

Green Star Design & As Built **Summary of Credit Changes**

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Introduction









This document provides an overview of the draft credits that are proposed for Green Star – Design & As Built. The sections of this document list the draft credits that are included in each category; whether the credits are based on credits in existing Green Star rating tools or are new topics; and a description of changes and updates that are proposed.

The credit codes used in this document refer to the Green Star – Public Building v1 rating tool unless noted other wise.

Key

Credit Status	
	New Credit
	Updated Credit
	Major Changes to Credit

Management

Credit	Credit Status	Summary of Changes
Green Star Accredited Professional		<ul style="list-style-type: none"> Minor change to the role definition for Green Star Accredited Professionals (GSAP). Added requirement for GSAP to deliver workshop to project team.
Commissioning and Tuning		<ul style="list-style-type: none"> This credit has been updated to incorporate issues from the following credits: Man-2 Commissioning, Man-3 Building Tuning, Man-4 Independent Commissioning Agent and Man-11 Maintainability.
Building Information		<ul style="list-style-type: none"> This credit has been changed to incorporate issues from the following credits: Man-5 Building Users Guide and Man-10 Learning Resource.
Construction Environmental Management		<ul style="list-style-type: none"> This credit has been updated to incorporate issues from the following credits: Man-6 Environmental Management System, Man-12 Construction Indoor Air Quality Plan (Green Star – Healthcare v1) and Man-7 Waste Management.
Commitment to Performance		<ul style="list-style-type: none"> This credit has been changed to incorporate issues from Man-13 Sustainable Procurement Guide (Green Star – Healthcare v1). The credit also introduces criteria for commitment to building performance and a commitment to performance reporting.
Operational Waste		<ul style="list-style-type: none"> Mat-1 'Recycling Waste Storage' has been moved from the Materials category to the Management category, as it is a process based credit rather than dealing directly with material impacts. The updated credit addresses future operational practices rather than building attributes.
Metering and Monitoring		<ul style="list-style-type: none"> This credit has been updated to incorporate issues from: Man-9 Building Management and Control Systems and Man-16 Metering.
Adaptation and Resilience		<ul style="list-style-type: none"> A new credit that rewards building solutions that address the impact of extreme weather events and implementation of design solutions that address these impacts.


Indoor Environment Quality

Credit	Credit Status	Summary of Changes
Quality of Internal Air	●	<ul style="list-style-type: none"> This credit has been updated to incorporate issues from: the following credits: IEQ-1 Ventilation Rates, IEQ-2 Air Change Effectiveness, IEQ-3 Indoor Pollutants Monitoring and Control, IEQ-17 Air Distribution System, IEQ-17 Exhaust Riser, IEQ-21 Dwelling Ventilation (Green Star – Multi Unit Residential v1) and IEQ-22 Natural Ventilation (Green Star – Multi Unit Residential v1). The credit criteria for air distribution/air change effectiveness have been deleted. The credit has also been updated with new benchmarks, definitions and standards and includes a Deemed to Satisfy pathway to demonstrate credit compliance.
Thermal Comfort	●	<ul style="list-style-type: none"> The updated credit incorporates the existing credits IEQ-5 Thermal Comfort and IEQ-15 Individual Thermal Comfort Control (Green Star – Healthcare v1). The credit has also been updated with new benchmarks, definitions and standards. The credit has also been updated with modelling requirements to allow shell and core areas to be included in the thermal model. The credit also includes a new Deemed to Satisfy pathway to demonstrate credit compliance
Lighting Comfort	●	<ul style="list-style-type: none"> This updated credit incorporates the existing credits IEQ-4 Daylight, IEQ-11 Daylight Glare Control and IEQ-16 External Views. This credit has been revised to account for updated lighting standards and practices. This includes issues of lighting levels, glare and surface illuminance. It also recognises that some spaces may not be fitted out, and provides an option for shell and core areas to demonstrate a commitment to achieving credit compliance by an owner / tenant agreement.
Acoustic Comfort	●	<ul style="list-style-type: none"> This credit is an update to IEQ-7 Internal Noise Levels This credit has been revised to account for updated acoustic standards and practices.
Hazardous Materials	●	<ul style="list-style-type: none"> This credit has been revised to account for updated practices around identifying hazardous material sources and encapsulation options where relevant.
Visual Comfort	●	<ul style="list-style-type: none"> This credit has been updated to incorporate issues from the following credits: IEQ-4 Daylight, IEQ-11 Daylight Glare Control and IEQ-14 External Views. The benchmarks have been streamlined to better reward those projects that go above typical practice, and recognise those who significantly exceed typical practice with an innovation point. The credit has also been updated with regards to the definition of view, in the 'Access to Views' criteria.
Reduced Exposure to Pollutants	●	<ul style="list-style-type: none"> This credit has been updated to incorporate issues from the following credits: IEQ-8 Volatile Organic Compounds (VOC) and IEQ-9 Formaldehyde Minimisation. The credit provides a number of pathways for demonstrating compliance, including a whole of VOC content.


Energy

Credit	Credit Status	Summary of Changes
Greenhouse Gas Emissions	●	<ul style="list-style-type: none"> • This credit has been changed to incorporate issues from the following credits: Ene-Conditional Requirement, Ene-1 Greenhouse Gas Emissions, Ene-4 Lighting Zoning (Green Star – Office v3), Ene-5 Lighting Power Density (Green Star – Office v3), Ene-6 Car Park Ventilation (Green Star – Healthcare v1), Ene-7 Unoccupied Areas (Green Star – Multi Unit Residential v1) Ene-9 Efficient External Lighting (Green Star – Healthcare v1) and Ene-10 Shared Energy Systems (Green Star – Education v1), • Two compliance paths are now available to project teams to demonstrate reduction in greenhouse gas emissions. <ul style="list-style-type: none"> – Deemed to satisfy: Which provides a limited number of points through simple deemed-to-satisfy criteria. – Modelled Performance pathway: Which allows project teams to model their proposed design and compare it against a benchmark building, or a recognised baseline. This pathway provides an additional incentive for the installation of renewable energy sources. Full points are only available for this approach. • <i>New Building Energy Consumption and Greenhouse Gas Emissions Calculation Guideline</i> have been produced for the updated credit. • <i>Shared Services and Low-Carbon Energy Supply Guidelines</i> have been produced to address how these issues should be included in demonstrating credit compliance. • Extra point incentives have been included for the installation and use of renewable energy sources.
Peak Electricity Demand Reduction	●	<ul style="list-style-type: none"> • This updated credit is based on the existing Ene-3 Peak Energy Demand Reduction credit. • Two compliance paths are now available to project teams to demonstrate a reduction in the peak electricity demand (PED) when compared to a reference building. <ul style="list-style-type: none"> – Deemed to satisfy: Which provides a reduced number of points where the PED reduction is demonstrated through simple deemed-to-satisfy criteria – Performance pathway: Full points are available where projects demonstrate a reduction in PED by energy modelling.

Transport

Credit	Credit Status	Summary of Changes
Sustainability Impacts from Transport		<ul style="list-style-type: none"> • A new credit which rewards projects for implementing design and operational measures to reduce the impacts from transport to and from the building, compared to a benchmark building. It incorporates issues from Tra-1 Provision of Car Parking, Tra-2 Fuel-Efficient Transport, Tra-3 Cyclist Facilities, Tra-4 Commuting Mass-Transport, Tra-5 Trip Reduction Mixed-Use (Green Star – Retail Centre v1) and Tra-6 Transport Design, Planning and Information. • Two paths are provided to project teams to demonstrate compliance: <ul style="list-style-type: none"> – Deemed to Satisfy: this approach rewards reduced car parking requirements, improved cyclist facilities, provision of car sharing, walkability, and access by public transport. Full points are only available through the modelled performance approach. – Modelled Performance: this approach compares transport impacts from traffic and increased use of active modes of transport. • An improved transport calculator (Access by Public Transport) has been developed for this credit.

Water

Credit	Credit Status	Summary of Changes
Potable Water		<ul style="list-style-type: none"> • This credit has been changed to incorporate issues from the following credits: Wat-1 Occupant Amenity Water, Wat-3 Landscape Irrigation, Wat-4 Heat Rejection Water, and Wat-5 Fire System Water. • Two paths are provided to project teams to demonstrate compliance: <ul style="list-style-type: none"> – Deemed to Satisfy: this approach rewards the installation of energy saving fixtures and fittings, rainwater reuse, waterless heat rejection, water-efficient landscape irrigation and water-saving fire system testing procedures. – Modelled Performance (Water Balance Calculation): this approach rewards projects that demonstrate a reduction in use of potable water when compared with a standard practice building be a holistic water balance calculation.

Materials

* Within the updated Materials category, there are two pathways to demonstrate a reduction in impacts from the use of materials. Projects can target maximum points via the modelled pathway, or target a reduced number of points via the two deemed to satisfy (DTS) credits, *Steel Sourcing and Use* and *Concrete Sourcing and Use*.

Credit	Credit Status	Summary of Changes
Reduction of Construction and Demolition waste	●	<ul style="list-style-type: none"> A new credit which incorporates issues from the following credits: Man-7 Waste Management, Mat-10 Shell and Core or Integrated Fitout and Mat-2 Building Re-use. This credit has been modified to offer two pathways to compliance: <ul style="list-style-type: none"> Mass of waste to landfill is below a bench mark, Percentage of the total waste that has been diverted from landfill and percentage of existing structure or façade that have been retained.
Material Life Cycle Impacts (Modelled Pathway)	●	<ul style="list-style-type: none"> A new credit which incorporates issues from the following credits: Mat-4 Concrete, Mat-5 Steel, Mat-8 Design for Disassembly, Mat-9 Dematerialisation, Mat-2 Building Re-use and Mat-3 Recycled Content & Re-used Products & Materials. The credit requires the use of LCA to demonstrate reduced impacts against a benchmark to be performed for the projects to inform the eventual design of the building. Full points are only available for this pathway If projects target this credit, they cannot claim points for Steel Sourcing and Use or Concrete Sourcing and Use
Steel Sourcing and Use (DTS Pathway)	●	<ul style="list-style-type: none"> This credit is an update of Mat-5 Steel. It can only be claimed by projects that do not target the Material Life Cycle Impacts credit. The credit has been restructured to be more easily understood. More options are available for demonstrating a reduction in steel use and criteria for high-strength reinforcing has been removed as this is now business as usual.
Concrete Sourcing and Use (DTS Pathway)	●	<ul style="list-style-type: none"> This credit is an update of Mat – 4 Concrete. It can only be claimed by projects that do not target the Material Life Cycle Impacts credit. The credit has been restructured to be more easily understood. The criteria and benchmarks are unchanged.
Responsible Sourcing of Construction Materials	●	<ul style="list-style-type: none"> A new credit which incorporates issues previously found in Mat-4 Concrete, Mat-5 Steel, and Mat-7 Timber. This credit recognises the use of building materials that have been sourced responsibly or have Chain of Custody certification. Concrete, Steel and Timber initiatives are included in this credit. This credit is limited to building materials only, products are addressed in 'Product Transparency and Sustainability'.

Credit	Credit Status	Summary of Changes
Product Transparency and Sustainability	●	<ul style="list-style-type: none"> • A new credit which incorporates issues previously found the following credits: Mat-11 Flooring, Mat-12 Assemblies, Mat-13 Furniture and Emi-7 Insulant ODP. • This credit recognises the specification of transparent, sustainable products used anywhere in the building including re-used and recycled products, EPDs and products that have been certified by an independent third party. • Where previous rating tools only rewarded a small subset of building products, this credit recognises that a portion of the building's cost is composed of products that meet the criteria. This means that products such as blinds, cabling, ducting, etc. can now contribute to a project's Green Star score.

Land Use & Ecology

Credit	Credit Status	Summary of Changes
Sustainable Sites	●	<ul style="list-style-type: none"> • A new credit which incorporates issues previously found in Eco- Conditional Requirements, Eco-1Topsoil, Eco -2-Reuse of Land and Eco-Reclaimed Contaminated Land credits. • There have been a number of changes to the conditional requirements of this credit following industry feedback including: <ul style="list-style-type: none"> – The exclusion of projects built or 'Prime Agricultural Land' requirement has been removed. – A requirement that the project does not impact on 'Matters of National Environmental Significance' has been added. – The definition of 'wetlands' has been expanded to include all natural water bodies. • Criteria relating to reclaimed and contaminated land now reward onsite best-practice soil remediation.
Ecological Value	●	<ul style="list-style-type: none"> • This credit is an update to credit Eco-4 Change in Ecological Value. A number of measures have been included to make the credit reward increases to a site's ecological value more fairly, including: <ul style="list-style-type: none"> – impacts to migratory species and threatened ecological communities are included – reduced number of ecological land types. • Updates to the calculator to improve point scoring. • This credit is deemed not applicable where less than 7.5% is vegetated at purchase.
Heat Island Reduction	●	<ul style="list-style-type: none"> • A new credit which rewards projects that reduce the impacts of heat island effects in the building's immediate area. This can be achieved by the choice of paint, cladding and roofing or by providing planted areas on the site.

Emissions

Credit	Credit Status	Summary of Changes
Stormwater	●	<ul style="list-style-type: none">This credit has been updated to combine criteria from following credits: Emi-5 Stormwater and Emi-6 Discharge to Sewer.
Light Pollution	●	<ul style="list-style-type: none">Updated credit based on Emi-7 Light Pollution. Minor amendments have been made to simplify the submission requirements.
Impacts from Refrigerants	●	<ul style="list-style-type: none">This is an updated credit based on the following credits: Emi-1 Refrigerant ODP, Emi-2 Refrigerant GWP and Emi-3 Refrigerant Leaks. The credit specifies that the ODP of refrigerants must be zero and the combined environmental impacts of the refrigerants must be less than the benchmark. There is a provision for a higher benchmark where leak detection systems are in place.
Microbial Control	●	<ul style="list-style-type: none">This credit is an update to Emi 8-Legionella.