


















## Summary of Changes for Green Star – Industrial v1

This document describes how each credit has changed from Green Star - Industrial PILOT to Green Star - Industrial v1.

Key	Description	Type of Change
	Significant revision or change to credit made.	Credit deletions or additions; Conditional Requirements; Credits moved between categories; Significant change in Aim of Credit, Credit Criteria and/or Compliance Requirements; and Significant change in benchmarks.
	Moderate revision or change to credit made.	Minor change in Aim of Credit, Credit Criteria and/or Compliance Requirements Any change in documentation Change in the number of points awarded;
	As PILOT and/or Minor clarification, revision or change to credit made.	Credit remains exactly as in the PILOT rating tool Rewording of credit for clarity Change in Credit Name and number Additional information and guidance Background








General	Update Outcome	Summary of Change
<b>Eligibility</b>		Eligibility has been revised as follows:  Buildings primarily used for industrial purposes (e.g. manufacturing and warehousing facilities, distribution centres, etc.) are eligible for assessment under the Green Star - Industrial v1 rating tool provided that they meet the following criteria:  - At least 50% of the building's GLA (measured to exclude internal car parks) is classified as BCA Class 7b and/or 8; - Up to 50% of the building's GLA (measured to exclude internal car parks) is classified as BCA Class 5; and - Up to 10% of the building's GLA (measured to exclude internal car parks) is classified as any other BCA class.
<b>Precinct</b>		The GBCA has reassessed the inclusion of the 'precinct' component in the rating tool. Precinct wide solutions are strategies used to reduce the environmental impact of a number of issues, not an end of itself within the tool.

Credit No.	Credit Name	Update Outcome	Summary of Change
<b>Management</b>			
Man - 1	<b>Green Star Accredited Professional</b>		Credit Criteria has been revised to assess the involvement and influence of the Green Star Accredited Professional (GSAP) based on a list of particular tasks (including a broader set of responsibilities from the Green Star perspective) rather than the sole percent of participation in meetings.  Compliance Requirements and documentation has been slightly amended to better demonstrate validity and accreditation status of the GSAP as per Green Star requirements under the new Continuous Development Program (CDP) to be implemented from July 1, 2010.  It is also clarified that the role of the GSAP can be fulfilled by different individuals.
Man - 2	<b>Commissioning</b>		Moderate revision and re-wording of sections of the Credit Criteria and Documentation Requirements. Minor revision and re-structure of the Additional Guidance and Background sections.  Number of points awarded changed from 1 to 2 to align with all other Green Star - Rating tools. Credit Rewards the commissioning process, not the amount or the difficulty in commissioning such services.  Name of credit changed from 'Commissioning Clauses' to 'Commissioning' to better reflect the content of the credit.











General		Update Outcome	Summary of Change
Man - 3	Building Tuning		Minor rewording of the Aim of Credit for clarity. Credit Criteria has been clarified, with the removal of the term "recommissioning". The requirement to tune the system at the end of the 12-month process is now explicitly stated in performance terms. The Compliance Requirements section now contains a requirement to verify that systems are performing to their design potential during all variations in climate and occupancy.
Man - 4	Independent Commissioning Agent		Minor clarification relevant to the time when the Independent Commissioning Agent (ICA) needs to be engaged. The Credit previously required an ICA to be engaged at the beginning of the project. The credit now requires that the ICA be engaged at the relevant time when his advice can be used.  Compliance Requirements have also been revised for clarity on the roles and responsibilities of the ICA.
Man - 5	Building Users' Guides		As per Green Star - Industrial PILOT
Man - 6	Environmental Management		Aim of Credit reworded to better reflect the intent of the credit. Minor amendments and re-wording in the Documentation and Additional Guidance section of the credit for clarity.
Man - 7	Waste Management		As per Green Star - Industrial PILOT
Man - 8	Credit not applicable to this tool.		
Man - 9	Credit not applicable to this tool.		
Man - 10	Credit not applicable to this tool.		
Man - 11	Credit not applicable to this tool.		
Man - 12	Credit not applicable to this tool.		
Man - 12	Credit not applicable to this tool.		
Man - 13	Credit not applicable to this tool.		
Man - 14	Operations Environmental Management		Credit has been removed from version 1 of the tool, as the credit criteria addressed operational aspects of the industrial process rather than building attributes.
Man - 15	Precinct Environmental Management		Credit has been removed from version 1 of the tool, as the credit criteria addressed operational aspects of the industrial process rather than building attributes.
Man - 16	Metering		New Credit. The credit merges the Ene-2 'Energy Sub-metering' and the Wat-2 'Water Metering' credits into one within the Management category to better reward the benefits of these design features, as well as the information provided by meters, from a management decision-making perspective.
<b>Indoor Environment Quality</b>			
IEQ - 1	Ventilation Rates		It is now a requirement of this credit that outdoor air pollutants are minimised by locating the supply and exhaust intakes away from pollutant sources in accordance with ASHRAE Standard 62.1-2007.  The nominated area for the tool has been defined as the 'Occupied Space'. This credit is therefore only applicable to non-industrial occupied areas. Feedback questioned the need to supply large amounts of additional air to the industrial space.  The credit is not applicable where the non-industrial occupied space is less than 2.5% of the nominated area of the GLA up to 500m <sup>2</sup> , or where there is no non-industrial occupied space.
IEQ - 2	Air Change Effectiveness		95% of the nominated area needs to comply with the requirements for naturally ventilated spaces. The requirements for naturally ventilated spaces have been significantly modified. The guidance provided has been detailed to allow projects to model the air change effectiveness of a space on specific conditions. Previously the guidance required hourly modelling. This change has resulted in a significant decrease in the amount of modelling required. In addition, a simple Deemed to Satisfy criteria has been developed for simple spaces that are naturally ventilated.  The credit is not applicable where the non-industrial occupied space is less than 2.5% of the nominated area of the GLA up to 500m <sup>2</sup> , or where there is no non-industrial occupied space.

General		Update Outcome	Summary of Change
IEQ - 3	Indoor Pollutants Monitoring & Control	●	<p>The credit has been renamed from "CO<sub>2</sub> and Other Pollutants Monitoring and Control".</p> <p>The credit addresses the monitoring and control of CO and CO<sub>2</sub>. It addresses carbon dioxide and carbon monoxide levels in the internal space. The guidance for this point has changed. It is now a requirement that projects calibrate the monitoring and control mechanism to modulate the amount of outside air to reduce the indoor CO<sub>2</sub> level to 600 particles per million.</p>
IEQ - 4	Daylight	●	<p>It has been clarified that rooms that require the exclusion of daylight for functional reasons (photograph labs, for instance), can be excluded from the requirements of this credit. The guidance for Daylight Illuminance has been clarified, and the requirement changed from 250 lux to "160 lux for 80% of the nominated hours"</p>
IEQ - 5	Thermal Comfort	●	<p>Up to three points are now awarded in this credit.</p> <p>The first point addresses the thermal comfort levels on the industrial space, through the acceptability limits index. The second point addresses the thermal comfort of the occupied space using either the acceptability limits index, or the PMV scale.</p> <p>The third point addresses the individual comfort control requirements in the Occupied Space. This point is additional to achieving either of the first two. The guidance has been clarified with regards to occupancy. It rewards the inclusion of controls at set intervals (where the final fitout design is unknown), or per workstation (where known).</p> <p>The second and third points are not applicable where the non-industrial occupied space is less than 2.5% of the nominated area of the GLA up to 500m<sup>2</sup>, or where there is no non-industrial occupied space.</p>
IEQ - 6	Hazardous Materials	●	<p>As per Green Star - Industrial PILOT</p>
IEQ - 7	Internal Noise Levels	●	<p>Credit addresses the noise levels in all spaces, as well as the acoustic privacy found within the non-industrial spaces.</p> <p>One point is available for the design of areas that have noise levels between 'satisfactory' plus three and satisfactory minus three. The reverberation time must meet the requirements as laid out in the standard. These must be measured in accordance with AS/NZS 2107:2000.</p> <p>One additional point is available for providing noise insulation between acoustically sensitive rooms and other spaces. This additional point is not applicable where the non-industrial occupied space is less than 2.5% of the nominated area of the GLA up to 500m<sup>2</sup>, or where there is no non-industrial occupied space.</p>
IEQ - 8	Volatile Organic Compounds	●	<p>Credit has been revised for clarity.</p>
IEQ - 9	Formaldehyde Minimisation	●	<p>Credit has been revised for clarity.</p>
IEQ - 10	Mould Prevention	●	<p>Credit has been removed. The credit 'Air Distribution Systems' addresses the same concerns and is more suitable to industrial facilities.</p>
IEQ - 11	Daylight Glare Control	●	<p>Requirement for blinds to be automatic has been removed. Manually operated blinds now acceptable.</p> <p>Shading devices are only required to block 95% of all direct sun for 80% of the nominated area.</p> <p>The specific criteria for translucent sheet installation has been removed. It has been clarified within the credit that shading must be provided for all viewing facades. This includes skylights, and translucent sheeting, and perforated sheeting in facades.</p>









General		Update Outcome	Summary of Change
IEQ - 12	High Frequency Ballasts	●	Credit has been removed from the tool - the requirements have been added to IEQ-13 'Electric Lighting Levels'
IEQ - 13	Electric Lighting Levels	●	<p>Credit has been revised. Benchmarks no longer point to a specific lux level, rather projects are required to show that lux levels are not more than 25% above the relevant value as stated in the appropriate standard.</p> <p>It is also a requirement that all lighting installed in the project is flicker free.</p> <p>Guidance has been added to address spaces where no lighting has been installed, and where the lighting has been modified by a tenant. Spaces without lighting cannot achieve this credit. Where a tenant has modified the space, this space must be assessed as finished at the time of practical completion.</p>
IEQ - 14	External Views	●	No change from current credit
IEQ - 15	Individual Thermal Comfort Control	●	Credit has been removed from the tool - the requirements have been added to IEQ-5 'Thermal Comfort'
IEQ - 16	Exhaust Riser	●	Credit has been removed from the tool
IEQ - 17	Air Distribution System	●	New Credit adopted from the Green Star - Healthcare v1 rating tool.
IEQ - 18	<b>Credit not applicable to this tool.</b>		
IEQ - 19	Breakout Space	●	<p>Credit criteria changed to allow the location of breakout spaces be either indoor or outdoor. Performance criteria for each type of space has been created.</p> <p>A breakout space can be fully internal, or fully external, provided that the credit criteria has been met. The area required for a breakout space has been defined as either 1% of the GLA, or 2 meters per person when the occupancy is known. The minimum size of a breakout space is 40m<sup>2</sup>.</p> <p>Breakout spaces no longer have to be naturally ventilated. The daylight requirements have been lowered to 30% of the space minimum at 2.0% Daylight Factor. There is no longer a 100m distance requirement from pollution and noise sources; performance criteria has been introduced for both instead.</p>
IEQ - 20	<b>Credit not applicable to this tool.</b>		
IEQ - 21	<b>Credit not applicable to this tool.</b>		
IEQ - 22	<b>Credit not applicable to this tool.</b>		
IEQ - 23	Small Occupied Spaces	●	<p>A new credit was created to appropriately address the impacts of small non-industrial occupied spaces found on industrial facilities. This credit rewards up to two points for achieving a number of environmental initiatives. These initiatives are:</p> <ul style="list-style-type: none"> <li>- IEQ-1 'Ventilation Rates' (minimum 1 point)</li> <li>- IEQ-3 'Carbon Dioxide Monitoring and Control'</li> <li>- IEQ-16 'Tenant Exhaust Riser'</li> <li>- IEQ-5 'Thermal Comfort' (minimum 1 point)</li> <li>- IEQ-15 'Individual Comfort Control'</li> <li>- IEQ-16 'External Views' (80% must comply with the criteria)</li> </ul>
<b>ENERGY</b>			

General		Update Outcome	Summary of Change
General			<p>There have been two major changes to the Energy Category.</p> <p>1) The methodology used in Ene-Con and Ene-1, to assess the building's reduction in greenhouse gas emissions compared to standard practice, has been replaced with the new Greenhouse Gas Emissions methodology. This new Greenhouse Gas Emissions methodology was first introduced in Green Star – Healthcare v1 and has been adapted to suit the industrial sector. This methodology requires two buildings to be modelled: the Proposed Building and a Standard Practice Building (predominantly based on the BCA Section J deemed-to-satisfy provisions). The improvement in greenhouse gas emissions between the Standard Practice building and the Proposed building is calculated by the Greenhouse Gas Emissions Calculator. The modelling methodology is described in the Green Star – Industrial v1 Greenhouse Gas Emissions Calculator guide.</p> <p>2) Three credits from the PILOT tool have been merged into Ene-1: Greenhouse Gas Emissions:  1) Ene-4: Zoning;  2) Ene-6: Car Park Ventilation; and  3) Ene-10: Precinct Energy Systems.  The energy/greenhouse gas emissions savings initiatives which were rewarded in these credits</p>
Ene- Con	Energy Conditional Requirement		<p>To meet the Conditional Requirement, it must be shown that the predicted greenhouse gas emissions of the Proposed Building are 10% lower than those predicted for the Standard Practice Building. The PILOT methodology to assess greenhouse gas emissions has been replaced with the methodology described above.</p> <p>Further details can be found in the Green Star - Industrial v1 Greenhouse Gas Emissions Calculator Guide.</p>
Ene - 1	Greenhouse Gas Emissions		<p>While the point distribution remains the same as in the PILOT. The PILOT methodology to assess greenhouse gas emissions methodology has been replaced as described above.</p> <p>Further details can be found in the Green Star - Industrial v1 Greenhouse Gas Emissions Calculator Guide.</p>
Ene - 2	Energy Sub-metering		<p><b>This credit has been moved to the Management Category.</b>  The benefits of Energy Sub-Metering is now rewarded in Man-16: Metering.</p>
Ene - 3	Peak Energy Demand Reduction		<p>Minor revisions to credit - applicable technical clarifications and Credit Interpretation Request for rulings have been included into the wording of the credit.  Please refer to the ongoing stakeholder engagement process for review of this credit for all Green Star tools. Latest updates on the progress of this review are available form <a href="http://www.gbca.org.au">www.gbca.org.au</a></p>
Ene - 4	Lighting Zoning		<p><b>This credit has been merged into Ene-1.</b>  Lighting zoning coupled with automatic lighting controls is now rewarded in the Ene-1: Greenhouse Gas Emissions credit.</p>
Ene - 5	Credit not applicable to this tool.		
Ene - 6	Car Park Ventilation		<p><b>This credit has been merged into Ene-1.</b>  The new Ene-1 Greenhouse Gas Emissions credit methodology rewards energy efficient car park ventilation strategies, including the installation of CO monitoring and Variable Speed Drive fans .</p>
Ene - 7	Credit not applicable to this tool.		
Ene - 8	Credit not applicable to this tool.		
Ene - 9	Credit not applicable to this tool.		
Ene - 10	Precinct Energy Systems		<p><b>This credit has been merged into Ene-1.</b>  The installation of a shared/precinct wide energy system that results in savings in energy and/or greenhouse gas emissions for the building, will be rewarded Ene-1: Greenhouse Gas Emissions. If the project team believes that a particular system results in reduced environmental impacts which are not rewarded in the Green Star - Industrial v1 tool, they should apply for Innovation Points.</p>
TRANSPORT			

General		Update Outcome	Summary of Change
Tra - 1	Provision of Car Parking	●	It is clarified how compliance can be demonstrated where no mandatory parking requirements exist. Parking spaces for heavy vehicles and vehicles associated with the industrial activity in the building can now be excluded from the number of car parking spaces.
Tra - 2	Fuel-Efficient Transport	●	Car parking spaces for hybrid vehicles can no longer be utilised to meet the credit criteria. The environmental preference of these types of cars in comparison with other fuel efficient vehicles was deemed unclear. Car parking spaces for car pooling can no longer be utilised to meet the credit criteria, as enforcing such parking regulation was deemed unfeasible. The requirement for minimum 10 car parking spaces for fuel efficient vehicles has been removed. The new requirement is for 10% of spaces rounded up (to the nearest whole space) to be for fuel efficient vehicles. Credit reworded to provide more clarity, further guidance and additional definitions in line with wording of the Australian Standard. Parking spaces for heavy vehicles and vehicles associated with the industrial activity in the building, can be excluded from the number of car parking spaces.
Tra - 3	Cyclist Facilities	●	Change from 3 points available to 2 points, the additional point for Visitors bicycle parking has been removed. To represent best practice, the criteria has changed to be a fixed number (5) visitor bicycle racks for all developments included in the basic criteria, rather than being based on building area. New requirement for a continuous bicycle path from the entrance of the site to the bicycle storage facility has been included. Included mechanism to base the number of bicycle facilities required on actual occupancy, if known. If it is not known, it will be based on a default occupancy value.
Tra - 4	Commuting Mass-Transport	●	The benchmarks required for points to be awarded now depend on the population density of the building's location. The higher the population density the more transport services and are required. Population density data from the Australian Bureau of Statistics (ABS) is used to determine the score required to achieve points, data for each postcode in Australia is embedded in the Calculator. A Transport Calculator Guide has been developed, further details on how the benchmarks are calculated is provided in this guide. The credit has been reworded for consistency with Commuting Mass Transport Calculator Guide terminology and for increased clarity. A new method to demonstrate compliance is included, it reduces the amount of documentation required.
Tra - 5	Trip Reduction Mixed-Use	●	Benchmarks has been reduced to represent best practice for Industrial facilities, the benchmarks in the PILOT tool were deemed unachievable for industrial buildings. Worked example included in Additional Guidance of the credit.
Tra - 6	<b>Credit not applicable to this tool.</b>		
Tra - 7	Cargo Transport Facilities	●	Credit removed from rating tool. The environmental benefit of the credit was unclear and the proposed credit was very linked to the industrial activity in the building, e.g. if the industrial activity that was to take place in the building required rail cargo transport, a site will be chosen with rail cargo transport facility. It was deemed unlikely that industrial transport solutions would be changed based on points awarded in a Green Star tool.
<b>WATER</b>			
Wat - 1	Occupant Amenity Water	●	The points specifically rewarding water savings in precinct developments have been removed, savings from such initiative can be rewarded in the Calculator. Function to enter Maximum Design Occupancy if known, if not the default will be used. Water efficiency benchmarks disclosed in the calculator for transparency Calculator formatted for improved user interface and guidance notes added A Potable Water Calculator Guide has been developed, where instructions for how to use the calculator is included as well as all benchmarks and assumptions disclosed.
Wat - 2	Water Meters	●	<b>This credit has been moved to the Management Category.</b> It is included as part of Man-16 Metering.
Wat - 3	Landscape Irrigation	●	As per Green Star - Industrial PILOT

General		Update Outcome	Summary of Change
Wat - 4	Heat Rejection Water		As per Green Star - Industrial PILOT
Wat - 5	Fire System Water		Points are awarded if the fire system does not expel water for testing Maximum area for drain-down shut off points has been defined; this requirement was previously based on a floor by floor basis, many industrial buildings are single story with large floor area.
<b>MATERIALS</b>			
Mat - 1	Recycling Waste Storage		Specific size requirement based on Green Star - Office Design credit applied to recycling storage space for waste arising from occupied areas. minimum recycling storage space provisions applied to recycling storage space for waste arising from process areas.  The two points that specifically rewarded recycling waste storage on a precinct wide scale have been removed as this approach can be used to satisfy the requirements of the credit without the need to specifically address this in the credit criteria.
Mat - 2	Building Reuse		A possibility to achieve one or two points for re-use of façade rather than just two or nil points has been introduced. A Possibility for achieving 1 point for reuse of 15% of structure also introduced
Mat - 3	Recycled Content & Re-used Products & Materials		As per Green Star - Industrial PILOT
Mat - 4	Concrete	NA	This credit is under Expert Reference Panel review. The existing credit was included in the Green Star - Industrial v1 tool. The revised credit is expected in June 2010 and will supersede this credit in all Green Star rating tools.
Mat - 5	Steel		The revised Steel Credit has been included in the tool in place of the old Steel Credit. See the GBCA website for detail of the Steel credit review.
Mat - 6	PVC		The revised PVC Credit has been included in the tool in place of the old PVC Minimisation Credit. See the GBCA website for detail of the PVC Minimisation credit review.
Mat - 7	Timber		The revised Timber Credit has been included in the tool in place of the old Sustainable Timber Credit. See the GBCA website for detail of the Sustainable Timber credit review.
Mat - 8	<b>Credit not applicable to this tool.</b>		
Mat - 8	Dematerialisation		The requirements for finishes and ductwork under this credit have been made not applicable when occupied space is <5% of GFA.
Mat - 10	Shell & Core or Integrated Fitout		Credit has been removed from the tool - not an integrated fitout tool.
<b>LAND USE &amp; ECOLOGY</b>			

General		Update Outcome	Summary of Change
Eco - Con	Conditional Requirement	●	<p>The new Eco-Conditional Requirement developed by an Ecology Expert Reference Panel in collaboration with the GBCA, has been included in this tool.</p> <p>Previously, the conditional requirement meant that land within 100m of any wetland was ineligible for a Green Star rating. Now land within 100m of a wetland is accepted if the wetland is not listed as being of high ecological value, and the following wetland protection measures are met:</p> <ul style="list-style-type: none"> <li>- A site-specific Wetland Management Plan has been produced, exhibited and implemented; and</li> <li>- A minimum of 2 points are achieved in the Emi-5 'Stormwater' credit, and all points are achieved in the Emi-7 'Light Pollution' credit.</li> </ul>
Eco - 1	Topsoil	●	<p>Definition of "topsoil" expanded.</p> <p>Guidance added as to what "inherently non-productive" topsoil is.</p> <p>Compliance requirements added to require a report by a soil technical or agronomist where credit is claimed as N/A because soil on site is claimed to be inherently non-productive.</p>
Eco - 2	Reuse of Land	●	<p>Added mines, landfills, quarries and brick pits to definition of 'previously developed land'.</p> <p>Definition of curtilage expanded and clarified.</p> <p>Language in credit criteria made consistent.</p>
Eco - 3	Reclaimed Contaminated Land	●	<p>Credit criteria updated fro OV2 to OV3 - Encapsulation option is now in Compliance Requirements rather than in credit criteria.</p> <p>Definitions expanded.</p> <p>NA option expanded to include building extensions as well as refurbishments.</p>
Eco - 4	Change of Ecological Value	●	<p>Ecological weightings in the calculator recalibrated to make attaining points achievable. This credit changed to reflect those changes.</p> <p>Green roofs added to the list of ecological land types and weighted highly to encourage uptake.</p> <p>Additional Guidance expanded to include definitions of ecological land types.</p>
<b>EMISSIONS</b>			
Emi - 1	Refrigerant ODP	●	<p>Credit Criteria expanded. All refrigerants now required to comply, not just those used in HVAC systems. This will capture cold/freezer rooms.</p>
Emi - 2	Refrigerant GWP	●	<p>Credit Criteria expanded. All refrigerants now required to comply, not just those used in HVAC systems. This will capture cold/freezer rooms.</p>
Emi - 3	Refrigerant Leaks	●	<p>Credit Criteria expanded. No of points available changed from 1 to 2. All refrigerants now required to comply, not just those used in HVAC systems. This will capture cold/freezer rooms.</p> <p>Credit scope has been expanded to include all refrigeration machinery. Small units with a cooling capacity of less than 50 kW each are excluded from the requirements of the credit.</p> <p>Credit now rewards an automated refrigerant recovery system activated by a leak detection system, with 2 points.</p> <p>Guidance on refrigerant leak detection systems and recovery systems has been provided</p>
Emi - 4	Insulant ODP	●	<p>Credit criteria expanded to capture acoustic insulants, not just thermal insulants.</p>

General		Update Outcome	Summary of Change
Emi - 5	Stormwater (formerly Watercourse Pollution)		<p>Name changed from 'Watercourse Pollution' to 'Stormwater' to more accurately reflect intent of credit.</p> <p>Complete review undertaken. Entire credit including credit criteria rewritten. Credit written to encourage projects to implement the principles of Water Sensitive Urban Design (WSUD). Environmental benefits of this approach are improvement of the urban landscape through installation of biological treatment systems such as wetlands, retention ponds etc; reducing pollutant export to receiving waters; retarding stormwater flows, and reducing landscape irrigation requirements. Aim of credit changed to reflect this approach.</p> <p>Credit now requires that stormwater flows be reused or treated. 1, 2 or 3 points are awarded based on the level of stormwater used on site and/or level of pollutants removed from discharge. Additional point for installing a riparian buffer zone removed. Water calculator amended to accept input of stormwater used on site.</p> <p>Compliance requirements written to accept results of modelling programs such as MUSIC (Model for Urban Stormwater Improvement Conceptualisation), as well as manual calculation m</p>
Emi - 6	Discharge to Sewer		Additional Guidance added covering situations where the consent authority can not provide approval or preliminary approval of a blackwater treatment system.
Emi - 7	Light Pollution		<p>New credit criteria developed for Green Star - Healthcare adopted. Credit criteria now require that no external luminaire has an upward light output ratio of more than 5%.</p> <p>Added criteria to enable project teams to show compliance by submitting the output from commonly used modelling programs.</p> <p>All references to AS1158 removed.</p>
Emi - 8	Legionella		Scope of the credit expanded to address Legionella causes in water based heat rejection systems. Previously the credit penalised all water based heat rejection systems.
Emi - 9	<b>Credit not applicable to this tool.</b>		
Emi - 10	Noise Pollution		<p>Complete review undertaken. Entire credit including credit criteria rewritten. Criteria now allows two routes to compliance:</p> <p>1) The contribution from all significant noise sources, including adjustments, is less than the ambient background noise level minus 10dB; OR</p> <p>2) The contribution from all significant noise sources, including adjustments, is less than 35dBLAeq during the day, and less than 30dBLAeq at other times.</p> <p>Credit addresses building attributes such as site selection and noise attenuation features, using estimates of process noise as a basis to determine how the credit criteria will be achieved. The credit does not address or attempt to influence the levels of process noise (operational).</p> <p>Default values have been incorporated that allow an acoustic consultant to model the noise generated from the development when the use of the development is unknown. These values are conservative and do result in a high level of noise that a development would need to respond to.</p> <p>Formerly Emi-11. Number changed for consistency with credits in other tools.</p>
<b>INNOVATION</b>			
Inn - 1	Innovative Strategies and Technologies		As per Green Star - Industrial PILOT.
Inn - 2	Exceeding Green Star Benchmarks		As per Green Star - Industrial PILOT.
Inn - 3	Environmental Design Initiatives		As per Green Star - Industrial PILOT.