

Summary of Changes

Green Star NZ - Industrial Design & Built 2009

June 2009



The NZGBC is committed to ensuring the ease of use and transparency of all its Green Star NZ tools. The following 'traffic light system' has been developed to outline how each *Green Star - Industrial 2009* credit has changed since the PILOT version. This indicates whether it is now easier or harder to achieve the credit, or similar to the requirements in the PILOT tool. A number of overall improvements have also been made and these are outlined below.




Overall Changes

- The NZGBC received considerable feedback, both from the PILOT projects and the industry, that the benchmarks in the PILOT tool represented a level of achievement beyond the targeted levels of "Best Practice", "New Zealand Excellence" and "World Leadership" for industrial buildings. To ensure that the tool is aligned with these levels, a detailed review of the tool was undertaken and as a result a few Credits have been removed, and the value of points adjusted. In addition to this the weightings of the IEQ, Transport, Water, Land Use & Ecology and Emissions categories have been adjusted.

- Wherever possible the text and format of each credit has been clarified, simplified and streamlined. Submission Checklists have been introduced for each credit to simplify the collection of documentation for submission.
- A table at the top of each Credit sets out clearly the number of points, any related Credits, and the area of the building that the Credit applies to (Assessable Area). Credits have been renumbered so that they are the same across all Green Star NZ tools; old numbers have been indicated in italics below the new number for each Credit.
- Detailed guidance on the eligibility criteria has been provided in the introduction to the Technical Manual.
- The energy calculation methodology has been finalised with full details provided in the Energy Calculation Guide available to download from www.nzgbc.org.nz.
- Detailed explanation of the area of the building to which each Credit is applied, has been provided in the Introduction to the Technical Manual.
- The range of eco-labels recognised within Green Star NZ has been expanded across all 2009 tools. Please refer to www.nzgbc.org.nz for further details.
- Clarification has been provided about Green Star- Industrial being an 'integrated' base building and fitout tool.














Credit Changes



















A traffic light system has been used to provide an indication of the change to each Credit at a glance. In addition to this there is a summary of the key change to the Credit, and a more detailed explanation of the modifications. The meaning of each 'traffic light' is set out to the right:

	Credit more attainable through reduced benchmark, or introduction of alternative methods of compliance.
	Credit not significantly changed from PILOT version. Overall impact deemed to be neutral.
	Significant change to the Credit, in line with feedback and/or other 2009 tools.

MANAGEMENT			
MAN-1	Green Star NZ Accredited Professional	●	Wording change in Credit Criteria for consistency: 'design and construction team' changed to 'project team'.
MAN-2	Commissioning Clauses	●	No change to Credit.
MAN-3	Building Tuning	●	No change to Credit.
MAN-4	Independent Commissioning Agent	●	No change to Credit.
MAN-5	Waste Management	●	A Waste Management Plan is no longer included in the Compliance Requirements.
MAN-6	Users' Guide	●	Wording change to align across tools: Tenant User Guide now Building Users' Guide, Building Users' Guide now Building Managers' Guide. Credit amended to retain only Building User Guide, as the Building Managers Guide for industrial facilities would be required to focus more on the process. Points available reduced to one.
MAN-7	Environmental Management	●	The third point relating to an IEQ Management Plan has been removed.
MAN-A	Environmental Management Operations	●	No change to Credit.
INDOOR ENVIRONMENT QUALITY			
IEQ-1	Base Ventilation Rates	●	No change to Credit.
IEQ-2	Ventilation Rates	●	No change to Credit.
IEQ-3	Indoor Air Quality	●	No change to Credit.
IEQ-4	Air Change Effectiveness	●	Credit has been removed. This was not considered to be a critical issue for the office space of an Industrial building.
IEQ-5	Exhaust Riser	●	As this tool assesses the whole building (i.e. base building and fitout) this Credit has been amended to reward provision of printing/photocopy rooms and kitchenettes which are enclosed and have a dedicated and separate exhaust facility. This is aligned with the <i>Office Interiors</i> Exhaust Riser Credit.
IEQ-6	Thermal Comfort	●	The Credit Criteria for the industrial and offices areas of the building have been combined into the same Credit. The third point which was awarded for the office space has been removed to provide a balance between the office and industrial space, and ensure the overall points value of the Credit is appropriate to the environmental impact.
IEQ-7	Thermal Comfort Control	●	No change to Credit.

IEQ-8	Daylight	●	A 'deemed-to-satisfy' approach is provided within the Technical Manual as an alternative to daylight modelling. The Credit Criteria for the industrial and offices areas of the building have been combined into the same Credit with the benchmarks adjusted so that four instead of six points area available for daylighting to ensure the overall points value of the Credit is appropriate to the environmental impact.
IEQ-9	Daylight Glare Control	●	No change to Credit.
IEQ-10	External Views	●	Credit clarified to confirm that it is only applicable to office space.
IEQ-11	Electric Lighting Levels	●	The recent changes to the Core Credit (in Office 2009), which was adapted in response to industry feedback, have been adopted in the Industrial tool. The Credit Criteria for the industrial and offices areas of the building have been combined into the same Credit. One point for reflectances has been removed from the requirements for the office space to provide a balance between the office and industrial space, and ensure the overall points value of the Credit is appropriate to the environmental impact.
IEQ-12	High Frequency Ballasts	●	No change to Credit.
IEQ-13	Internal Noise Levels	●	No change to Credit.
IEQ-A	Hazardous Materials	●	Credit has been removed. This was not considered to be a critical issue for the office space of an Industrial building.
IEQ-B	Respite Space	●	Criteria tightened up and clarified. Points available have been increased from 1 to 2 in response to feedback which indicated that this is an important issue within industrial buildings.
(IEQ-C)	Daylight (Industrial)	●	Credit combined with IEQ-8. A 'deemed-to-satisfy' approach is provided within the Technical Manual as an alternative to daylight modelling.
(IEQ-D)	Internal Noise Levels (Industrial)	●	Credit has been removed. This Credit was considered process dependent and therefore outside the scope of the tool.
(IEQ-J)	Electric Lighting Levels (Industrial)	●	Credit combined with IEQ-11. Benchmark reduced from 95% to 80% to allow areas that have process specific lighting to be excluded.
ENERGY			
ENE-1	Conditional Requirement	●	The energy calculation methodology has now been finalised and an Energy Calculation Guide is available on www.nzgbc.org.nz . The key changes are summarised below: - Ten points are now awarded for energy efficiency and ten points for a reduction in Greenhouse Gas Emissions.
ENE-2	Greenhouse Gas Emissions	●	- The schedule method has been developed to allow lower budget buildings to achieve some recognition without the added cost of a full energy modelling process. This approach will award 5 points for achieving a schedule of requirements. - The calculator has now been amended so that all buildings regardless of ventilation method are compared to a mechanically ventilated system. - The standard carbon factor for all combustible heating in the reference building is 0.25kg CO2/kWh.

ENE-3	CO ₂ Monitoring and Control		No change to Credit.
ENE-4	Lighting		Credit removed. Lighting is considered in the energy modelling therefore was being double counted.
ENE-5	Lighting Control		Benchmark reduced from 95% to 80% to reflect the industrial sector's current position and to reduce compliance time and cost. The second and third points have been combined allowing either/or options to gain a point, this was to provide balance within the tool. In the PILOT tool there were three points available for lighting control within the office space but only two available for the industrial space. Given that control in the industrial space has potential for greater impact (and not wishing to make the tool too points heavy) the points available for the Office Credit have been reduced. The Industrial space Credits have been added to this Credit bringing the total points available to four.
ENE-6	Electrical Sub-metering		No change to Credit.
ENE-7	Peak Energy Demand Reduction		No change to Credit.
ENE-D (ENE-E)	Carbon Monoxide Monitoring and Control		The Credit has been modified to be not applicable to naturally ventilated buildings or where no combustion processes are carried out. It was felt that no points should be awarded where no sensors were installed.
ENE-E (ENE-H)	Efficient External Lighting		Benchmark reduced from 95% to 80% to reflect the industrial sectors current position and to reduce compliance time and cost.
(ENE-F)	Lighting (Industrial)		This Credit has been removed. Lighting is considered in the energy modelling therefore was being double-counted.
(ENE-G)	Lighting Control (Industrial)		Credit combined with ENE-5. Setting benchmarks around zone sizes was deemed inappropriate for industrial buildings with varying process requirements. As a result the Credit has been amended to award points based on a selection of control options being provided.
TRANSPORT			
TRA-1	Car Park Minimisation		No significant change to Credit Criteria.
TRA-2	Fuel Efficient Transport		A paragraph has been added to ensure that this Credit is appropriate for smaller projects.
TRA-3	Cyclist Facilities		Credit used to require visitor bicycle storage to be provided within 10m of a major public entrance only. This requirement has been expanded by stating that 'visitor bicycle storage spaces are to be provided in a convenient location, which is signposted and near a major public entrance'. This is more comprehensive and consistent with this Credit in other tools.
TRA-4	Mass Commuting Transport		Industrial districts are by necessity outside of the CBD therefore the benchmarks have been adjusted to be more inappropriate to industrial buildings. An option for demonstrating compliance via private buses has been included in the Credit and the benchmarks have been amended to reflect the industrial sector's opportunity for impact and to encourage projects to consider commuting mass transport.

(TRA-C)	Proximity to Major Transport Services		Credit removed. Not all industrial processes require proximity to major cargo services and those that do are expected to locate as close as possible for economic reasons.
WATER			
WAT-1	Base Building Water Efficiency		No change to Credit.
WAT-2	Water Meters (Offices)		WAT-2 and WAT-D have been combined. This Credit is now applicable to the entire GFA and remains worth two points.
WAT-3	Landscape Irrigation Water Efficiency		No change to Credit.
WAT-4	Heat Rejection Water		Not applicable to this tool.
(WAT-D)	Water Meter (Industrial)		Credit combined (see WAT-2).
MATERIALS			
MAT-1	Shell and Core or Integrated Fitout		No change to Credit.
MAT-2	Building Reuse		No change to Credit.
MAT-3	Applied Coatings		No change to Credit.
MAT-4	PVC		No change to Credit.
MAT-5	Insulation		No change to Credit.
MAT-6	Timber		No change to Credit.
MAT-7	Concrete		No change to Credit.
MAT-8	Steel		No change to Credit.
MAT-9	Floor Coverings		No change to Credit.
MAT-10	Waste Recycling		'Not Applicable' criteria added for Industrial buildings in which there is no office area provided.
LAND USE & ECOLOGY			
ECO-1	Ecological Value of the Site		Deleted 'was built on prior to 2006' as this was included in error.
ECO-2	Reuse of Land		No change to Credit.
ECO-3	Reclaimed Contaminated Land		Wording clarified in Credit Criteria and definition moved to Additional Guidance.

ECO-4	Change of Ecological Value	●	No change to Credit.
ECO-5	Topsoil and Fill Removal from Site	●	No change to Credit.
EMISSIONS			
EMI-1	Refrigerant ODP	●	No change to Credit.
EMI-2	Refrigerant GWP	●	No change to Credit.
EMI-3	Insulant ODP	●	No change to Credit.
EMI-4	Discharge to Sewer	●	The Credit has been substantially changed to simplify the benchmark, and align the criteria with other Green Star tools. Points are now achieved through demonstrating a substantial reduction in the stormwater quantity leaving the site, and use of appropriate cladding materials.
EMI-5	Watercourse Pollution	●	No change to Credit.
EMI-6	Light Pollution	●	No change to Credit.
EMI-7	Purge Control	●	Credit added to the tool to replace EMI-A.
EMI-8	Legionella	●	Credit renamed to clarify aim.
(EMI-A)	Refrigerant Recovery	●	Credit removed. Aligning with current Green Star approach the Credit has been removed and replaced with EMI-7 Purge Control.
(EMI-B)	Airborne Emissions	●	Credit removed. This Credit was considered to relate primarily to the industrial process and therefore is outside of the scope of the Green Star Industrial tool.
(EMI-C)	Noise Pollution	●	Credit removed. This Credit was considered to relate primarily to the industrial process and therefore is outside of the scope of the Green Star Industrial tool.
INNOVATION			
INN - 1	Innovative Strategies and Technologies	●	Reworded for clarity and inserted need for environmental benefits to be quantified to ensure that benefits are tangible.
INN - 2	Exceeding Green Star Benchmarks	●	The following has been added: "...and where that improvement can be demonstrated or considered to have a commensurate additional environmental benefit". This is a result of there needing to be a significant benefit beyond that achieved by complying with the upper end of the existing benchmark. This is now aligned with the Office 2009 Credit.
INN - 3	Environmental Design Initiatives	●	The word 'quantified' has been added to ensure that benefits are tangible.