CONTENT: (18.8kg/32.5kg)			58%	

58% of the 'Live' workstation mass is re-used, recycled or certified content. This exceeds the requirement of more than 40% mass, so Holesail Furniture's 'Live' workstation can be entered as containing re-used, recycled or certified content.

4.6 CRITERION 5: ENVIRONMENTAL MANAGEMENT SYSTEMS

How to enter an environmental management system (EMS)

- Select **Yes** for items that have at least 90% of the mass of their total content sourced from manufacturing facilities that are operating an ISO 14001 certified EMS.
- Select **No** for all other items.

Item score

- Selecting **Yes** adds 20% to the item score

Definition of an EMS

An EMS is a management tool designed to help an organisation administer and control its environmental impact and compliance with regulations. An EMS does this by helping to develop and implement policies, objectives and processes.

To be recognised for this criterion, a certified EMS must include:

- 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
- requirements for continuous improvement
- an annual review of the EMS and its components
- details of the relevant environmental roles and responsibilities of staff
- details of the environmental training of staff.

The EMS must address the following aspects:

- Waste minimisation
Document whether or not the waste disposal and recycling rates of all waste generated from the product manufacturing process are measured, reviewed and reported at least once every three months
- Energy
Document whether or not the energy consumption of the product manufacturing process is measured, reviewed and reported at least once every three months
- Emissions
Document whether or not the gas and liquid emissions from the product manufacturing process are measured, reviewed and reported at least once every three months
- Materials minimisation
Document whether or not product material inputs including packaging are measured, reviewed and reported at least once every three months.

ISO 14001:2004 Environmental Management Systems Certification

This is an international standard published by the International Organisation for Standardisation (ISO). The standard specifies requirements for environment management systems.

Aspect

ISO 14001:2004 uses the term 'aspect' to describe an area of environmental impact.

Manufacturer

For the purposes of the material calculators, this is the maker who delivers a finished product. If there are several key manufacturers for a given product, EMS documentation will be required from each of them. This does not include parties who process raw materials.

Manufacturing facility

For the purposes of this criterion, a 'manufacturing facility' is not the same as the warehousing or assembly facility.

Documentation requirements

DOCUMENTATION GUIDELINES - DESIGN RATING

Submit all the evidence and ensure it readily confirms compliance.

Items provided from ISO 14001 certified manufacturing facilities:

- ☐ An extract from the specification, stipulating that the items will be manufactured in facilities that operate a compliant EMS.
- ☐ An extract from the specification, stipulating that any substitutes for these items must also be manufactured in facilities that operate a compliant EMS.

DOCUMENTATION GUIDELINES - AS BUILT RATING

Submit all the evidence and ensure it readily confirms compliance.

Items provided from ISO 14001 certified manufacturing facilities:

- ☐ A schedule of product components that includes:
 - each component's weight
 - confirmation of whether or not each component is sourced from manufacturing facilities that operate an ISO 14001 certified EMS
 - reference to the following supporting documentation:
 - A copy of the ISO 14001:2004 accreditation for relevant product manufacturing facilities.
 - A table of contents from a relevant ISO 14001 certified EMS manual confirming that the EMS includes the required components.
 - An EMS Scoping Document demonstrating that the ISO 14001 certified EMS addresses the relevant aspects

5.0 POINTS CALCULATION

This section describes the processes that material calculators use to calculate the number of Green Star credit points awarded. An example of a completed material calculator is provided. The example is accompanied by the equations a material calculator would use to arrive at the estimate of 'points awarded'.

The processes used by material calculators are:

- 1) calculating the 'item score'
- 2) calculating the 'overall score'
- 3) calculating the 'points awarded'.

5.1 ITEM SCORE

Material calculators convert responses entered for the five criteria into an 'item score' for each item type. 'Item scores' are displayed in the far right column of each calculator.

Calculating the item score

An 'item score' is generated for each item as follows:

$$\begin{array}{ccccccccc} \text{item} & & \text{score for} & & \text{score for} & & \text{score for} & & \text{score for} & & \text{score for} \\ \text{score} & = & \text{Criterion 1} & + & \text{Criterion 2} & + & \text{Criterion 3} & + & \text{Criterion 4} & + & \text{Criterion 5} \end{array}$$

The maximum 'item score' is 100%. If the total of scores for the five criteria exceeds 100%, for one item type, an 'item score' of 100% will be recorded.

Table 2 lists the scores for different responses to the five criteria.

Criterion	Response	Contribution to item score
Criterion 1 Re-used item	Yes	100%
Criterion 2 Product stewardship	Yes – Leased Item	40%
	Yes – Purchased Item	30%
Criterion 3 Certified product	Level A	100%
	Level B	80%
	Level C	60%
Criterion 4 Re-used, recycled or certified content	Yes	50%
Criterion 5 Environmental management systems	Yes	20%

Table 2: Score contributions for responses to the 5 criteria

5.2 OVERALL SCORE

Material calculators combine all of the item scores and convert them into an 'overall score'. This overall score is displayed at the top right of each material calculator.

Calculating the impact

The first step material calculators take when calculating an overall score is to work out the 'impact' for each item type as follows:

$$\text{'impact'} = \text{item score} \times \frac{\text{total number or area of items}}{\text{items score for Criterion 2}}$$

EXAMPLE 6: CALCULATING THE 'IMPACT'

'Lisa' chairs from Vandaley Industries generate an item score of 70%.

'Total number of items' for 'Lisa' chairs from Vandaley Industries = 120.

Item impact = 70% x 120 = 84

Calculating the overall score

The second step material calculators take when calculating an overall score is to add up all of the 'impacts' in the calculator and divide them by the total quantity of relevant items in the project. The overall score is calculated as follows:

$$\text{'impact'} = \frac{\text{Total of all impacts}}{\text{Total quantity of relevant items in the project}}$$

The 'Total quantity of relevant items in the project' refers to the number entered in the following field:

- **Furniture calculator:** 'Total number of furniture items in the project'.
- **Assemblies calculator:** 'Total area of assemblies in the project'.
- **Flooring calculator:** 'Total area of flooring in the project'.

5.3 POINTS AWARDED

Finally, the number of 'points awarded' are calculated based on the overall score. This number is displayed in the 'points awarded' field at the top of the calculator. The number of points available varies for each material calculator, and is defined in the 'credit criteria' for the relevant Green Star credit.

5.4 EXAMPLE OF POINTS CALCULATION

EXAMPLE 7: GREEN STAR – FURNITURE CALCULATOR

Step 1: Calculating the item score

• Item entry 1: 'Z10' task chairs	item score = 30% for criterion 2 + 80% for criterion 3 = 110%. Maximum item score = 100%
• Item entry 2: 'Z6' task chairs	item score = 100% for criterion 3
• Item entry 3: 'Lisa' chairs	item score = 50% for criterion 4 + 20% for criterion 5 = 70%
• Item entry 4: a variety of workstations	item score = 100% for criterion 1
• Item entry 5: 'Live' workstations	item score = 30% for criterion 2 + 50% for criterion 4 + 20% for criterion 5 = 100%
• Item entry 6: 'Hang On' storage units	item score = 60% for criterion 3
• Item entry 7: '1800' tables	item score = 30% for criterion 2 + 50% for criterion 4 + 20% for criterion 5 = 100%

These item scores should appear in the 'item score' column at the far right of the calculator.

Step 2: Calculating the overall score

• Item entry 1: 'Z10' task chairs	impact = 100% x 250 = 250
• Item entry 2: 'Z6' task chairs	impact = 100% x 250 = 250
• Item entry 3: 'Lisa' chairs	impact = 70% x 120 = 84
• Item entry 4: a variety of workstations	impact = 100% x 60 = 60
• Item entry 5: 'Live' workstations	impact = 100% x 200 = 200
• Item entry 6: 'Hang On' storage units	impact = 60% x 200 = 120
• Item entry 7: '1800' tables	impact = 100% x 120 = 120

$$\text{overall score} = \frac{250 + 250 + 84 + 60 + 200 + 120 + 120}{1,250} = 1,084 = 86.72\%$$

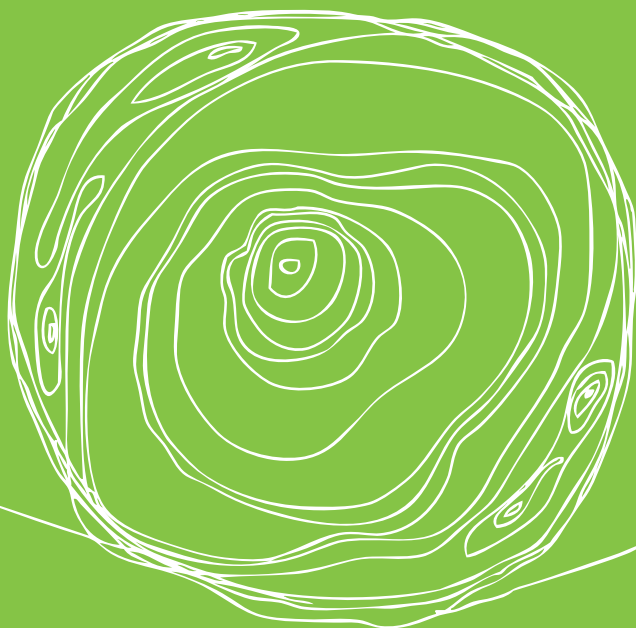
Rounding up to the nearest whole percentage point = **87%**

'87' should appear in the 'overall score' field at the top right of the furniture calculator.

Step 3: Calculating the points awarded

- The 'points awarded' are determined by the overall score and the credit criteria for the relevant Green Star credit.
- In this example, the 'credit criteria' award **4 points** for overall scores of 80–89%.
- '4' should appear in the 'points awarded' field at the top of the furniture calculator.
- The 'points awarded' will not automatically be recognised by the GBCA. Further documentation and assessment will be required.

Total number of furniture items in the project:			1250	Points awarded:			4	Overall score:	87	%
			Overall score \geq 80%, 4 points have been awarded			Total items documented			1200	items
			Criterion-1	Criterion-2	Criterion-3	Criterion-4	Criterion-5			
#	Name of Supplier and Brief Description of Item	Total Number of items	Re-used Item	Product Stewardship	Certified Product	Re-used, Recycled or Certified Content	Environmental Management Systems	Item score (%)		
1	Furnco, Z10 task chair	250		Yes – purchased product	Level B			100		
2	Furnco, A6 task chair	250			Level A			100		
3	Vandaley Industries, Lisa chair	120				Yes	Yes	70		
4	Under the Hammer Auction House, variety of workstations	60	Yes					100		
5	Furnco, Live workstations	200		Yes – purchased product		Yes	Yes	100		
6	Task, Hang On storage units	200			Level C			60		
7	Snow Gum Design, 180° tables	120		Yes – purchased product		Yes	Yes	100		

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