













GREEN STAR – EDUCATION DESIGN & GREEN STAR – EDUCATION AS BUILT v1















As the Green Star – Education PILOT rating tool moves into version 1, many questions have been asked by different sectors of the industry regarding the changes to particular credits and categories and whether they are now easier or harder to achieve.

In an attempt to make version 1 of this tool as transparent and easy-to-use as possible, the following “traffic light system” is provided. It sets out how each credit has changed and whether it is now easier, about the same, or harder to achieve, bearing in mind that the standards across the industry overall are improving. Where clarifications have been made following feedback from the PILOT, these have also been detailed.

KEY

	Benchmark higher than PILOT in line with feedback, the Education Technical Working Group (TWG) and Green Star – Office v3, or significant revision made.	Summary: <ul style="list-style-type: none"> • Technical manuals have been produced in line with the format adopted for Green Star – Office v3. • Documentation requirements have been aligned with Green Star – Office v3. • Calculators and associated guides have been amended in line with learning outcomes from PILOT projects and public feedback. • Credit numbering has been aligned across the Office, Education and Retail Centre tools, so the same number will be applicable to the same credit across all three released rating tools. • Benchmarks and compliance requirements for Green Star – Office v3 have been adopted where appropriate, i.e. where no justification exists for building type specific differences.
	Clarification or change of wording/criteria/requirements.	
	As PILOT, or with minor clarifications/additional options.	

Credit No.	Credit Name	Update Outcome	Notes on Update
MANAGEMENT			
Man - 1	Green Star Accredited Professional		Benchmark as PILOT. Alignment with Green Star – Office v3.
Man - 2	Commissioning Clauses		Benchmark as PILOT. Alignment with Green Star – Office v3 with clarifications that training need not be in the specifications, but rather a commitment be provided that this happens.
Man - 3	Building Tuning		Scope of the credit expanded as Green Star – Office v3 to ensure that the aims of the credit are being met.
Man - 4	Independent Commissioning Agent		Scope of the credit expanded as Green Star – Office v3 to ensure that the aims of the credit are being met. For Primary and Secondary schools, an option has been provided for the Independent Commissioning Agent to be replaced by an in-house Facilities Manager (FM) with suitable experience to provide commissioning advice to the project team from the beginning of schematic design. If there is no in-house FM, the project must adhere to Green Star – Office v3 credit requirements.
Man - 5	Building Guides		Scope of the credit expanded as Green Star – Office v3 to require monitoring and targeting for water, waste and indoor environment quality in addition to energy. Credit increased to two points: One point for Building Users Guide and one point for Building Maintenance Guide. Draft Building Guides accepted to demonstrate compliance for Design rating, an actual copy of the Guide is required for an As Built rating.
Man - 6	Environmental Management		As PILOT.
Man - 7	Waste Management		Alternate methods of demonstrating compliance provided as Green Star – Office v3.
Man - 8	Credit not applicable to this tool.	—	
Man - 9	Credit not applicable to this tool.	—	
Man - 10	Learning Resource		Clarifications made throughout in light of the PILOT experience, no change in benchmark.
Man - 11	Maintainability		Clarifications made throughout in light of the PILOT experience, no change in benchmark.

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INDOOR ENVIRONMENTAL QUALITY			
IEQ - 1	Ventilation Rates		PILOT tool required 90% of nominated area to comply for the PILOTs inline with Green Star – Office v2, this has been updated to 95% in line with Green Star – Office v3. Credit Criteria clarified as Green Star – Office v3 for differently serviced buildings (i.e. naturally ventilated vs. mechanically ventilated).
IEQ - 2	Air Change Effectiveness		PILOT tool required 90% of nominated area to comply for the PILOTs inline with Green Star – Office v2, this has been updated to 95% in line with Green Star – Office v3. Credit Criteria clarified as Green Star – Office v3 for differently serviced buildings (i.e. naturally ventilated vs. mechanically ventilated). Green Star – Office v3 deemed-to-satisfy approach adopted for BCA Class 5 office space within education facilities.
IEQ - 3	Carbon Dioxide Monitoring & Control and VOC Monitoring		Figures included for alarm threshold for volatile organic compounds monitoring. Credit Criteria clarified as Green Star – Office v3 for differently serviced buildings (i.e. naturally ventilated vs. mechanically ventilated).
IEQ - 4	Daylight		Additional point is N/A for universities. Clarifications made throughout in light of the PILOT experience, no change in benchmark. Alternate methods of demonstrating compliance provided, as Green Star – Office v3.
IEQ - 5	Thermal Comfort		Individual thermal comfort control is for every four stations in classrooms as well as office space. Acceptability limits for naturally ventilated spaces have been introduced. Credit Criteria clarified for differently serviced buildings (i.e. naturally ventilated vs. mechanically ventilated), as Green Star – Office v3. Alternate methods of demonstrating compliance for naturally ventilated buildings provided.
IEQ - 6	Hazardous Materials		Scope of the credit expanded to address other hazardous materials – lead and PCBs. Following research, the following clarification has been provided: A Hazardous Materials Survey for buildings completed in 2005 or later is only required to address Lead paint; it does not have to address Asbestos or Polychlorinated Biphenyls (PCBs).
IEQ - 7	Internal Noise Levels		Units updated for sound reduction index in line with BCA changes. Tightened criteria to ensure that the aims of the credit are being met, as Green Star – Office v3.
IEQ - 8	Volatile Organic Compounds		Additional guidance has been included from the recent Green Star – Interiors v1.1 review in relation to tenancy fit out items. As Green Star – Office v3, scope of the credit expanded to address all flooring, not just carpet. Reduced benchmark for paints and sealants/adhesives.
IEQ - 9	Formaldehyde Minimisation		As PILOT.
IEQ - 10	Mould Prevention		Credit Criteria clarified as Green Star – Office v3 for differently serviced buildings (i.e. naturally ventilated vs. mechanically ventilated).
IEQ - 11	Daylight Glare Control		As PILOT.
IEQ - 12	High Frequency Ballasts		As PILOT.
IEQ - 13	Electric Lighting Levels		As PILOT.
IEQ - 14	External Views		As PILOT, with gymnasiums excluded from the Credit Criteria.

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ENERGY			
Ene	Conditional Requirement	●	Clarifications made to the benchmark in respect to lift energy and daylight dimming of lighting.
Ene - 1	Greenhouse Gas Emissions	●	TWG agreed to increase the number of points available to 20, with the full 20 points available for base build Zero Net Operating Emissions, aligning with Green Star – Office v3. Incremental steps in improvements are relative to the Education Standard Practice benchmark.
Ene - 2	Energy Sub-metering	●	Name change from Electrical Sub-metering to Energy Sub-metering and it has been clarified that an effective mechanism for monitoring energy consumption must be present in line with Green Star – Office v3.
Ene - 3	Peak Energy Demand Reduction	●	Any energy generation systems used to comply with this credit must be included within the Green Star – Education Energy Calculator for the Ene-Conditional Requirement and Ene-1 credit. System viability has been defined for passive design technologies to achieve flatter electrical demand curve. Benchmark is now incremental with a lower threshold to achieve the first point as Green Star – Office v3. <i>Alternative compliance option provided for naturally ventilated buildings.</i>
Ene - 4	Lighting Zoning	●	As PILOT.
Ene - 5	Credit not applicable to this tool.	—	
Ene - 6	Car Park Ventilation	—	Now addressed within the Green Star – Education v1 Energy Calculator.
Ene - 7	Unoccupied Areas	●	Specified requirement for air-conditioning to be designed to allow a wider temperature control band when not in use, a minimum of 2 degrees Celsius (°C) in each direction is required (e.g. if the band allowed for an occupied room is 20-24°C then the band for an unoccupied must be 18-26°C). Raised to two points: One point for 60% of the UFA made of total space types; two points 90%.
Ene - 8	Stairs	●	As PILOT.
Ene - 9	Efficient External Lighting	●	As PILOT, with an exemption introduced for emergency lighting.
Ene - 10	Centralised Energy Systems	●	As PILOT but expanded to reward a wider range of energy system initiatives, not just reticulated chilled water.
TRANSPORT			
Tra - 1	Provision Car Parking	●	As PILOT.
Tra - 2	Fuel-Efficient Transport	●	As PILOT.
Tra - 3	Cyclist Facilities	●	As PILOT.
Tra - 4	Commuting Mass Transport	●	Easier to demonstrate compliance if located adjacent to major transport hubs as Green Star – Office v3, benchmarks remain the same. Weightings have been revised to make trains equal to buses (bus use is a more common means of public transport for education buildings).
Tra - 5	Credit not applicable to this tool.	—	
Tra - 6	Transport Design and Planning	●	A travel plan requirement has been incorporated into the credit based on feedback and the approval by the TWG. Credit re-named from Pedestrian Routes to Transport Design and Planning to reflect the inclusion of a travel plan.

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WATER			
Wat - 1	Occupant Amenity Water	●	Rise in benchmark to ensure the aims of the credit are being met and to encourage water re-use/recycling as Green Star – Office v3. Total number of points available remain the same, however, the maximum number of points that can be achieved without water re-use/recycling has been reduced.
Wat - 2	Water Meter	●	Introduced fire test water to the list of items requiring metering. Rise in benchmark in line with industry progress as Green Star – Office v3.
Wat - 3	Landscape Irrigation	●	Tightened criteria in line with Green Star – Office v3 to ensure that a measurable reduction in potable water consumption is achieved (benchmark unchanged). Expanded the scope to incorporate alternate compliance method.
Wat - 4	Heat Rejection Water	●	Criteria expanded to address all water-based heat rejection systems in the building, not just cooling towers, as Green Star – Office v3. Significant clarification to ensure buildings with different servicing strategies understand their options for compliance.
Wat - 5	Fire System Water	●	Criteria tightened as Green Star – Office v3 to ensure that the aims of the credit are being met.
Wat - 6	Potable Water Use in Laboratories	●	As PILOT with scope for the N/A changed from percentage UFA to percentage water use.
MATERIALS			
Mat - 1	Recycling Waste Storage	●	Specific size requirement replaced with expanded criteria for facilities being 'adequately sized'.
Mat - 2	Building Re-use	●	Combined from two separate credits (re-use of facade and re-use of structure) as Green Star – Office v3, points available remain the same. Criteria revised from addressing the re-used proportion of the new building, to addressing the proportion of the original building that was re-used.
Mat - 3	Recycled Content & Re-used Products and Materials	●	As PILOT.
Mat - 4	Concrete	●	Rise in benchmark in line with industry progress, as Green Star – Office v3.
Mat - 5	Steel	●	As PILOT.
Mat - 6	PVC Minimisation	●	As PILOT.
Mat - 7	Sustainable Timber	●	Compliance Requirements streamlined. Benchmark lowered to encourage industry uptake of the credit, as Green Star – Office v3.
Mat - 8	Design for Disassembly	—	NEW CREDIT included, as Green Star – Office v3: One point is awarded where the following are designed for disassembly, to "minimise embodied energy and resource loss during demolition": 50% of structural roofing and façade OR 95% of the total façade.
Mat - 10	Credit not applicable to this tool.	—	
Mat - 11	Flooring	●	As Green Star – Interiors v1.1. Specification documentation allowed for design rating, no change in benchmark.
Mat - 12	Joinery	●	As Green Star – Interiors v1.1. Specification documentation allowed for design rating, no change in benchmark.
Mat - 13	Loose Furniture	●	As Green Star – Interiors v1.1. Specification documentation allowed for design rating, no change in benchmark.

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LAND USE & ECOLOGY			
Eco	Ecological Value of Site: Conditional Requirement	●	Expanded the definition of land of high ecological value to include old growth forests as Green Star – Office v3.
Eco - 1	Topsoil	●	Rise in benchmark requiring protection of top soil, as Green Star – Office v3. Not applicable options expanded to include refurbishment projects and project where the topsoil on site is inherently non-productive.
Eco - 2	Re-use of Land	●	As PILOT.
Eco - 3	Reclaimed Contaminated Land	●	Alternate methods of demonstrating compliance as Green Star – Office v3, benchmarks remain the same.
Eco - 4	Ecological Value of Site	●	Tightened criteria to ensure that the aims of the credit are being met, as Green Star – Office v3.
EMISSIONS			
Emi - 1	Refrigerant ODP	●	This credit has been separated from Insulant ODP credit which had been combined into a general ODP credit. The overall impact is an additional one point available within the Emissions category. Rise in benchmark in line with industry progress as Green Star – Office v3.
Emi - 2	Refrigerant GWP	●	Benchmark is now incremental as Green Star – Office v3 with an additional point introduced to award partial replacement of refrigerant charge.
Emi - 3	Refrigerant Leaks	●	As PILOT.
Emi-4	Insulant ODP	●	This credit has been separated from Refrigerant ODP credit which had been combined into a general ODP credit. The overall impact is an additional one point available within the Emissions category.
Emi - 5	Watercourse Pollution	●	As Green Star – Office v3, where a site contains, or is immediately adjacent to, a waterway an additional point is available for creating a vegetated riparian buffer zones between the development and the watercourse. Increased number of points available.
Emi - 6	Discharge to Sewer	●	As Green Star – Office v3, where a blackwater system is being installed an additional point is available for a Blackwater Treatment Maintenance Plan. Increased number of points available.
Emi - 7	Light Pollution	●	General clarifications made to the Credit Criteria in addition to the criteria being tightened in line with Green Star – Office v3 to ensure that the aims of the credit are being met.
Emi - 8	Legionella	●	Scope of the credit expanded to address all water-based cooling systems, not just cooling towers, as Green Star – Office v3.
INNOVATION			
Inn - 1	Innovative Strategies and Technologies	●	Significant clarifications to the credit, benchmarks remain the same as Green Star – Office v3.
Inn - 2	Exceeding Green Star Benchmarks	●	Significant clarifications to the credit, benchmarks remain the same as Green Star – Office v3.
Inn - 3	Exceeding Green Star Scope	●	Significant clarifications to the credit, benchmarks remain the same as Green Star – Office v3.