

Green Star NZ tools – Paint perspective

(May 2009)

The first Green Star NZ rating tool was launched in new Zealand in 2006 with Green Star NZ - Office Design. As of May 2009 there have been 13 buildings certified with a Green Star NZ Office Design rating.

NB. If you are unfamiliar with Green Star NZ, refer also **New Zealand green systems and resources information (Jan 2008 amended)** available from www.resene.co.nz.

Summary

- Education (Design & Built), Interiors (Built only) and Industrial (Design & Built) Pilots now out for review, with pilot projects already underway.
- All core credits for paint are IEQ 3 and MAT 3.
- A Wall partition calculator is included in the Interiors and Education Tools, paint contributes towards 2 available points for this credit.
- Interiors include paint applied up to 24 months prior.
- Interiors are for a completed fit out only, no design tool is available.
- Office has been expanded to include both Design and Built, criteria's are the same but proof of compliance required is different.
- Office has also been expanded to include both new builds and also major refurbishments where 50% or more of the building is undergoing refurbishment.
- The amount of points available under IEQ and MAT and the associated weightings of each category vary greatly from tool to tool.

Green Star NZ tool	Office Design & Built 2009	Education tool	Interiors tool	Industrial tool
Indoor environment quality criteria	IEQ 3 indoor air quality	IEQ 3 indoor air quality	IEQ 3 indoor air quality	IEQ 3 indoor air quality
Paint points	1	1	1	1
Total IEQ points + weighting	26 points / 20%	28 points / 20%	28 points / 25%	38 points / 15%
Weighted points	0.77	0.71	0.89	0.39
Materials criteria	MAT 3 finishes	MAT 3 applied coatings	MAT 3 finishes	MAT 3 applied coatings
Paint points	1	1	1	1
Total MAT points + weighting	24 points / 10%	37 points / 13%	35 points / 25%	27 points / 15%
Weighted points	0.42	0.35	0.71	0.56
Wall partition calculator included	NO	YES	YES	NO
Points contributed to (MAT)		2	6	
Paint weighted approx. (MAT)		0.12	0.70	
Total paint points	1.2	1.18	2.30	0.95

1 Office Design & Built 2009

- The existing Green Star NZ – Office Design v1 rating tool has been expanded to include an Office Built rating. The two Green Star NZ tools are combined into one technical manual and one excel tool.
- It has also expanded to include refurbished buildings. The building must be a new build or more than 50% must be refurbished.
- The Office Design tool rates the design of a building - it assesses what 'will' be built.
- The Office Built tool confirms the environmental initiatives proposed at Design phase reflects has been built and validates the environmental initiatives proposed at design.
- The credit aims and criteria are the same for the Design and Built phases of the Green Star NZ - Office rating. However, the compliance requirements, or types of evidence submitted, vary between the two stages.

NOTE: All projects that plan to be assessed under Version One (v1) of the tool must be registered under this version. Certification Agreements will need to be signed, and fees paid to be considered registered. Registrations for v1 will remain open for two months after the release of Version Two (v2). After this no further projects will be assessed under Version One. The only exception to this is buildings that achieved a certified Design rating under Version One. These projects may seek an Office Built v1 rating at any time. Any project registered under Version One can elect to be assessed under Version Two if they choose.

1.1 IEQ 3 - Indoor air quality

Up to 3 points are available for this credit.

NOTE: PAINT CAN CONTRIBUTE TO ONLY 1 POINT.

Up to 3 points are awarded where it is demonstrated that the various finishes meet the benchmarks for low VOC content.

1 point where 90% of all painted finishes are low VOC paints or no paints are used.

Other 2 points come from (1) adhesives and sealants, (1) carpets.

1.2 MAT 3 – Applied coatings

1 point available for this credit.

One point is awarded where it can be demonstrated that 90% or more of the paints used are independently certified as having lower environmental impact than standard applied coatings as verified through a material certification body recognised by the NZGBC (list of ecolabels available on NZGBC website)

1.3 Compliance requirements

Design - Compliance for Paints:

Documentation includes design documents, short reports and report extracts from design professionals, and statements from owners demonstrating that the design intent adheres to Green Star NZ compliance requirements.

The Green Star NZ accredited professional (GSAP) will have primary responsibility for collecting the compliance requirement documents.

As Built - Compliance for Paints:

The following is the compliance documentation required for both MAT 3 and IEQ 3, more information will follow as to how Resene will provide this information and the process needed.

Documentation includes evidence from suppliers and subcontractors, short reports and report extracts, as-built drawings, product data sheets, and statements confirming that Green Star NZ compliance requirements have been met.

• In many instances, the construction team will collect documentation from subcontractors and suppliers verifying how the project was completed. • It is recommended that requirements for such documentation are included in construction sub-contracts.

MAT 10

The following documentation is required to demonstrate compliance:

- Summary sheet showing all types of paint used on the project, the area (m²) covered by each type, whether or not it qualifies for the credit and compliance with the credit criteria;
- Proof of independent certification for each nominated paint type;
- Statement from the supplier certifying or invoices confirming the quantity and types of paint supplied to the project; AND
- Statement from construction project manager, owner's project manager, design professional or quantity surveyor certifying the nominated products were installed.

The Assessor(s) will not award points unless at least 90% or more of the paint used on the project meets the criteria as set out by an independent verification method (such as NZ Environmental Choice or any GEN-aligned certification system) recognised by the NZGBC.

Additional Guidance

Note: that any pre-existing paint that is retained in a refurbished project is not to be included in the calculation of this credit.

IEQ 3

The following documentation is required to demonstrate compliance:

- Summary sheet or a copy of the schedule of finishes listing all carpets, paints, adhesives and sealants included in the building and clearly stating the VOC content limit of each product and indicating compliance with the credit criteria;
- VOC data sheets for each product used, which highlight the VOC content of the product provided by the supplier and are signed by a suitably qualified professional;
- Supplier invoice confirming the quantity of each product supplied; AND
- Statement from the sub-contractor certifying that the only the products on the supplier invoice were used in the development.

1.4 Weighted points

The Green Star NZ points are weighted so that the maximum 4 paint points (2 as part of wall partition calculator) detailed above, once weighted, equate to:

IEQ 3 – 1 paint point out of 26 IEQ points, total Green Star NZ weighting for IEQ of 20% = 0.77 Green Star points.

MAT 3 - 1 paint points out of 24 MAT points, total Green Star NZ weighting for MAT of 10% = 0.42 Green Star points.

Giving a maximum potential Green Star NZ paint points = 1.2 points (rounded).

2 Education (Design & Built) Tool

The Green Star NZ - Education tool rates whole new schools, school buildings, tertiary buildings and childcare centres. Pilot projects are underway.

2.1 IEQ 3 - Indoor air quality

Up to 5 points are available for this credit. 4 points for VOCs and 1 point for Formaldehyde.

NOTE: PAINT CAN CONTRIBUTE TO ONLY 1 POINT.

- **Low VOCs**

Up to 4 points are awarded where the various finishes used in the project meet the benchmarks for low VOC limits.

1 point where 90% of all finishes meet the requirements OR no finishes are used

Other 3 points come from (1) adhesives and sealants, (1) floor coverings and (1) ceiling tiles.

2.2 MAT 3 – Applied coatings

1 point is available for this credit.

Applied Coatings/Paints are defined as any liquid applied finishes. Including but not limited to Paints, Stains and Varnishes and Oils.

One point is awarded where it can be demonstrated that 90% or more of the applied coatings used are independently certified as having lower environmental impact than standard applied coatings as verified through a material certification body recognised by the NZGBC (list of ecolabels available on NZGBC website)

2.3 MAT B Walls partitions calculator

Up to 2 points can be achieved for the entire calculation, paint if used in partitions can achieve only up to 1 point but this is will be weighted down. Re-use of original partitions is the only way to score maximum points. Repainting of re-used partitions falls under the overall painting specification.

This includes that finishes are environmentally preferable (they must be independently certified as having lower environmental impact than standard applied coatings as verified through a material certification body recognised by the NZGBC (list of ecolabels available on NZGBC website)

Green Star NZ - Education Design (Pilot)
Determining the points awarded in Mat-B:

Walls and Partitions Calculator

STEP ONE: Enter the total M² per wall type below

Type:	Total M ²
Walls & Partitions	
Joinery	
Other	
Total M²	0.0

Mix of Re-Used vs Non Reused		
Total Re-Used	-	0%
Total Non Reused	-	0%
Total	-	0%

[Click to return to the Materials tab](#)

Total Points Achieved:	Furniture	Walls & Partitions	Rounded Total
Reuse Points Achieved	-	-	-
Non-Reuse Points Achieved	-	-	-
Points Achieved	-	-	-

STEP TWO: Enter below a break down of the above types by Supplier, the M² and confirm if what is being supplied is re-used

Ref	Select walls & partitions, joinery or other	Supplier	M ² of material/wall	Re-Used?	Environmental preferred board	Finishes are environmentally preferred	Designed for disassembly	Raw Product Score	Weighted Product Score
1	Walls & Partitions							-	-
2								-	-
3								-	-

STEP THREE: If a supplier is supplying re-used items confirm yes or no to each of the questions below

The Green Star NZ points are weighted so that the maximum 4 point points (2 as part of wall partition calculator) detailed above, once weighted, equate to:

IEQ 3 – 1 point point out of 28 IEQ points, total Green Star NZ weighting for IEQ of 20% = 0.71 Green Star NZ points.

MAT 3 - 1 point points out of 37 MAT points, total Green Star NZ weighting for MAT of 13% = 0.35 Green Star NZ points.

MAT B - 2 points are available from Wall partition calculator out of 37 MAT points, total Green Star NZ weighting for MAT of 13% = 0.70 Green Star NZ points for entire wall partitions calculator. Paint will only contribute towards approximately a 1/3 of 1/2 (0.35) of these points = 0.12. Maximum points can only be achieved by re-using all partitions.

Giving a maximum potential Green Star NZ point points = 1.18 points (rounded).

3 Interiors Tool (Built only)

This tool rates completed fit-outs only- no Interiors Design rating will be available. Open for feedback until 17th of April but pilot projects are underway now.

3.1 IEQ 3 - Indoor air quality

Up to 5 points available for this credit. 4 points for VOCs and 1 point for Formaldehyde.

NOTE: PAINT CAN CONTRIBUTE TO ONLY 1 POINT.

- Low VOCs

Up to 4 points are awarded where the various finishes used in the project meet the benchmarks for low VOC limits (as per table) or were installed at least 24 months ago.

1 point where 90% of all finishes meet the requirements OR no finishes are used

Other 3 points come from adhesives and sealants, floor coverings and workstations / furniture / fittings/ ceiling tiles.

3.2 MAT 3 – Finishes

1 point available for this credit.

One point is awarded where it can be demonstrated that 90% or more of the applied coatings used are independently certified as having lower environmental impact than standard applied coatings as verified through a material certification body recognised by the NZGBC (list of ecolabels available on NZGBC website)

3.3 MAT B Walls partitions calculator

Up to 6 points can be achieved for the entire calculation, paint if used in partitions can achieve only up to 1 point but this is will be weighted down. Re-use of original partitions is the only way to score maximum points. Repainting of re-used partitions falls under the overall painting specification.

This includes that finishes are environmentally preferable (they must be independently certified as having lower environmental impact than standard applied coatings as verified through a material certification body recognised by the NZGBC (list of ecolabels available on NZGBC website)

Green Star NZ - Interiors (Pilot)
Determining the points awarded in Mat.B:

Walls and Partitions Calculator

STEP ONE: Enter the total M² per wall type below

Type:	Total M ²
Walls & Partitions	
Joinery	
Other	
Total M²	0.0

Mix of Re-Used vs Non Reused

Total Re-Used	-	0%
Total Non Reused	-	0%
Total	-	0%

Click to return to the Materials tab

Total Points Achieved:

	Furniture	Walls & Partitions	Flooring	Rounded Total
Reuse Points Achieved	-	-	-	-
Non-Reuse Points Achieved	-	-	-	-
Points Achieved	-	-	-	-

STEP TWO: Enter below a break down of the above types by Supplier, the M² and confirm if what is being supplied is re-used

Ref	Select walls & partitions, joinery or other	Supplier	M ² of material/wall	Re-Used?	Environmental preferred board	Finishes are environmentally preferred	Designed for Disassembly	Raw Product Score	Weighted Product Score
4				No	Yes	No	No	1	-
5								-	-
6								-	-
7								-	-
8								-	-

STEP THREE: If a supplier is supplying re-used items confirm yes or no to each of the questions below

Weighted points

The Green Star NZ points are weighted so that the maximum 4 point points (2 as part of wall partition calculator) detailed above, once weighted, equate to:

IEQ 3 – 1 point point out of 28 IEQ points, total Green Star NZ weighting for IEQ of 25% = 0.89 Green Star NZ points.

MAT 3 - 1 point points out of 35 MAT points, total Green Star NZ weighting for MAT of 25% = 0.71 Green Star NZ points.

MAT B - 6 points are available from Wall partition calculator out of 37 MAT points, total Green Star NZ weighting for MAT of 13% = 4.26 Green Star NZ points for entire wall partitions calculator. Paint will only contribute towards approximately a 1/3 of 1/2 (2.13) of these points = **0.70**. Maximum points can only be achieved by re-using all partitions.

Giving a maximum potential Green Star NZ point points = **2.30 points (rounded)**.

4 Industrial (Design & Built) Tool

This tool rates a broad spectrum of industrial buildings. Open for feedback until 16th of March but pilot projects are underway

4.1 IEQ 3 - Indoor air quality

Up to 5 points available. 4 points for VOCs and 1 point for Formaldehyde.

NOTE: PAINT CAN CONTRIBUTE TO ONLY 1 POINT.

- **Low VOCs**

Up to 4 points are awarded where the various finishes used in the project meet the benchmarks for low VOC limits.

1 point where 90% of all finishes meet the requirements OR no finishes are used

Other 3 points come from (1) adhesives and sealants, (1) floor coverings and (1) ceiling tiles.

4.2 MAT 3 – Applied coatings

1 Point is available for this credit.

Applied Coatings/Paints are defined as any liquid applied finishes. Including but not limited to Paints, Stains and Varnishes and Oils.

One point is awarded where it can be demonstrated that 90% or more of the applied coatings used are independently certified as having lower environmental impact than standard applied coatings as verified through a material certification body recognised by the NZGBC (list of ecolabels available on NZGBC website).

4.3 Weighted points

The Green Star NZ points are weighted so that the maximum 2 paint points detailed above, once weighted, equate to:

IEQ 3 – 1 paint point out of 38 IEQ points, total Green Star NZ weighting for IEQ of 15% = 0.39 Green Star NZ points.

MAT 3 - 1 paint points out of 27 MAT points, total Green Star NZ weighting for MAT of 15% = 0.56 Green Star NZ points.

Giving a maximum potential Green Star NZ paint points = 0.95 points (rounded).

Additional notes:

GREEN STAR NZ Office Design & Built 2009 IEQ 3 Applied Coatings compliance

IEQ 3 Applied Coatings compliance requires that 90% of all internal, applied on site, applied coatings meet the requirements for TVOC limits outlined in Table IEQ 3.1 below:

Product type	Maximum VOC content (gm/litre)
Low sheen (interior)	60
Low sheen (exterior)	60
Flat (interior) – washable	55
Flat (interior) – ceiling	65
Flat (exterior)	55
Semi-gloss (interior)	65
Semi-gloss (exterior)	65
Gloss (interior)	75
Gloss (exterior)	75
Stains and varnishes	100
Sealers and primers	
Exterior timber primer	60
Interior sealer	60
Latex primer (for galvanised iron and zincalume)	50
Undercoats	
Exterior latex	60
Interior latex	60
One and two pack performance coatings for floors	140

Solvent based paints shall not contain VOCs in excess of 200 g/litre. For recycled paints the average VOC level (across all batches) must not exceed 100g/litre.