

Technical Clarifications & CIR Rulings

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Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2			
CATEGORY	CREDIT		Technical Clarifications or CIR's
Management			
	Green Star Accredited Professional	Man-1	✓
	Commissioning - Clauses	Man-2	✓
	Commissioning – Building Tuning	Man-3	✓
	Commissioning – Commissioning	Man-4	✓
	Building Users Guide	Man-5	✓
	Environmental Management	Man-6	✓
	Waste Management	Man-7	✓
Indoor Environment Quality			
	Ventilation Rates	IEQ-1	✓
	Air Change Effectiveness	IEQ-2	✓
	Carbon Dioxide Monitoring & Control	IEQ-3	✓
	Daylight	IEQ-4	✓
	Daylight Glare Control	IEQ-5	✓
	High Frequency Ballasts	IEQ-6	✓
	Electric Lighting Levels	IEQ-7	✓
	External Views	IEQ-8	✓
	Thermal Comfort / Thermal Monitoring	IEQ-9	✓
	Individual Comfort Control	IEQ-10	✓
	Asbestos	IEQ-11	✓
	Internal Noise Levels	IEQ-12	✓
	Volatile Organic Compounds	IEQ-13	✓
	Formaldehyde Minimisation	IEQ-14	✓
	Mould Prevention	IEQ-15	✓
	Tenant Exhaust Riser	IEQ-16	✓
Energy			
	Energy Efficiency	Ene-1	✓
	Energy Improvements	Ene-2	✓
	Electrical Sub-metering	Ene-3	✓
	Tenancy Sub-metering	Ene-4	✓
	Office Lighting Power Density	Ene-5	✓
	Office Lighting Zoning	Ene-6	✓
	Peak Energy Demand Reduction	Ene-7	✓
Transport			
	Provision of Car Parking	Tra-1	✓
	Small Parking Spaces	Tra-2	✓
	Cyclist Facilities	Tra-3	✓
	Commuting Public Transport	Tra-4	✓
Water			
	Occupant Amenity Potable Water Efficiency / Potable Water Efficiency	Wat-1	✓
	Water meters	Wat-2	✓
	Landscape Irrigation Water Efficiency	Wat-3	✓
	Cooling Tower Water Consumption	Wat-4	✓
	Fire System Water Consumption	Wat-5	✓
Materials			
	Recycling Waste Storage	Mat-1	✓
	Re-use of Façade	Mat-2	✓
	Re-use of Structure	Mat-3	✓
	Shell and Core or Integrated Fitout	Mat-4	✓
	Recycled Content of Concrete	Mat-5	✓
	Recycled Content of Steel	Mat-6	✓
	PVC Minimisation	Mat-7	✓
	Sustainable Timber	Mat-8	✓
Land Use and Ecology			
	Ecological Value of Site	Eco-1	✓
	Re-use of Land	Eco-2	✓
	Reclaimed Contaminated Land	Eco-3	✓
	Change of Ecological Value	Eco-4	✓
	Topsoil and Fill Removal from Site	Eco-5	✓
Emissions			
	Refrigerant ODP	Emi-1	✓
	Refrigerant GWP	Emi-2	✓
	Refrigerant Leak Detection	Emi-3	✓
	Refrigerant Recovery	Emi-4	✓
	Watercourse Pollution	Emi-5	✓
	Reduced Flow to Sewer	Emi-6	✓
	Light Pollution	Emi-7	✓
	Cooling Towers	Emi-8	✓
	Insulant ODP	Emi-9	✓

Green Star – Office Interiors v1 & v1.1			
CATEGORY	CREDIT		Technical Clarifications or CIR's
Innovation			
	Innovative Strategies & Technologies	Inn-1	✓
	Exceeding Green Star Benchmarks	Inn-2	✓
	Environmental Design Initiatives	Inn-3	✓

Green Star – Office Interiors v1 & v1.1			
CATEGORY	CREDIT		Technical Clarifications or CIR's
Management			
	Green Star Accredited Professional	Man-1	✓
	Tenancy Fitout Commissioning	Man-2	✓
	Commissioning - Tenancy Fitout Tuning	Man-3	✓
	Tenant Guide	Man-4	✓
	Environmental Management	Man-5	✓
	Waste Management During Tenancy Fitout	Man-6	✓
Indoor Environment Quality			
	Ventilation Rates	IEQ-1	✓
	Carbon Dioxide Monitoring & Control	IEQ-2	✓
	Daylight	IEQ-3	✓
	Daylight Glare Control	IEQ-4	✓
	High Frequency Ballasts	IEQ-5	✓
	Electric Lighting Levels	IEQ-6	✓
	External Views	IEQ-7	✓
	Individual Comfort Control	IEQ-8	✓
	Asbestos	IEQ-9	✓
	Internal Noise Levels	IEQ-10	✓
	Volatile Organic Compounds	IEQ-11	✓
	Formaldehyde Minimisation	IEQ-12	✓
	Air Supply Ductwork	IEQ-13	✓
	Tenant Exhaust	IEQ-14	✓
	Indoor Plants	IEQ-15	✓
Energy			
	Energy Efficiency	Ene-1	✓
	Energy Improvements	Ene-2	✓
	Electrical Sub-metering	Ene-3	✓
	Office Lighting Zoning	Ene-4	✓
Transport			
	Public Transport	Tra-1	✓
	Car Parking	Tra-2	✓
	Cyclist Facilities	Tra-3	✓
Water			
	Potable Water Efficiency	Wat-1	✓
Materials			
	Workstations	Mat-1	✓
	Flooring	Mat-2	✓
	Walls and Partitions	Mat-3	✓
	Chairs	Mat-4	✓
	Tables	Mat-5	✓
	Storage	Mat-6	✓
	Joinery	Mat-7	✓
	Ceilings	Mat-8	✓
	Waste Management for Tenancy Operation	Mat-9	✓
	PVC Minimisation	Mat-10	✓
	Timber	Mat-11	✓
Land Use and Ecology			
	Green Star - Office As Built Certified Building	Eco-1	✓
	Building Layout Efficiency	Eco-2	✓
	Building Environmental Management	Eco-3	✓
	Commitment to Building Performance	Eco-4	✓
	Shell and Core or Integrated Fitout	Eco-5	✓
	Building Conservation	Eco-6	✓
Emissions			
	Refrigerant ODP	Emi-1	✓
	Insulation ODP	Emi-2	✓
Innovation			
	Innovative Strategies & Technologies	Inn-1	✓
	Exceeding Green Star Benchmarks	Inn-2	✓
	Environmental Design Initiatives	Inn-3	✓

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General

Gross Floor Area (GFA) is defined as the total floor area of all parts of a building that are permanently covered and can be protected from the elements. Car parking (including under-cover car parking) should not be included in the GFA calculations (as per the Glossary within the Green Star - Office Interiors Technical Manuals).

Please note that in regards to GFA and NLA:

Whenever the Credit Criteria refers to NLA ('Air Change Effectiveness', 'Daylight' or 'Recycling Waste Storage'), only Class 5 Commercial Office areas must be included in the assessment; however, when the Credit Criteria refers to the entire project ('Waste Management', 'Formaldehyde Minimisation' or 'Recycled Content of Concrete'), the entire project, including the internal car parks and non-office areas, must be assessed.

Site definition

The 'site' is defined by the scope of Green Star assessment. If a development consists of several buildings, the site must be defined for each registered building.

Initial condition

For the purposes of credits that require comparison between the initial and resulting conditions of the site, e.g. Mat-2 'Reuse of Façade', Mat-3 'Reuse of Structure' or credits in the Land Use and Ecology Category, the initial condition is defined as the condition at the time of site purchase, and can be documented through evidence (e.g. aerial photographs or site plans) generated at or before the time of purchase.

Interdependent Projects

Well designed and operated, shared services and amenities can lead to superior outcomes over individual solutions.

The following guidelines apply to any shared services and amenities:

- 1) Energy generation, refrigeration and water treatment services
 - a. Both shared and off-site services can contribute to project's Green Star rating; however, in all cases a Credit Interpretation Request (CIR) must be submitted to invite a GBCA ruling on the manner in which the Certified Assessors are to evaluate compliance.
 - b. The Green Building Council strongly supports the use of shared/centralised (often those beyond the site boundary of the development being assessed) energy or treatment facilities. Energy, Water and Emissions points can be achieved with a shared plant as long as the use by the Green Star development is not jeopardised and not subject to operational uncertainty.
 - c. For shared mechanical plants, projects must justify how the plant is apportioned; energy modelling is then conducted for the building as if it were served by a dedicated plant.
 - d. For shared grey- and blackwater treatment facilities, projects must justify how the treatment plant is apportioned. For Wat-1 'Occupant Amenity Potable Water Efficiency', the Potable Water Calculator will estimate the potable water consumption of the building. Any project can use the manual calculations option and enter the final estimated potable water consumption in L/person/day (1 person per 15m²), taking into account reused water bought from off-site (or the use of cooling tower discharge, condenser water, etc.), and provide evidence to substantiate the offset.
- 2) Amenities

Examples of amenities include, but are not limited to:

 - Car Parking (Tra-1 and Tar-2)
 - Peak energy demand reduction facilities (Ene-7)
 - Cyclist facilities (Tra-3)
 - Small car parking spaces (Tra-2)
 - Rainwater/recycled water storage (Wat-1, Wat-3, Wat-4, Wat-5, Emi-6)
 - Recycled water plants (Wat-1, Wat-3, Wat-4, Wat-5, Emi-6)

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a. When the amenity is within the project but other uses (for base building projects) or tenants (for fitout projects) are present in the building, the Certified Assessors will seek to validate that the use of such facilities by the project being assessed is not compromised (e.g., that a proportion of facilities is dedicated for exclusive use of the project).

b. The following applies to amenities that are not within the assessed project:

As Green Star assesses inherent attributes of buildings, external amenities can only be rewarded if they are provided for the life of the Building to the same degree of service and certainty as internal facilities, as follows:

- The Building and the amenities are under the same ownership and cannot change ownership separately (i.e., they are on the same title or equivalent);
- The Building and the amenities are under the same management and cannot change management separately (e.g., the same facility management to ensure recycling waste storage is processed as designed);
- There is close, convenient, weather-protected, guaranteed and secure access to the amenities from the Building (in the case of recycling waste storage, with no step change);
- The amenities are completed by the date of practical completion of the Building; and
- That all other elements of the Credit Criteria are met as per the Compliance Requirements and Additional Guidance of the Technical Manual.

Should any of the above conditions not be met, the external amenities cannot contribute to the Building's Green Star rating or a Credit Interpretation Request (CIR) must be submitted to advocate for alternative yet equivalent compliance.

Should the amenities meet the above criteria yet reside in a separate building (from the Building undergoing Green Star assessment), that building can be excluded from the assessment, and only the amenities considered. For example, that building will not be considered for Man-7 'Waste Management', Ene-1 'Energy' or Mat-5 'Recycled Content of Concrete'.

NB: Whenever apportioning is acceptable, the GBCA reserves the right to question the project team's justification for the apportioning if it is deemed to compromise the meaning of the outcome of the clarity of the Green Star message, and request reapportioning.

Staged projects

It is understood that buildings/tenancies are often delivered or refurbished in stages. However, this does not alter the requirements for Green Star submissions, as this would compromise the comparability of Green Star ratings. As such, the entire building/tenancy design is assessed for a 'Design' rating, and the documented evidence for each credit must be in full accordance with the Technical Manual. If some aspects of the design have not been completed, projects may not be able to claim affected credits. Similarly, no design documentation will be accepted for an 'As Built' assessment and all stages of the project (base building or tenancy, whichever is relevant) must reach practical completion prior to submission.

Shell and Core or Integrated Fitout projects

Any space within a project delivered as a Shell and Core or Integrated Fitout will be assessed on the basis of:

- The traditional scope of fitout provided by the base building (e.g. not furniture);
- The fully documented design for Green Star – Office Design; and
- The as-built base building provisions (for a shell and core project) and any fitout provisions installed as part of an integrated fitout for Green Star – Office As Built.

Where any component of the project is delivered as Shell and Core or Integrated Fitout, the General Section of the submission must include an area summary listing each area within the project and indicating whether it is delivered as a standard fitout, integrated fitout or shell and core. In addition, the mode of delivery must be clearly indicated on all documentation to allow for the Certified Assessors to confirm compliance.

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For a Green Star – Office Design Certified Rating, the fully documented design will be assessed regardless of how it is delivered. Where an integrated fitout is designed into the project, all documentation submitted for assessment, including tender drawings, must reflect the changes requested by the tenant(s).

For a Green Star – Office As Built Certified Rating, the project must demonstrate compliance with the Credit Criteria regardless of how the project is delivered (to the extent provided by the base building). Any areas that remain as shell and core (i.e. have not been fitted out) at the time of submission cannot contribute towards the compliance requirements for a credit.

Eligibility

If ever in doubt whether a project meets the Eligibility Criteria by area, proactively get a confirmation or refutation from the GBCA. For the base building, submit a development description (with schematic drawings and an area schedule) that affirmatively answers the following questions:

- Is Green Star assessment sought for a whole, not part of a, building?
 - Does the development seeking Green Star assessment share envelope or services with other developments or existing buildings?
 - Is the development on one building contract, title, address, stage and/or delivery date?
- Is a minimum of 80% of the building's gross floor area Class 5 Commercial Office?
 - What is the development GFA?
 - What are the building classes (by BCA) preset within the project, with GFA allocations?

Green Star - Office Design vs Green Star - Office As Built

Eligibility for assessment

To protect the Green Star brand for the sake of all certified and registered projects, the GBCA has and will refuse assessment to any project that does not meet the Eligibility Criteria, <http://www.gbcaus.org/gbca.asp?sectionid=97&docid=961>. The GBCA has requested resubmissions when a portion of a building/fitout was submitted for assessment.

As-Built documentation for Green Star – Office Design submissions

CIR Ruling: The Credit Interpretation Request (CIR) to provide Green Star – As Built v2 documentation in the place of Green Star – Office Design v2 documentation for specification-based credits such as 'Recycled Content of Steel', 'Recycled Content of Concrete' or 'Sustainable Timber' is **granted conditionally** on the project's ability to demonstrate the following:

1. The project begun construction prior to registration for Green Star – Office Design v2;
2. The Aim of the Credit has been clearly met; and
3. All of the documentation for a specific credit is as-built or as-installed in strict accordance with the Green Star – As Built v2 Technical Manual, rather than combining as-built or as-installed with design documentation.

NB: This ruling does not automatically set precedent for other submissions; each project should submit a Credit Interpretation Request (CIR) should a similar Ruling be sought.

'As Built' assessment

Projects that have achieved a 'Design' Certified Rating have a choice of undergoing 'As Built' assessment using either the same or the more recent version of the applicable 'As Built' tool.

Does the submission for Green Star - Office Design need to demonstrate evidence of implementation if construction has commenced?

For assessment under Green Star - Office Design, projects are only responsible for demonstrating compliance for the design as per the Compliance Requirements, even if construction has begun. For example, even if construction of stage one has been completed, a project claiming Man-3 'Commissioning - Building Tuning' must demonstrate commitment to commissioning as stipulated, but does not need to demonstrate commissioning that has taken place for the stage one. Similarly, for IEQ-

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13 'Volatile Organic Compounds' the project must submit specifications and schedules, as stipulated, but does not need to submit Manufacturers' Data Sheets. The Certified Assessors will not consider evidence beyond that which is stipulated in the Compliance Requirements.

Assumptions

It is acceptable to use assumptions (e.g., in regards to thermal and visual properties of an existing façade) in demonstrating compliance with the Credit Criteria, but only when actual values/properties are not known and the submission must clearly justify that at all times, the assumptions have been conservative. Should any project seek confirmation whether its assumptions are sufficiently conservative, CIRs justifying the assumptions must be submitted.

Should design change between the Round 1 and Round 2 submissions, the Certified Assessor(s) will seek to verify consistency for all contingent credits in order for those credits to contribute to the project's final rating, even if they were awarded in the Round 1. This may require that certain evidence be resubmitted for previously awarded credits to demonstrate such consistency. For example, if a peak energy demand reduction system has been introduced, it must be accommodated in the commissioning credits for all relevant services, such as Man-2 'Commissioning: Commissioning Clauses', Man-3 'Commissioning: Building Tuning', Man-4 'Commissioning: Independent Commissioning Agent', Man-5 'Building Users' Guide', Ene-2 'Energy Improvement' and IEQ-12 'Internal Noise Levels' and wherever else it might affect compliance.

Documentation Submission

The new website section 'Templates, Forms and Checklists' contains vital documents for your submission. Please ensure to complete the Pre-Submission Checklists for respective Rounds of Assessment, and notify the GBCA of your submission via the Submission Notification Form.

In order to be assessed, projects must limit their submissions to the specific documentation stipulated in the Compliance Requirements in the Technical Manual. The GBCA cannot allocate resources for reviewing superfluous documentation. Therefore, if complete project specifications are submitted for assessment, the entire submission will be returned to sender.

The Assessor(s) reserve the right not to review any documentation that is not in Word or PDF format. If change in design occurs between the Round 1 and Round 2 assessment, the client must submit a letter of confirmation that the variations (e.g., within engineers' instructions) are accepted and acted upon.

Alternatives to specifications

CIR Ruling: The CIR to deem the inclusion of the details of the design criteria within the base building scope of works contract equivalent to the inclusion of the same information within the structural specification is **granted**. The Certified Assessor(s) will, however, look for a similar level of certainty as to that which they would look for within structural specifications.

CIR Ruling: The CIR to deem construction drawings equivalent to a specification is **granted conditionally** on the project's ability to clearly demonstrate the following:

- The construction drawings contain all the information required in the Technical Manual to define the design and scope of work;
- A short report from a suitably qualified Engineer is provided and describes how the Credit Criteria is met; and
- All other documentation for this credit is provided in accordance with the Technical Manual.

The Certified Assessor(s) will look for a similar level of certainty as to that which they would look for within specifications.

Contractual Evidence

For Green Star – Office Design, Green Star – Office As Built and Green Star – Office Interiors, when an extract from the main building contract is required to demonstrate compliance, Superintendent

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Instruction(s), Consultant's Advice Notices (CANs) or instructions from the Tenant Representative (wherever appropriate) can be submitted in its place if they amend and take precedence over the executed contract, and clearly demonstrate the same level of contractual commitment, i.e. if either of the following holds true:

- A) The instructions are endorsed (i.e. counter-signed) by the client;
- OR
- B) The client has provided an official and project-specific letter authorising the superintendent, the consultant or the tenant representative to issue contractually binding instructions, and confirming that the client will automatically pay any additional costs associated with these instructions (an upper cost limit may be stipulated).

As specifications are contractual documents, the above would also apply to specifications.

Digital Evidence

The GBCA will accept electronic documentation such as e-mails, digitally signed/stamped (e.g. 'As Built' stamp) drawings and letters, and documentation from an internal document management system (e.g. Aconex), as part of a submission for most documentation, provided that the Certified Assessor(s) can attest that the documentation submitted is complete, meets the criteria outlined in the Technical Manual, and its integrity cannot be questioned.

All documentation must be in the form of PDF printed versions of the documents, including e-mails. Because of the different types of file formats, and the difficulty in obtaining the software required in viewing them all, the GBCA will not accept any type of file formatting. Please note that some documentation, such as contractual documentation, cannot be submitted in the original electronic formatting. These must be physically signed by the relevant parties, scanned, and turned into PDF for submission. The GBCA reserves the right to further identify unacceptable forms of digital evidence, and to expand the list of acceptable examples below. Please email greenstar@gbcaus.org if further clarification or confirmation is required.

- Example: A printed PDF copy of the full e-mail instruction, all headers included. Where e-mails are being submitted as superintendent instructions, the e-mails printed must come from all involved parties, signaling that they have understood and are implementing the instructions. Single e-mails setting out requirements or making requests cannot be used to comply with the submission requirements as per the CIR posted on the GBCA website; and
- Example: Digitally signed/stamped drawings printed straight from the CAD software which is being used in the project. Stamps applied to drawings via a PDF editing software will not be accepted.

Submission Timing

A project will be about 80% through the design phase before it has enough evidence to submit for Green Star - Office Design. Green Star - Office As Built and Green Star - Office Interiors are assessed after practical completion. For assessment under Green Star - Office Existing Building, the building must be in operation for at least 24 months.

Round 2 Submission

Where the Certified Assessor(s) request that a piece of evidence be resubmitted in order for the credit to be awarded, it is the responsibility of the project team to resubmit the entire credit, and the related credits, if the revised evidence changes the basis on which the rest of the evidence was accepted in Round 1. The Certified Assessor(s) will seek to confirm that all evidence clearly and consistently confirms compliance, and reserve the right to withdraw credits awarded in Round 1 if a subsequently demonstrated change would necessitate re-assessment.

Claiming Additional Credits in Round 2

Projects are welcome to both claim additional credits and even change design between the Round 1 and the Round 2. However, please note that a) all new information only gets one review (i.e., new information

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does not qualify a project for Round 3), and b) explicitly inform the Certified Assessor(s) (e.g., in the general section via a cover letter) where new information lies, as otherwise they will only review the items they had questions.

Resubmitting for Round 2

The project need ONLY resubmit credits/items that were questioned by the Certified Assessor(s). Hence, the Round 2 submission should be very thin and explicitly address the comments received after the Round 1.

Transfer of changes from new versions of Green Star - Office

Clarifications:

As Technical Clarifications provide better guidance or identify common misinterpretations of the Aim of the Credits (which result in credits being denied in assessment), they apply to all projects. Therefore, the clarifications for Green Star - Office v3 apply to all projects undergoing assessment Green Star - Office Design v2 and Green Star - Office As Built v2. The clarifications for Green Star - Office Interiors v1.2 apply to all projects registered for Green Star - Office Interiors v1 or v1.1.

Changes in criteria:

Any change to criteria outline in the Summaries of Changes documents apply solely to projects registered for the new versions of the rating tools. Changing any criteria retrospectively jeopardises equitable assessment of all projects. However, achieving higher benchmarks can be claimed for Inn-2 'Exceeding Green Star Benchmarks'. Please note that Innovation points are not guaranteed until approved by the GBCA Board of Directors at the time of the Round 2 assessment.

New credits:

Any new credits are available solely to projects registered for the new versions of the rating tools. Changing criteria retrospectively jeopardises equitable assessment of all projects. However, initiatives addressed by new credits can be claimed for Inn-3 'Exceeding Green Star Scope'. Please note that Innovation points are not guaranteed until approved by the GBCA Board of Directors at the time of the Round 2 assessment.

Switching between versions of Green Star rating tools:

Projects registered to receive a Green Star Certified Rating may choose to be assessed using a more recent version of a Green Star Rating Tool as long as it is applied across the entire project (i.e. no partial upgrade is acceptable). The GBCA staff must be notified in writing prior to receiving the project's submission for assessment. Please note that no project can be assessed under an earlier version (i.e. the version that was superseded by the version in the project's registration).

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Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2 Management

Man-1 'Green Star Accredited Professional'

If the schematic design phase of a project commenced prior to the development of the Green Star rating system and the accompanying training course, the project will not be eligible for this point as equivalent level of advice would not be able to be offered.

It is understood that in some circumstances, the role of the Green Star Accredited Professional is fulfilled by different individuals throughout the project. This is acceptable as long as each Green Star Accredited Professional individually meets the requirements of this credit and this role has been fulfilled continually from the beginning of the schematic design.

Man-2 'Commissioning – Clauses'

As stated in the Compliance Requirements, this credit addresses all services. As the ASHRAE Guideline 1 addresses mechanical services only, it is only sufficient to demonstrate compliance if supplemented by CIBSE Commissioning Codes for all other services.

As stated in the Credit Criteria section of the credit, this credit addresses the commissioning of all systems, not just of the mechanical systems. ASHRAE addresses mechanical systems only; therefore, if used, it must be supplemented by CIBSE for all other systems.

Man-3 'Commissioning - Building Tuning'

Minimum quarterly (not monthly) reviews are required.

As this credit addresses tuning after handover, the evidence must clearly relate to that period (e.g. the timeline must go through the 12 month tuning process).

Man-4 'Commissioning – Commissioning Agent'

CIR Ruling: The Credit Interpretation Request (CIR) to deem independent commissioning agent(s) sufficiently independent if they report directly to the building owner or the owner's designated representative, even if they are paid by the contractor, is **granted**.

Man-5 'Building Users' Guide'

Compliance Requirements should read "A copy of the Building Users' Guide... **OR** A copy of a contract..."

Man-6 'Environmental Management'

Projects **automatically qualify** for full credit (3 points) if their EMS is certified under ISO-14001. Hence, projects qualify either for 2 points (without ISO-14001) **OR** for all 3 points (with ISO-14001).

Once sufficient time has allowed organisations to obtain a more recent version of ISO-14001 certification, Green Star will stipulate ISO-14001/2001 certification (not 1996).

The contractor must have valid ISO14001 accreditation throughout the construction phase of the project.

ISO 14001:2005 does not exist; such certification will not be acceptable.

Man-7 'Waste Management'

Asbestos or other hazardous materials that legally must be withheld from the general construction waste do not have to be included in the calculation for the total waste by mass.

If a sub-contractor is engaged to sort and recycle construction waste on the project's behalf and does it on 'bulk' basis (not on a project basis), the credit can be claimed if the sub-contractor can provide evidence of diverting the claimed percentage of waste on average.

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CIR Ruling: The Credit Interpretation Request to allow contractor(s) to measure waste by volume is granted presuming that the results will be converted to mass for the purpose of Green Star submission (i.e., please submit for this credit in accordance with the Technical Manual). Please support the conversion factors chosen, and note that the Certified Assessor(s) will evaluate the veracity of the conversion process.

As per the Credit Criteria, this credit addresses all project waste. For the purposes of this credit, this includes demolition and construction waste, but not soil or contaminated waste, as those would normally be excluded from the general waste stream.

This credit applies to all waste from construction activities, including existing carpet and ceiling tiles. Please note that the Additional Guidance clearly identifies these materials as having the potential to be re-used / reconditioned or recycled.

CIR Ruling: The Credit Interpretation Request (CIR) to exclude the demolition waste associated with the demolition of the existing building(s) from the total amount of waste generated on the project from the credit requirements is **denied**, as this would contradict the current Credit Criteria.

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Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2 Indoor Environment Quality

IEQ-1 'Ventilation Rates'

The second item under Compliance Requirements for mechanically ventilated buildings should read: "A copy of the section of the mechanical specification where the minimum outside-air rate for the system is stipulated and where design occupant density is specified". The same occupancy density must be used throughout the submission unless otherwise specified in Compliance Requirements (i.e. for Wat-1, Ene-1 or Ene-2).

Supplementary outside air systems can be incorporated into IEQ-1. However, the GBCA does not expect many projects to utilise Supplementary O/A systems in IEQ-1 because:

1. The system would have to be operating whenever the air conditioning system is operating (as the Credit Criteria states "Up to 3 points are awarded if minimum outside air is PROVIDED at rates..." (not potentially available). In addition, AS1668.2 would also require the system to be operational. It is NOT sufficient just to have system available for the tenant to connect to.
2. The supplementary system must be installed and operated (including energy and maintenance) by the base-building, in a similar way that supplementary cooling towers and pumps are operated by the base building. Green Star Office is a BASE BUILDING tool and can therefore only assess base building systems. The only exception Green Star allows to this rule is for office lighting (which is generally installed by base building but operated by the tenants), yet it will assess both the environmental benefit and energy penalty on the tenant in IEQ-6 'High Frequency Ballasts', IEQ-7 'Light Levels', Ene-5 'Lighting Power Density' and Ene-6 'Lighting Zoning', and therefore counteracts claiming environmental benefits without also considering any detrimental impact.

Please be reminded that inclusion of supplementary outside air systems in IEQ may have a detrimental impact on other Green Star credits, such as IEQ-9 'Thermal Comfort' and/or Ene-2 'Energy Performance'. The Certified Assessor(s) are required to assess the coordination between credits.

Although there is perceived discrepancy between IEQ-1 'Ventilation Rates' and Section J, this is not the case. Projects cannot use the Deemed-to-Satisfy provisions of the BCA should they chose to claim IEQ-1 'Ventilation Rates'. Demonstration of compliance by verification method should be used.

CIR Ruling: The Credit Interpretation Request (CIR) to deem an increased outside-air solution that relies on the operation and adjustment by the facility management to achieve desired performance as providing an alternative yet equivalent level of compliance with the Aim of the Credit is denied; Green Star assesses building attributes and rewards them for ensuring a superior environmental outcome regardless of future operations.

IEQ-3 'Carbon Dioxide Monitoring and Control'

If credit is claimed under IEQ-1 'Ventilation Rates', the minimum threshold must correlate to rate claimed in IEQ-1. The occupant density referenced for ventilation credits must be consistent with the design occupant density stipulated in the mechanical services specification.

Carbon Dioxide (CO₂) sensors must be located at all return air points on each floor (usually ducts); location purely within risers does not support the Aim of the Credit. Location within return ducts only or within return ducts and return risers is acceptable.

IEQ-4 'Daylight' / 'Daylighting'

Green Star - Office Design v2 and Green Star - Office As Built v2 stipulate that calculations be based on the Uniform Design Sky. If the software used for the calculations does not have a preset option for the Uniform Design Sky, you can set it up manually.

A Uniform Design Sky represents a sky with a constant value of luminance. Thus, no matter where in the sky you look, the model has the same value. Design Sky values are derived from a statistical analysis of outdoor luminance levels. They represent a horizontal luminance level that is exceeded 85% of the time between the hours of 9am and 5pm throughout the working year. Thus they also represent a worst-case

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scenario that you can design to and ensure your building will meet the desired light levels at least 85% of the time.

The resulting semi-hemispheric 'bubble' is located at 'infinite' distance, therefore the shading effect of the immediate surrounding building will still be taken into account.

Please note that the uniform sky distribution and diffuse luminance levels tend to vary from the equator to the poles.

For all Green Star – Office Design and Green Star – Office As Built assessments, only base-building installed partitions (e.g. load bearing walls) must be included; tenant-installed partitions should not be included in the modelling/calculations.

CIR Ruling: The Credit Interpretation Request (CIR) to allow the use of Overcast Sky for modelling rather than the Uniform Sky (as stipulated in the Technical Manual) is **denied** because it would not generate an equivalent outcome and can compromise equitable assessment of all projects.

IEQ-5 'Daylight Glare Control'

It is the intent of the credit to bring glare control into the realm of owner's/developer's responsibility because research proves conventional internal blinds marginally effective. Hence it is required to install fixed or automated (with manual override) shading, as stipulated in the Technical Manual. If shading devices are present, they must be included in the daylight modeling if IEQ-4 'Daylight' credit is claimed.

The area which is required to comply with this credit is the NLA (not GFA) of a project.

CIR Ruling: A project registered for v1 can claim IEQ-5 in accordance with Green Star - Office Design v2, but must adhere to the requirements fully, not selectively.

CIR Ruling: The Credit Interpretation Request to deem a solution (consisting of a monitor that can pivot back and forth on a stand) as compliant with the intent of the credit is not granted because the solution does not provide an equivalent measure of adjustability. Specifically, the monitor cannot be moved 50cm vertically, and it cannot be moved this distance horizontally without due preparation by the user (i.e., clearing the work surface).

The Credit Criteria can be met through a combination of compliant fixed shading devices and automated internal blinds.

IEQ-6 'High Frequency Ballasts'

When referencing ballasts, the term 'electronic' is considered synonymous with 'high frequency'.

IEQ-7 'Electric Lighting Levels'

To claim this credit, full lighting capacity (**not dimmed**) must be included in calculations. Green Star assesses the capacity of building's attributes to reduce its environmental impact. Any design that allows for greater luminance levels does not meet the aim of this credit because tenant operations and/or behaviour can reverse the effort of the commissioning and utilise the full capacity of the design.

The Credit Criteria stipulates the maximum (at any point), not average (over a floor or space) value for maintained luminance. Maintained luminance refers to the average luminance of a light fitting over its life time (dust and other factors taken into account); in order to claim the credit, the maintained luminance values must not exceed 400 Lux for 95% of the NLA.

IEQ-8 'External Views'

1. If the office space opens directly to the atrium (i.e., no internal glazing is installed), then the internal perimeter of the atrium may be used for the calculations.

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2. The base of the internal atrium is considered to be at the lowest level of Class 5 Commercial Office space (even if the actual base of atrium is several floors lower).
3. The minimum daylight factor of 3.5% is for any point within the atrium.
4. The minimum daylight factor can be demonstrated either at the base of the atrium (as per the Technical Manual), OR at the base of each level for which compliance with the Credit Criteria is claimed.
4. In 'Additional Guidance', "minimum 8m sight line across the atrium" can be no less than 45 degrees to the vision glazing or atrium edge. The atrium must be at least 8 meters wide at **any point** to which the line of sight is demonstrated.

IEQ-9 'Thermal Comfort' / 'Thermal Modeling'

The Credit Criteria applies to Class 5 Commercial Office NLA only.

CIR Ruling: The Credit Interpretation Request (CIR) to use an approximation of the estimated thermal and visual properties of an existing façade (e.g., the U-values and shading coefficients of walls/glazing) is **granted conditionally** on the ability of the submission to justify that at all times, the assumptions have been conservative, i.e. described the 'worst case scenario'. Should any project seek confirmation whether its assumptions are sufficiently conservative, CIRs justifying the assumptions must be submitted.

IEQ-11 'Asbestos'

For Green Star - Office Design (not Green Star - Office As Built), a contractual commitment to remove asbestos (according with the stipulations of the Technical Manual) meets the Credit Criteria, as does evidence that asbestos has been removed.

IEQ-12 'Internal Noise Levels'

Credit Criteria refers to Design Sound Levels in Table 1 of AS/NZS 2107:2000. The reverberation times recommended by AS 2107:2000 are not required to be met to achieve the credit. Internal partitions need only be considered if they are a part of the base building (e.g., structural walls of internal offices).

CIR Ruling: The Credit Interpretation Request (CIR) to deem the mechanical engineer's contractual obligation to meet the Credit Criteria as alternative but equivalent compliance with the Aim of the Credit is denied as it poses an increased measure of uncertainty over the facility's attributes. Green Star assesses building attributes and rewards them for ensuring a superior environmental outcome; while in the areas of management, contractual relationships are a viable measure of outcome, in the areas of design they are not so, in part because subsequent design decisions will require client endorsement prior to implementation (due to cost implications).

As acoustic reports are very frequently questioned in the Round 1 assessment, the GBCA offers the following advice to enhance their ability to communicate compliance:

- The acoustic consultant must reach a conclusion that supports compliance with the Credit Criteria.
- The data provided in the report should clearly justify the conclusion and account for all constant noise sources (hydraulic and mechanical systems that are both internal and external to the space, traffic, etc.).
- In most cases, it is in the interest of the project to provide a tabulated summary table listing the noise levels in all relevant spaces and comparing them to the values prescribed in the standard.

IEQ-13 'Volatile Organic Compounds'

The criteria for VOC content of paint in IEQ-13 'Volatile Organic Compounds' refers only to paint applied on site (e.g., excludes paint applied at a factory). It applies to ALL paint applied on site, whether it is exposed or concealed, internal or external.

The table of VOC content criteria is for latex-based paint only; the only criteria for all solvent-based paint is that it must not exceed 200g/l in VOC content.

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The credit assesses the VOC content, not emissions, hence the number of layers is irrelevant.

The credit assesses as-applied paint, hence the documented content must be inclusive of tints.

95%, not 100% of all sealants/adhesives must comply with the Credit Criteria.

As per the current wording of the Technical Manual, paint for both internal and external applications on site must comply with the Credit Criteria.

CIR Ruling: The only type of flooring that the credit currently addresses is carpet. Projects may claim this credit for all flooring in the project if all flooring meets the Credit Criteria that is currently stipulated for carpet.

Reused items/products are not addressed by this credit and do not need to demonstrate compliance with the Credit Criteria.

It must be clear that the evidence accounts for all uses of the relevant product(s) in the project, i.e. via using 'all' in the specification or, where appropriate, providing a summary table listing all uses and the attributes of the material(s) used.

Paints, sealants and adhesives used in car parks (internal / external) do not require documentation and are excluded from this credit.

CIR Ruling: The Credit Interpretation Request (CIR) to provide a letter from the architectural practise manager (stating that low-VOC paints were used) instead of the inclusion of VOC levels within the specification is **denied**. The two are not considered equivalent.

IEQ-14 'Formaldehyde Minimisation'

E1 or E0 limit under AS/NZS 2269:2004, testing procedure AS/NZS 2098.11 for plywood is acceptable means of compliance with the Credit Criteria.

E1 and E0 are commonly-known terms in the building and fit-out industry and are recognised in Green Star- Office Design v2 according to 'rate-based' as well as 'concentration-based' emission testing results.

'Rate-based' Standards / Testing Methods recognised as acceptable means of compliance with the Credit Criteria include: ASTM D5116, EN 13419, DIN EN717-2 and JIS A 1901

Products demonstrating formaldehyde emission 'rates' of less than or equal to 0.100 +/- 0.005 mg/m²/hr are compliant for this credit. (This is the equivalent to a rating of less than or equal to E1).

E1 and E0 as 'rate-based' emission results are defined as:

E1: 0.060 to 0.100 +/- 0.005 mg/m²/hr;

E0: less than or equal to 0.050 +/- 0.005 mg/m²/hr.

'Concentration-based' Standards and Testing Methods recognised as acceptable means of compliance with the Credit Criteria include:

- AS/NZS 2269:2004, testing procedure AS/NZS 2098.11:2005 method 10 for plywood;
- AS/NZS 1859.1:2004 - particle board, with use of testing procedure AS/NZS 4266.16:2004 method 16;
- AS/NZS 1859.2:2004 - dry processed fibreboards (MDF), with use of testing procedure AS/NZS 4266.16:2004 method 16;
- JIS A 5908:2003- Particleboard and Plywood, with use of testing procedure JIS A 1460; and
- JIS A 5905:2003 - dry processed fibreboards (MDF), with use of testing procedure JIS A 1460

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Products demonstrating formaldehyde 'concentration' emission rates of less than or equal to 1.0mg/L (<1 part per million) are compliant for this credit. (This is the equivalent to a rating of less than or equal to E1)

'Concentration-based' emission results are defined by AS/NZS 1859:2004 as:

E1: 1 mg/L to .6 mg/L

E0: less than or equal to 0.5 mg/L

Correction: DIN EN 717-2 (not DIN EN 717-1) complies with the Credit Criteria because it provides 'rate-based' emission results which enable calculation of net-best air quality that meets best human exposure standards (reported in mg/m²/h). DIN EN 717-1 measures emissions by chamber testing but reports in mg/m³. This does not meet the Credit Criteria because the cubic metre measurement of the chamber space in which the products are tested do not correspond to the differing cubic metre measurements of the actual space in which a product will be placed.

JIS A 5908:2003-Particleboard is appropriate for meeting the Credit Criteria, as JIS A 5908 for additional product types would be.

This credit addresses all composite wood products, including plywood, particleboard and MDF.

Reused items are not addressed by this credit and do not need to demonstrate compliance with the Credit Criteria.

It must be clear that the evidence accounts for all uses of the relevant material in the project, i.e. through using the word 'all' in the specification or, where appropriate, providing a summary table listing all uses and the attributes of the material(s) used.

Products made completely of laminate which are not pressed onto a wood-product substrate, (e.g. High-Pressure Laminate and Compact Laminate) are not considered to be composite wood products and are therefore not subject to the formaldehyde minimisation credit in Green Star rating tools.

Products made completely of laminate that are not pressed onto a wood-product substrate, (e.g. High-Pressure Laminate and Compact Laminate) are not considered to be composite wood products for the purposes of Green Star and are therefore not subject to the Credit Criteria of this credit.

The following applications are not addressed by this credit and are therefore not subject to its Credit Criteria:

- Any composite wood products used in exterior applications (e.g. decorative façade);
- Formwork;
- Internal car park applications;
- Reused composite wood products; and
- Raw timber.

IEQ-15 'Mould Prevention'

This credit stipulates an **active** humidity control system. Systems that rely on humidity monitoring **only** or humidity control by virtue of coil selection **only** do not satisfy the Credit Criteria and will not be rewarded. The second item under the Compliance Requirements for spaces in the building which are mechanically ventilated could read "A copy of the selection of the mechanical specification where the system design parameters in terms of design conditions, humidity and temperature **and humidity control parameters** are stipulated".

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IEQ-16 'Tenant Exhaust Riser'

CIR Ruling: The Credit Interpretation Request (CIR) to deem discharge louvers on each level equivalent of a provision for a tenant exhaust riser is **granted conditionally** on the project's ability to clearly demonstrate the following within the submission:

- The quantity and position of the discharge louvers is sufficient to serve all tenants on all floors;
and
- A fan, wired to the base building board, is provided on each floor to serve all tenancies.

The Green Star – Office Design and Green Star – Office As Built rating tools focus on base building attributes, not tenancy attributes or tenant behaviour. Requiring the tenants to install the fans negates the ability of the base building to claim this initiative as its provision. The tenant exhaust riser, if provided in accordance with the Technical Manual, would be a base building responsibility both in terms of provision and in terms of energy consumption.

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Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2 Energy

Ene-1 'Energy' / Ene-2 'Energy Improvement'

Include all systems that are noted in the submission (cogeneration, cooling towers, and solar hot water heating units).

Domestic hot water is an annual amount. The overall energy use would be calculated as per the ABGR Validation Protocol and consequently include the default figure of 2kWh/m² for domestic hot water.

Projects may use the 2005-01 Validation Protocol.

CIR Ruling: The Credit Interpretation Request (CIR) to use an approximation of the estimated thermal and visual properties of an existing façade (e.g., the U-values and shading coefficients of walls/glazing) is **granted conditionally** on the ability of the submission to justify that at all times, the assumptions have been conservative, i.e. described the 'worst case scenario'. Should any project seek confirmation whether its assumptions are sufficiently conservative, CIRs justifying the assumptions must be submitted.

CIR Ruling: The Credit Interpretation Request (CIR) to alter the time schedules of the ABGR Validation Protocol to reflect automatic shutdown of equipment each night is **denied** because this would alter default values used by all projects, jeopardising equitable assessment and disadvantaging projects that have already gone through assessment.

The Energy Modelling Report must reflect the documented design (for Green Star – Office Design assessment) or as-built/as-installed (for Green Star – Office As Built assessment) evidence. If a Green Star – Office Design v2 Certified Rating has been achieved and the same number of points are claimed for Green Star – Office As Built, the Certified Assessors will seek to confirm that no change to design occurred. It is recommended that in this case, the submission for Green Star – Office As Built v2 includes a confirmation from the professional responsible for the Energy Modelling Report that any changes subsequent to the issue of the reviewed Report do not alter the outcome of the modelling. In all other circumstances, the Energy Modelling Report must be reissued to reflect the as-built condition.

CIR Ruling: The CIR to deem the inclusion of the design criteria details within the base building scope of works contract equivalent to the inclusion of the same information within the Mechanical specification is **granted**. However, the Certified Assessor(s) will look for a similar level of certainty as to that which they would look for within Mechanical Specifications.

As stated on page 3 of 6 of Ene-1 'Energy (Conditional Requirement)' in Green Star – Office As Built v2, "A formal AGBR Pre-Commitment Agreement is not required to achieve this credit."

As per Green Star – Office Design, the Ene-1 or Ene-2 credits within a Green Star – Office As Built submission are assessed purely on predictive energy modelling, not on operational performance. No period of operation is necessary; the submission for assessment can be made at any time after, and within two years of, practical completion.

Each variable in the Energy Modelling Report (e.g. building form, materials or air-conditioning system(s)) must be referenced consistently throughout the rest of the submission (i.e. in related credits such as IEQ-1 'Ventilation Rates' or Ene-7 'Peak Energy Demand Reduction') and clearly justified by the documented design (for Green Star – Office Design v2 assessment) or by the as-built evidence (for Green Star – Office As Built v2 assessment).

Ene-2 'Energy Improvement'

The car park correction **does not** reward projects for having car parks. It is purely intended to compensate projects whose ABGR score was lower because their car parks are on grade or within the building shell (as opposed to being external). As a result, all projects can be compared on an equitable basis. The environmental impact of car parks is addressed under Transport.

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Ene-3 'Electrical Sub-metering'

Whenever lifts, individually or collectively, carry an energy use greater than 100kVa, they must be sub metered. If individually, lifts carry an energy use under 100kVa, they can be sub metered individually or as a group; if individually, they carry an energy use greater than 100kVa, they must be sub metered separately unless they are monitored by an intelligent control system.

Ene-5 'Office Lighting Power Density'

To claim this credit, full lighting capacity (**not dimmed**) must be included in calculations. Green Star assesses the capacity of building's attributes to reduce its environmental impact. Any design that allows for greater luminance levels does not meet the aim of this credit because tenant operations and/or behaviour can reverse the effort of the commissioning and utilise the full capacity of the design.

Ene-6 'Office Lighting Zoning'

Controlling alternate rows by separate switches in a lighting zone that exceeds 100m² does not meet the intent of the credit to minimise energy consumption necessary for performing a task in a specific area, as it is likely that both switches will be on simultaneously to provide the desired lighting level.

Motion occupancy sensors are treated the same way as switching, but they must be automated with a manual override, and connected to a system that will automatically turn off all lighting after hours.

Ene-7 'Peak Energy Demand Reduction'

Unless they are designed and integrated into the base building for the purpose of peak energy demand reduction and can be initiated and turned off without causing a blackout, diesel or other types of stand-by generators **do not** qualify for this credit.

Any peak energy demand reduction must be reflected in the evidence for Ene-7 'Peak Energy Demand Reduction', the Certified Assessor(s) will seek to verify that it has been accommodated in commissioning credits for all relevant services, such as Man-2 'Commissioning: Commissioning Clauses', Man-3 'Commissioning: Building Tuning', Man-4 'Commissioning: Independent Commissioning Agent', Man-5 'Building Users' Guide', Ene-2 'Energy Improvement' and IEQ-12 'Internal Noise Levels', whenever claimed. Consistency with the amended design will be required whenever the above credits are to contribute to the project's final rating, even if they have been awarded. This may require that certain evidence be resubmitted for previously awarded credits to demonstrate such consistency.

CIR Ruling: The Credit Interpretation Request (CIR) to deem diesel generators that are designed to be utilised as a peak energy demand reduction solution is granted conditionally on the project's ability to demonstrate that, although this solution requires significant operational control and investment throughout the building's functional life, it possesses all the attributes necessary for it to be utilised so as to meet the Aim of the Credit. This must be demonstrated by all of the below:

- Extract of specification describing the system to be installed on-site to reduce peak energy demand.
- Drawings which illustrate the location and installation of the on-site generation system.
- A report prepared by the electrical engineer on the peak energy demand reduction system describing the predicted peak-load energy consumption for the building, strategy & system to deliver peak load reduction and the amounts to be provided by the demand reduction system.
- A consultant's advice to the contractor with regards to the design changes.
- Evidence that power will be transferred seamlessly (i.e. without any power-outage during transfer);
- Assessment of the number of days in each month and average duration (measured in hours) that the system will need to be operating, i.e. whenever the load exceeds 75% of the full load.
- Evidence that the system is designed to initiate automatically whenever the load exceeds 75% of the full load;

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- A letter from the Facilities Manager confirming they understand the system will be operated for the aforementioned period, and outlining the full expected expense in running the proposed system (including diesel costs, maintenance etc.);
- Evidence of contractual commitment to run the system for at least 5 years following the practical completion of the project;
- Evidence that the diesel tank is sized sufficiently to support the operation of the system for one month when it is expected to operate the most; please note that fuel necessary for standby/emergency operation is considered to be in addition to the fuel for peak energy demand reduction;
- A clear description of how the diesel tank will be filled, confirming that it can be done conveniently and without disturbance to the building occupants and vehicular and pedestrian traffic; and
- A letter from the local Council and EPA confirming that they are aware of diesel exhaust associated with such a system and accept that a diesel system will be utilised at frequency and intervals necessary for peak energy demand reduction.

CIR Ruling: The Credit Interpretation Request (CIR) to allow energy efficiency initiatives (such as thermal mass, energy efficient envelope, services or lighting) to contribute to the overall reduction of peak energy demand is **denied**. This credit rewards the installation of specific peak energy demand reduction systems that reduce the pressure on municipal infrastructure; the overall (rather than peak) reduction in the project's energy demand is already rewarded within the Ene-1 or Ene-2 'Energy Improvement' credits.

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Energy

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Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2 Transport

Tra-1 'Provision of Car Parking'

CIR Ruling: The Credit Interpretation Request (CIR) to deem this credit 'Not Applicable' due to the remote location and/or absence of local planning allowances is denied. As the environmental impact of automotive commute does not depend on those factors, such an interpretation would counteract the Aim of the Credit.

Whenever neither maximum nor minimum local planning allowances exist (e.g., SA, QLD or municipal projects), the project cannot automatically claim the credit but must submit a Credit Interpretation Request (CIR) to substantiate an argument for equivalent yet alternative compliance. Such arguments have been accepted when based on proposed local planning allowances or a sample of other comparable developments in the area.

Tra-2 'Small Parking Spaces'

In order to claim this credit, car spaces must be small as stipulated in the Technical Manual. 'Small Car Space' signage over a regularly sized space is not sufficient.

Small car spaces need to be provided in a fair and equitable manner (e.g. not blocked by other spaces).

CIR Ruling: The Credit Interpretation Request (CIR) to deem this credit 'Not Applicable' due to the remote location and/or absence of local planning allowances is denied. As the environmental impact of automotive commute does not depend on those factors, such an interpretation would counteract the Aim of the Credit.

CIR Ruling: The Credit Interpretation Request (CIR) to demonstrate compliance via an alternative benchmark due to the absence of car parking limits provided in the projects DA is **denied** whenever local planning allowances exist.

Revised CIR Ruling: Whenever mandatory parking requirements for the project exist, either within the local planning allowances or Development Approval requirements, they must be used. However, in cases where requirements:

- do not exist at all; OR
- are not specified for the building; OR
- are optional; OR
- are recommended;

the following two options are available to projects:

- 1) Clearly demonstrate that parking is not provided in excess of one parking space per 100m² of NLA to achieve one point or one parking space per 200m² to achieve two points;
OR
- 2) Submit a Credit Interpretation Request (CIR) to substantiate an argument for equivalent yet alternative compliance with the Credit Criteria.

Tra-3 'Cyclist Facilities'

Credit Criteria for the visitor bicycle storage within the Technical Manual had a typographic error. The Criteria should have read: "one space per 750m² NLA or part thereof" and not "one space per 7500m² NLA or part thereof". The Technical Manual and the rating tool have been updated, please reload the rating tools from www.gbcaus.org. A PDF replacement page has been sent to all who have taken a Green Star course, please [download the PDF](#).

In order to not disadvantage projects that were already in progress, this change will not be imposed on projects currently registered for assessment under Green Star - Office Design v2 and Green Star - Office As Built v2 or those that register prior to 12 June 2006. All projects registered on or after 12 June 2006 will be subject to this correction.

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For owner-occupier projects, cyclist facilities should **not** be claimed in the base building assessment if the project wishes to claim the Additional Point ("facilities were installed specifically for the tenancy fitout and were not pre-existing in the base building") in the fitout assessment.

The guidance for sizing lockers is taken from the sited standards; no specific measurements are implied.

CIR Ruling: The Credit Interpretation Request (CIR) to deem a secondary public entrance (the main public entrance for the deliveries area) equivalent to the major public entrance for the purpose of locating visitor bike storage is denied. Visitor bike storage is not intended for the sole use by couriers; such an assumption is not supported by the Technical Manual or the Aim of the Credit. The project can choose to provide visitor parking in excess of the Green Star requirement and provide directional instructions to couriers; however, to be eligible for the additional point, the visitor bike storage must be sufficient, accessible, signposted and located near a major public entrance.

The Technical Manual states that bicycle storage must be "designed to allow both a wheel and the frame to be locked securely to the structure in accordance with AS 2890.3-1993". The referenced AS 2890.3-1993 standard actually stipulates that the bike must be able to be locked to both wheels and the frame (see extract below). The standard must be followed.

"Even if they are fitted out as showers or changing rooms, the minimum number of disabled toilets mandated by statutory requirements cannot contribute to the total number of changing or shower facilities provided, as doing so may detract from their availability for use by disabled persons " (AS 2890.3-1993, bottom of table 1.1).

The minimum number of disabled toilets mandated by the BCA cannot contribute to the total number of changing or shower facilities provided, as doing so may detract from their availability for use by disabled persons.

Even if they (Cyclist Facilities) are fitted out as changing rooms, the minimum number of disabled toilets mandated by statutory requirements cannot contribute to the total number of changing facilities provided, as this may detract from their availability for use by disabled persons. Disabled showers do contribute towards the total number of showers provided, as long as they are not stipulated in statutory requirements for the project.

Changing/shower facilities do not have to be aggregated. However, access must be guaranteed and convenient for all building occupants (e.g. not through another tenancy). If changing/shower facilities are located within tenancies rather than in common area, they must be adequately sized for each tenancy based on the default occupancy rate of one person per 15m², and each location must individually meet the Credit Criteria (e.g. providing excess facilities within one tenancy will not compensate for insufficient facilities in another).

To support the Aim of the Credit, lockers must be located within the changing facilities. Showers must be located within or immediately adjacent to the changing facilities.

Changing facilities (with lockers and showers) do not have to be in the same location as the secure bicycle storage. It is not necessary to provide weather-protected access from the secure bicycle storage to the changing/shower facilities. However, the access between the changing/shower facilities and the occupied space (e.g. office) must be weather protected.

CIR Ruling: The Credit Interpretation Request (CIR) to deem a particular bicycle parking system appropriate for meeting the Credit Criteria is **granted conditionally** on the project's ability to demonstrate, through its submission for this credit, how the attributes of this system meet the criteria of AS2890.3.

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CIR Ruling: The Credit Interpretation Request (CIR) to deem the location of visitor bicycle parking in the third level of basement equivalent to “near a public entrance” is **denied** because the proposed location is not considered to be suitable for visitor bicycle parking and does not meet the Aim of the Credit.

CIR Ruling: The Credit Interpretation Request (CIR) to provide visitor bicycle parking in two different locations is **granted conditionally** on the projects ability to demonstrate that the two different locations individually meet the Credit Criteria.

Tra-4 ‘Commuting Public Transport’

CIR Ruling: The Credit Interpretation Request (CIR) to deem the average frequency of services (which individually do not meet the frequency requirements) to be entered into the Public Transport Calculator is **denied** as services with average frequency intervals greater than 30 minutes are not considered to be of the same benefit to building occupants commuting to work.

CIR Ruling: The Credit Interpretation Request (CIR) to deem the private bus transport system with an established route and timetable equivalent to public transport is **granted conditionally** on the project’s ability to demonstrate that the future operation of this service is as certain to public transport (i.e. demonstrates alternative but equivalent compliance in respect to longevity, publicity, etc.). Please enter the number and frequency of services into the Public Transport Calculator and provide evidence stipulated in the Compliance Requirements.

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Transport

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Wat-1 'Potable Water Efficiency'

As custodian closet taps are not an occupant amenity, they are not included in the Potable Water Calculator.

Previously unused water from high-value fresh water sources (e.g., lake, river or bore water) cannot contribute to the amount of non-potable water used. In addition to the surface water table dropping, there is a deficit of groundwater every year, and extracting water from any fresh-water sources merely localises what otherwise would take place on the municipal or state level.

The following is acceptable to demonstrate fitting/fixture performance for the Water Calculator for the first six months after the release of a new product, after which the WELS rating will be required:

- a letter from the manufacturer stating the flow rate; and
- results of on-site commissioning demonstrating the achievement of the claimed rate.

CIR Ruling: The Green Building Council strongly supports the use of shared/centralised energy or treatment facilities and commends the project on employing this strategy. Both Wat-1 'Occupant Amenity Potable Water Efficiency' and Emi-6 'Reduced Flow to Sewer' can be achieved with a shared plant.

The calculator for Water credit Wat-1 'Potable Water Efficiency' has been rectified to address unnecessary disadvantage faced by small rainwater tanks.

For calculating the value (in litres) for dual-flush toilets, please use the 1:2 ration for full:half flush (e.g. enter "4" for 6/3 toilet (as per page 3 of the credit) or "3.3" for 5/2.5 toilet).

The National Water Conservation Rating and Labeling Scheme ('A' ratings) has been superseded by the Water Efficiency Labeling Scheme ('Star' ratings), and will formally cease on 1 July 2006. However, it does not impact the Green Star Potable Water Calculator, as all inputs must be in litres. Therefore, please convert either rating to litres to use the Calculator.

In order to determine the water consumption (per flush) of dual-flush toilets for the Calculator, it is appropriate to use the current Green Star method of calculating the ration of full- to half-flushes (one full flush to every two half-flushes) OR the WELS calculation method (one full flush to every three half-flushes).

If your project sub-meters all water going into the building AND all water going out (for cooling towers), and if the different equates bathroom water consumption, it is not necessary to have a separate bathroom water meter.

For refurbishment projects **ONLY**, waterless urinals can be deemed 'waterless' without completely removing existing plumbing **IF** the water supply to them has been permanently disabled (i.e., physically dismantled in such a way that reconnection water supply for flushing is NOT an option without additional construction work).

It is understood that in many cases, the relevant authority will not grant approval of the water reuse/recycling systems until they have been commissioned. For a Green Star – Office Design submission it is acceptable to provide the authority's preliminary approval, or if no objection to the system(s) by the authority, the documented design of the system(s) on the basis of relevant state and local standards. The authority must confirm that it is only able to approve operational systems. The authority's subsequent approval of the operation system(s) may be conditional on the project's ability to clearly demonstrate compliance with relevant regulation or standards, which may be cited. The relevant authority's approval of the operational system(s) will still be necessary to confirm compliance for Green Star – Office As Built.

Technical Clarifications & CIR Rulings

Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2 Water

If showers are installed but no points are claimed under Tra-3 'Cyclist Facilities', projects do not have to document the water efficiency of the showerheads and can choose 'no showers installed' from the drop-down menu of the Potable Water Calculator. Please note that this will affect the calculation of the total amount of greywater generated, and may significantly reduce the amount of greywater deemed available to offset potable water demand.

CIR Ruling on Wat-1/Wat-3 for projects based in Victoria only.

The Green Building Council of Australia has been made aware that Victoria has no relevant authority to approve water collection/re-use systems. In that case, please include the following information in the credit cover sheet:

"The Green Building Council of Australia has been made aware that Victoria has no relevant authority to approve water collection/re-use systems. Until this changes, the GBCA has ruled that a short report from a qualified hydraulics engineer will be 'deemed to comply' in place of an approval from the relevant authority (as stipulated in the Technical Manual), if the short report states that the water collection and re-use systems comply with the relevant NSW standards".

Wat-2 'Water Meters'

Kitchenette and other additional non-bathroom sinks (regardless of number) can be on the metered bathroom water line (e.g., use water already metered according to the Credit Criteria).

If your project sub-meters all water going into the building AND all water going out (for cooling towers), and if the difference equates to bathroom water consumption, it is not necessary to have a separate bathroom water meter.

One meter for ALL bathrooms, as long as it covers both hot and cold water, is sufficient regardless of the size of the building.

Wat-3 'Landscape Irrigation'

Previously unused water from high-value fresh water sources (e.g., lake, river or bore water) cannot contribute to the amount of non-potable water used. In addition to the surface water table dropping, there is a deficit of groundwater every year, and extracting water from any fresh-water sources merely localises what otherwise would take place on the municipal or state level.

Wat-4 'Cooling Towers'

Previously unused water from high-value fresh water sources (e.g., lake, river or bore water) cannot contribute to the amount of non-potable water used. In addition to the surface water table dropping, there is a deficit of groundwater every year, and extracting water from any fresh-water sources merely localises what otherwise would take place on the municipal or state level.

For mixed-mode ventilated buildings, it must be clearly demonstrated that the predicted reduction in the operating hours of the mechanical ventilation system does in fact equate to the stipulated reduction in potable water consumption.

Please note that 50% reduction in operating hours does not equate, under most circumstances, to a 50% reduction in water consumption by cooling towers.

Technical Clarifications & CIR Rulings

Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2

Materials

Materials General

To claim 'reused' items, a statement from the Interior Designer (DIA or IAID) and supporting evidence must clearly demonstrate that the items were previously used.

If the specification states that the item must be reused, a statement from the Interior Designer must confirm that the specified item was installed on site. The following can also be used as evidence by the Interior Designer:

- The final schedule of furniture, fitting and finishes;
- Purchase receipts should the items have been acquired from a second-hand retailer; and
- A removalist's inventory from the previous location of the item.

Mat-1 'Recycling Waste Storage'

The 'City of Sydney Code for Waste Handling in Building' (2004) has been replaced by 'Policy for Waste Minimisation in New Developments'. To demonstrate that the location and layout of the storage area is easily accessible by recycling collection vehicles, projects may still provide a letter from the recycling company (as stipulated in the Technical Manual), or demonstrate compliance with the 'Access' requirements of the following sections of the 'Policy for Waste Minimisation in New Developments': Section A, points A-12 through A-17, and Section C, points C6 and C7.

CIR Ruling: It is acceptable to meet the Credit Criteria of Mat-1 'Recycling Waste Storage' with more than one dedicated storage area. However, all storage areas dedicated to recycling must meet all the Credit Criteria and Additional Guidance requirements (such as location within 20m of a lift core) and be functional (e.g., an area may not be so small that it cannot house at least 3 standard bins as used in municipal waste collection). An area dedicated exclusively to storage of rubbish (non-recycling waste) should be excluded. In addition, where other uses (for base building projects) or tenants (for fitout projects) are present in the building, it must be clearly demonstrated that the office use of the recycling waste storage facilities is not compromised (e.g., how a proportion of facilities is dedicated for exclusive use of the project).

Mat-2 'Reuse of Façade'

To demonstrate the proportion of **total** façade being reused you need to demonstrate by area the proportion of reused and new. Where there is a **reused** portion, only 20% of the materials used within the reused portion can be new (i.e. new shading elements etc). Hence, to claim this credit a project must demonstrate that the new materials added to the reused portion equate to less than 20% of the total materials in the reused portion **by mass**.

If no new materials are added to the reused portion, this needs to be clearly identified and a demonstration of mass is not necessary. It is recommended that you speak to your Façade consultant regarding estimating the mass of existing façade. The Certified Assessor(s) will be looking for detailed calculations and justification of assumptions of **all existing** materials that are to be maintained in the refurbishment.

Mat-2 'Reuse of Façade' & Mat-3 'Reuse of Structure'

If the buildings demolished as a consequence of the development that seeks Green Star assessment extend beyond the site boundary, then their total area must be used in calculations for these credits.

These credits are 'Not Applicable' for Greenfield sites (as per the Credit Criteria) or for sites on which no buildings existed at the time of purchase of the site (please provide evidence of site purchase and site drawings or aerial photographs dated at or before the date of the site purchase, with all existing structures clearly identified).

The 'Not Applicable' clause within the Technical Manual should read as follows:

"If the site is a Greenfield site.... **or contained no buildings at the time of purchase...** or the total floor area of existing buildings demolished on-site is less than 30% of the NLA of the new building then the

Technical Clarifications & CIR Rulings

Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2

Materials

credit is 'Not Applicable' and is excluded from the points available to calculate the Materials Category Score."

Mat-4 'Shell & Core or Integrated Fitout'

While the Credit Criteria states "shell and core OR integrated fitout", any combination of these is acceptable, i.e. areas delivered as shell-and-core and areas delivered as integrated fitout must jointly contribute the required proportion of the NLA.

For projects that are delivered as shell-and-core, the GBCA will be issuing submission guidelines that will illustrate how this form of project delivery will affect the projects' compliance with affected credits.

CIR Ruling: The installation of the raised floor system and the perimeter cell air conditioning displacement system is appropriate for Shell & Core project delivery as long as carpet tiles are not installed.

Mat-5 'Recycled Content of Concrete'

Use of recycled aggregate and cement replacement are separate initiatives, in other words, it is not a prerequisite to claim recycled aggregate in order to claim cement replacement.

CIR Ruling: The Credit Interpretation Request (CIR) to deem "aggregate from waste rock returned from sites" equivalent to "recycled aggregate derived from crushed concrete", due to the stated absence of aggregate recycled from concrete in Melbourne, is denied.

The very aim of the Green Star tools is to change standard practices in the industry towards more sustainable and recycled methods; Green Building Council of Australia research has identified aggregate recycled from concrete and suppliers of this material within the state of Victoria.

With the Compliance Requirements, the third bullet point is only applicable to projects where the second bullet point is 'True'. So ALL projects must submit the evidence within the first bullet point, but only some projects have to submit the evidence within the third bullet point as well.

Mat-6 'Recycled Content of Steel'

While the Credit Criteria refers to 'all steel', this credit addresses structural applications of steel only, i.e. structural and reinforcing steel.

It must be clear that the evidence accounts for all uses of the relevant material in the project, i.e. via using 'all' in the specification or, where appropriate, providing a summary table listing all uses and the attributes of the material(s) used.

Mat-7 'PVC Minimisation'

For refurbished buildings, existing PVC materials that are not being replaced are excluded from the cost calculations.

If specified cabling has PVC sheathing but not PVC insulation, the submission must include documentation by the manufacturer to justify the reduction in PVC through avoidance of PVC insulation. The same logic would hold true for other composite products commonly including PVC.

It must be clear that the evidence accounts for all uses of the relevant material in the project, i.e. through using the word 'all' in the specification or, where appropriate, providing a summary table listing all uses and the attributes of the material(s) used.

Mat-8 'Sustainable Timber'

A current list of holders of the FSC chain-of-custody and management Certificate can be found on the following website: <http://www.fsc-info.org/>.

Technical Clarifications & CIR Rulings

Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2 Materials

The last 'hands' to touch a FSC-certified piece of timber (e.g., reseller of a finished product) must have a Chain of Custody Certificate; otherwise there is no sure way to know that the timber product is in fact FSC-certified.

CIR Ruling: The Credit Interpretation Request (CIR) to exclude formwork from items that must meet the Credit Criteria is **denied**. Green Star cannot assess whether formwork (or any other product) is reused in the future, yet the environmental impact of formwork is significant.

It must be clear that the evidence accounts for all uses of the relevant material in the project, i.e. through using the word 'all' in the specification or, where appropriate, providing a summary table listing all uses and the attributes of the material(s) used.

For a product to receive points within this credit for FSC certification, a full chain of custody (CoC) must exist. That is, if a board manufacturer who has FSC certification sells the board to a contractor for installation on the building, full chain-of-custody exists. However, if the board manufacturer provides product to the workstation manufacturer who doesn't have FSC certification, who then sells it to the project, then CoC is lost, and points will not be awarded for that workstation. The following is an extract from the Forest Stewardship Council website: www.fsc.org

Chain-of-custody certification provides a guarantee about the production of FSC-certified products. Chain-of-custody is the path taken by raw materials from the forest to the consumer, including all successive stages of processing, transformation, manufacturing and distribution. Companies or individuals that process, transform, or trade (take ownership of) FSC certified forest products must be CoC certified.

Industry Type	Process Stage	Chain-of-custody required?
Building & Construction	<i>Sawmills, Lumberyards</i>	YES
	<i>Manufacturers of forest products</i>	YES
	<i>Timber brokers</i>	YES
	<i>Artisans, carpenters</i>	YES
	<i>Building contractors</i>	NO*
	<i>Retailers (i.e. DIY stores)</i>	NO
Printing & Paper	<i>Pulp, paper producer</i>	YES
	<i>Paper merchant</i>	YES
	<i>Broker</i>	YES
	<i>Printers</i>	YES
	<i>Publisher</i>	NO

**The last person in the chain of ownership for materials being supplied to the construction project does NOT need to be CoC certified, but the company those materials are being received from does. The important issue here is ownership. For example, a spec contractor must be CoC certified as they will not be the final owner of the FSC materials.*

Products made completely of laminate which are not pressed onto a wood-product substrate, (e.g. High-Pressure Laminate and Compact Laminate) are not considered to be composite wood products and are therefore not subject to the sustainable timber credit in Green Star rating tools.

Products made completely of laminate that are not pressed onto a wood-product substrate, (e.g. High-Pressure Laminate and Compact Laminate) are not considered to be composite timber products for the purposes of Green Star and are therefore not subject to the Credit Criteria of this credit.

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Materials

Technical Clarifications & CIR Rulings

Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2 Land Use & Ecology

Eco-1 'Ecological Value of Site'

CIR Ruling: The Credit Interpretation Request (CIR) to submit the following documentation instead of the local development control plan and development zone map stipulated in the Technical Manual is **granted**:

1. Relevant domain map;
2. Relevant 'special facilities' schedule from the Local Council Planning Scheme together with the approved Master Plan; and
3. Original Rezoning Agreement referred to in the Local Council Planning Scheme.

Eco-3 'Reclaimed Contaminated Land'

CIR Ruling: The Credit Interpretation Request (CIR) to deem this credit 'Not Applicable' for projects that are assessed as 'Building Extensions' is **granted** because it meets the Aim of the Credit in an equivalent manner to that of refurbishment projects.

Please note the contamination resulting from this development (e.g. with asbestos from demolition of the existing buildings) cannot contribute to this credit.

The GBCA will not act to determine, from evidence of site visits, whether land is contaminated. This determination must be made by the relevant expert, as stipulated in the Technical Manual. The Certified Assessor(s) will accept that expert's conclusion and seek to verify that the land is decontaminated in accordance with the Technical Manual.

The second bullet point, "certificate from the Environmental Auditor confirming that the site has been correctly and appropriately decontaminated", does not refer to a Certificate of Environmental Audit but to a confirmation from the Auditor. For the confirmation from the Environmental Auditor to be acceptable, the Auditor must meet the requirements of the National Environment Protection Measure, specifically Schedule B (10).

CIR Ruling: The Credit Interpretation Request (CIR) to deem "a letter from a qualified (in the area of soil remediation) consultant who has been involved in the development, documenting pre-existing conditions and remediation procedures undertaken, and confirming that the site has been made suitable for development, safe for human health and the environment" sufficient for demonstrating that "adequate remedial steps have been taken to decontaminate the site prior to construction" (as per the Technical Manual) is **granted**.

The statement "prior to construction" as stated in the Eco-3 credit criteria refers to construction of actual building structures, not to the beginning of any construction works on the project (e.g. land clearing). Thereby, if remediation occurs during earthworks or any other stages during the construction phase of a project **prior** to the building of any structure, it is still considered as "prior to construction".

CIR Ruling for Green Star – Office Design ONLY: The Credit Interpretation Request (CIR) to deem a commitment to remediate a contaminated site at a later date equivalent to full remediation of the site prior to Green Star – Office Design submission is **granted conditionally** on the project's ability to demonstrate all of the following in the Green Star – Office Design submission:

- No construction works have commenced on the site at the date of the Round 2 assessment;
- There is assurance that the site will be remediated as stipulated, i.e. the builder has been appointed and has a contractual requirement to remediate the land in accordance with the Technical Manual prior to commencement of any construction works OR remediation of the land as required by the Technical Manual is a condition of the Development Approval and/or Occupancy Certificate; and
- The extent of the site addressed by the contractual requirement is justified and referenced consistently throughout the submission.

Technical Clarifications & CIR Rulings

Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2 Land Use & Ecology

NB: This Ruling does not apply to Green Star – Office As Built submissions and the site must have been fully remediated prior to assessment in strict accordance with the Technical Manual.

Eco-4 'Change in Ecological Value'

It is indeed possible to achieve more than one point in the calculator. However, this would require substantial initiatives to make the site 'better than you found it' (e.g. green roofs, bio-swale blackwater treatment). This credit is intended to challenge design teams to capture the synergy between the various project outcomes.

Eco-5 'Topsoil and Fill Removal from Site'

CIR Ruling: The Credit Interpretation Request (CIR) to provide a letter from the architect stating that the project has no cut and fill or removal of topsoil from the site as evidence for Eco-5 'Topsoil and Fill Removal from site' instead of the documentation required by the Technical Manual is **denied** as this would not equivalently demonstrate compliance.

The 'site' is defined by the scope of Green Star assessment. If a development consists of several buildings, the site must be defined for each registered building. Stockpiling of soil on sites of the other buildings within the development is not acceptable.

Technical Clarifications & CIR Rulings

Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2 Emissions

Emissions General

It is understood that a number of different systems may be installed on a project. Whenever Emi-1 'Refrigerant ODP' through Emi-4 'Refrigerant Recovery' are claimed, evidence must account for and describe all systems within the project. Where a system meets the Credit Criteria for Emi-1 'Refrigerant ODP' and Emi-2 'Refrigerant GWP', as documented in accordance with the Technical Manual, such system does not need to meet the requirements for Emi-3, and Emi-4.

Emi-3 'Refrigerant Leak Detection'

Plant rooms must be ventilated to comply with the Building Code of Australia, and this requirement must continue to be met in buildings with refrigerant detection systems. The Credit Criteria stipulates a "moderately air-tight enclosure" must also be provided, so that the concentration of leaked refrigerant can build up to a detectable level. In order to demonstrate the refrigerant detection system will be effective, please clearly demonstrate the location of sensor points and ventilation openings and confirm that small refrigerant leaks will be detected, i.e. that the location, size and intended operation of the sensors and openings will not prevent that.

CIR Ruling: The Credit Interpretation Request (CIR) to deem an R123 system inherently sufficient for meeting the Aim of the credit because the system is under negative pressure when operating is **denied**. The Aim of the credit is to detect any leaks of refrigerant from the vessel at any time, including those that occur when the system is not in operation.

Emi-5 'Watercourse Pollution'

CIR Ruling: The Credit Interpretation Request (CIR) to use a shared blackwater treatment facility is **granted** on the basis that a suitably qualified professional has indicated that it is sized sufficiently to serve all nominated uses. Please refer to the 'Interdependent Projects' clarification.

Emi-6 'Reduced Flow to Sewer'

CIR Ruling: The Green Building Council strongly supports the use of shared/centralised energy or treatment facilities and commends the project on employing this strategy. Both Wat-1 'Occupant Amenity Potable Water Efficiency' and Emi-6 'Reduced Flow to Sewer' can be achieved with a shared plant.

It is understood that in many cases, the relevant authority will not grant approval of the water reuse/recycling systems until they have been commissioned. For a Green Star – Office Design submission it is acceptable to provide the authority's preliminary approval, or if no objection to the system(s) by the authority, the documented design of the system(s) on the basis of relevant state and local standards. The authority must confirm that it is only able to approve operational systems. The authority's subsequent approval of the operation system(s) may be conditional on the project's ability to clearly demonstrate compliance with relevant regulation or standards, which may be cited. The relevant authority's approval of the operational system(s) will still be necessary to confirm compliance for Green Star – Office As Built.

Emi-9 'Insulant ODP'

It must be demonstrated that the specification of thermal insulation avoids the use of ozone depleting substances in **both** its manufacture and composition.

For refurbishment projects, any insulation which is already in place and which is not being touched, altered or refurbished is excluded from the calculations.

Technical Clarifications & CIR Rulings
Green Star – Office Design v1 & v2 and Green Star – Office As Built v1 & v2
Emissions

Technical Clarifications & CIR Rulings

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Innovation

NONE

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Innovation

Technical Clarifications & CIR Rulings

Green Star – Office Interiors v1 & v1.1 Management

Man-1 'Green Star Accredited Professional'

If the schematic design phase of a project commenced prior to the development of the Green Star rating system and the accompanying training course, the project will not be eligible for this point as equivalent level of advice would not be able to be offered.

It is understood that in some circumstances, the role of the Green Star Accredited Professional is fulfilled by different individuals throughout the project. This is acceptable as long as each Green Star Accredited Professional individually meets the requirements of this credit and this role has been fulfilled continually from the beginning of the schematic design.

Man-2 'Tenant Fitout Commissioning'

As stated in the Credit Criteria section of the credit, this credit addresses the commissioning of all systems, not just of the mechanical systems. ASHRAE addresses mechanical systems only; therefore, if used, it must be supplemented by CIBSE for all other systems.

Man-6 'Waste Management During Tenancy Fitout'

CIR Ruling: The Credit Interpretation Request to allow contractor(s) to measure waste by volume is granted presuming that the results will be converted to mass for the purpose of Green Star submission (i.e., please submit for this credit in accordance with the Technical Manual). Please support the conversion factors chosen, and note that the Certified Assessor(s) will evaluate the veracity of the conversion process.

Man-7 'Waste Management During Tenancy Fitout'

This credit applies to all waste from construction activities, including existing carpet and ceiling tiles. Please note that the Additional Guidance clearly identifies these materials as having the potential to be re-used / reconditioned or recycled.

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Management

Technical Clarifications & CIR Rulings

Green Star – Office Interiors v1 & v1.1

Indoor Environment Quality

IEQ-1 'Ventilation Rates'

Although there is perceived discrepancy between IEQ-1 'Ventilation Rates' and Section J, this is not the case. Projects cannot use the Deemed-to-Satisfy provisions of the BCA should they chose to claim IEQ-1 'Ventilation Rates'. Demonstration of compliance by verification method should be used.

IEQ-2 'Carbon Dioxide Monitoring and Control'

CIR Ruling: The Credit Interpretation Request (CIR) to deem the installation of CO₂ sensors in office areas only equivalent to their installation in all return air ducts, for all enclosed spaces less than 100m², is **denied** because the outside air supplied to other tenancy areas from the same duct is not controlled.

CIR Ruling: The Credit Interpretation Request (CIR) to meet the Credit Criteria by installing, within each enclosed space that is less than 100m², a combination of a wall-mounted CO₂ sensor linked to a BMS system and a VAV box that supplies outside air to that space is **granted conditionally** on the project's ability to demonstrate that:

- The CO₂ sensors are able to control the volume of outside air that is provided to the enclosed spaces;
- The quality of the air and the temperature settings within the enclosed space will not be compromised by the CO₂ sensors operating the VAVs;
- Any impact that these proposed strategies will have on related credits (such as energy consumption) is reflected consistently throughout the submission;
- The quality of air and temperature supplied to other spaces within the same duct is not compromised when a CO₂ sensor within a space activates the VAV system. See the Technical Clarifications section of the GBCA website for additional information on this point;
- Any assumptions made with regards to the operation of this system are justified in a conservative and robust way throughout the submission;
- The Aim of the Credit has been clearly met; and
- All of the documentation is as-built/as-installed in strict accordance with the Green Star – Office Interiors v1.1 Technical Manual.

IEQ-3 'Daylight'

CIR Ruling: The Credit Interpretation Request (CIR) to allow the use of Overcast Sky for modelling rather than the Uniform Sky, as stipulated in the Technical Manual, is **denied** because it would not generate an equivalent outcome and can compromise equitable assessment of all projects.

IEQ-4 'Daylight Glare Control'

Only one monitor per 18m² needs to comply with the Credit Criteria for monitor arms; all others can be anything else. The GBCA intends to review this credit for the subsequent version of the rating tool.

IEQ-5 'High Frequency Ballasts'

When referencing ballasts, the term 'electronic' is considered synonymous with 'high frequency'.

IEQ-6 'Electric Lighting Level's

The Credit Criteria stipulates the maximum (at any point), not average (over a floor or space) value for maintained luminance.

Maintained luminance refers to the average luminance of a light fitting over its life time (dust and other factors taken into account); in order to claim the credit, the maintained luminance values must not exceed 400 Lux for 95% of the NLA.

CIR Ruling: The Credit Interpretation Request (CIR) to use dimmers combined with lumen sensors as an alternative, but equivalent strategy for meeting the Aim of the Credit is **denied**. The energy benefits of the proposed solution are picked up in the Energy Category; this credit is specifically intended to avoid over-design of lighting systems.

Technical Clarifications & CIR Rulings

Green Star – Office Interiors v1 & v1.1

Indoor Environment Quality

CIR Ruling: The Credit Interpretation Request (CIR) to meet the Credit Criteria through a suspended overhead task lighting system that illuminates up to two workstations at a time is **granted conditionally** on the project's ability to clearly demonstrate the following:

1. The suspended overhead task lighting is connected to both workstations for individual control;
2. The overhead task lighting must be connected to the tenants' light control system;
3. The Lux levels specified in the Credit Criteria must be met for the specified NLA; and
4. The system installed and any assumptions made are reflected throughout the rest of the design and submission (e.g. in submissions for Ene-1, Ene-2, Ene-4, IEQ-5, etc.).

IEQ-7 'External Views'

As the Credit Criteria is based on 'work settings', not 'NLA', please note the following typos:

Within the second bullet point under Compliance Requirements, 'NLA' should read 'work settings', as follows: "Calculations that show the work settings that are within eight metres of vision glazing as a fraction of the total work settings."

In the last paragraph in Compliance Requirements, 'NLA' should also read 'work settings', as follows: "The Assessor(s) will not award points unless it is demonstrated that the required work settings are within eight meters..."

1. If the office space opens directly to the atrium (i.e., no internal glazing is installed), then the internal perimeter of the atrium may be used for the calculations.
2. The base of the internal atrium is considered to be at the lowest level of Class 5 Commercial Office space (even if the actual base of atrium is several floors lower).
3. The minimum daylight factor of 3.5% can be demonstrated either at the base of the atrium (as per the Technical Manual), OR at the base of each level for which compliance with the Credit Criteria is claimed.
4. In 'Additional Guidance', "minimum 8m sight line across the atrium" can be no less than 45 degrees to the vision glazing or atrium edge. The atrium must be at least 8 meters wide at **any point** to which the line of sight is demonstrated.

IEQ-10 'Internal Noise Levels'

CIR Ruling: The Credit Interpretation Request to alter the band of reverberation times due to a non-standard workplace or to deem the credit 'Not Applicable' is denied because the warehouse will host office-related tasks (making it a standard workplace), and it is not clear why higher volume of space suggests that different criteria is acceptable.

CIR Ruling: The Credit Interpretation Request (CIR) to deem the mechanical engineer's contractual obligation to meet the Credit Criteria as alternative but equivalent compliance with the Aim of the Credit is denied as it poses an increased measure of uncertainty over the facility's attributes. Green Star assesses building attributes and rewards them for ensuring a superior environmental outcome; while in the areas of management, contractual relationships are a viable measure of outcome, in the areas of design they are not so in part because subsequent design decisions will require client endorsement prior to implementation (due to cost implications).

As acoustic reports are very frequently questioned in the Round 1 assessment, the GBCA offers the following advice to enhance their ability to communicate compliance:

- The acoustic consultant must reach a conclusion that supports compliance with the Credit Criteria.
- The data provided in the report should clearly justify the conclusion and account for all constant noise sources (hydraulic and mechanical systems that are both internal and external to the space, traffic, etc.).
- In most cases, it is in the interest of the project to provide a summary table listing the noise levels in all relevant spaces.

Technical Clarifications & CIR Rulings

Green Star – Office Interiors v1 & v1.1

Indoor Environment Quality

IEQ-11 'Volatile Organic Compounds'

While all tenant-installed partitions (including the stud-and-gypsum partitions constructed on site) are to be included in the 'Walls & Partitions' Calculator, only the prefabricated partitions should be considered for this credit.

As per the current wording of the Technical Manual, paint for both internal and external applications on site must comply with the Credit Criteria.

Any applications/products for adhesives and sealants that are not identified (e.g. fire sealant) in the matrix, should be considered architectural sealants and the relevant threshold of 250 g/litre applies.

CIR Ruling: The only type of flooring that the credit currently addresses is carpet. Projects may claim this credit for all flooring in the project if all flooring meets the Credit Criteria that is currently stipulated for carpet.

Reused items are not addressed by this credit and do not need to demonstrate compliance with the Credit Criteria.

It must be clear that the evidence accounts for all uses of the relevant product(s) in the project, i.e. through using the word 'all' in the specification or, where appropriate, providing a summary table listing all uses and the attributes of the material(s) used.

CIR Ruling: The Credit Interpretation Request (CIR) to provide a letter from the architectural practice manager (stating that low-VOC paints were used) instead of the inclusion of VOC levels in the specification is **denied** because the two documents are not considered equivalent.

IEQ-11 'Volatile Organic Compounds': Paint

The criteria for VOC content of paint in IEQ-11 'Volatile Organic Compounds' refers only to paint applied on site (e.g., excludes paint applied at a factory). It applies to ALL paint applied on site, whether it is exposed or concealed.

The table of VOC content criteria is for latex-based paint only; the only criteria for all solvent-based paint is that it must not exceed 200g/l in VOC content.

The credit assesses the VOC content, not emissions, hence the number of layers is irrelevant.

The credit assesses as-applied paint, hence the documented content must be inclusive of tints.

IEQ-11 'Volatile Organic Compounds': Sealants/Adhesives

95%, not 100% of all sealants/adhesives (fitout items excluded) must comply with the Credit Criteria.

IEQ-11 'Volatile Organic Compounds': Fitout Items

95%, not 100% of fitout items must comply with the Credit Criteria.

Only tenant-installed, demountable/modular partitions must be included in the calculations.

IEQ-12 'Formaldehyde Minimisation'

E1 and E0 are commonly-known terms in the building and fit-out industry and are recognised in Green Star- Office Interiors v1.1 according to 'rate-based' as well as 'concentration-based' emission testing results.

'Rate-based' Standards / Testing Methods recognised as acceptable means of compliance with the Credit Criteria include: ASTM D5116, EN 13419, DIN EN717-2 and JIS A 1901

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Indoor Environment Quality

Products demonstrating formaldehyde emission 'rates' of less than or equal to 0.100 +/- 0.005 mg/m²/hr are compliant for this credit. (This is the equivalent to a rating of less than or equal to E1).

E1 and E0 as 'rate-based' emission results are defined as:

E1: 0.060 to 0.100 +/- 0.005 mg/m²/hr;

E0: less than or equal to 0.050 +/- 0.005 mg/m²/hr.

Super E0: less than or equal to 0.040 +/- 0.005 mg/m²/hr

'Concentration-based' Standards and Testing Methods recognised as acceptable means of compliance with the Credit Criteria include:

- AS/NZS 2269:2004, testing procedure AS/NZS 2098.11:2005 method 10 for plywood;
- AS/NZS 1859.1:2004 - particle board, with use of testing procedure AS/NZS 4266.16:2004 method 16;
- AS/NZS 1859.2:2004 - dry processed fibreboards (MDF), with use of testing procedure AS/NZS 4266.16:2004 method 16;
- JIS A 5908:2003- Particleboard and Plywood, with use of testing procedure JIS A 1460; and
- JIS A 5905:2003 - dry processed fibreboards (MDF), with use of testing procedure JIS A 1460

Products demonstrating formaldehyde 'concentration' emission rates of less than or equal to 1.0mg/L (<1 part per million) are compliant for this credit. (This is the equivalent to a rating of less than or equal to E1)

'Concentration-based' emission results are defined by AS/NZS 1859:2004 as:

E1: 1 mg/L to .6 mg/L

E0: less than or equal to 0.5 mg/L

Super E0: less than or equal to 0.3 mg/L is only recognised in the F4Star benchmark in the Japanese Standard JIS A 5905:2003 - dry processed fibreboards. (Super E0 is not referenced by AS/NZS 1859:2004)

E1 or E0 limit under AS/NZS 2269:2004, testing procedure AS/NZS 2098.11 for plywood is acceptable means of compliance with the Credit Criteria.

Correction: DIN EN 717-2 (not DIN EN 717-1) complies with the Credit Criteria because it provides 'rate-based' emission results which enable calculation of net-best air quality that meets best human exposure standards (reported in mg/m²/h). DIN EN 717-1 measures emissions by chamber testing but reports in mg/m³. This does not meet the Credit Criteria because the cubic metre measurement of the chamber space in which the products are tested do not correspond to the differing cubic metre measurements of the actual space in which a product will be placed.

JIS A 5908:2003-Particleboard is appropriate for meeting the Credit Criteria, as JIS A 5908 for additional product types would be.

This credit addresses all composite wood products, including plywood, particleboard and MDF.

Reused items are not addressed by this credit and do not need to demonstrate compliance with the Credit Criteria.

It must be clear that the evidence accounts for all uses of the relevant material in the project, i.e. through using the word 'all' in the specification or, where appropriate, providing a summary table listing all uses and the attributes of the material(s) used.

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Indoor Environment Quality

Products made completely of laminate which are not pressed onto a wood-product substrate, (e.g. High-Pressure Laminate and Compact Laminate) are not considered to be composite wood products and are therefore not subject to the formaldehyde minimisation credit in Green Star rating tools.

Products made completely of laminate that are not pressed onto a wood-product substrate, (e.g. High-Pressure Laminate and Compact Laminate) are not considered to be composite wood products for the purposes of Green Star and are therefore not subject to the Credit Criteria of this credit.

IEQ-14 'Tenant Exhaust'

To be deemed enclosed, the photocopy room must have full-height partitions on all sides and a door that can be shut.

IEQ-15 'Indoor Plants'

The plants do not have to be in individual pots, but rather be provided at the same ratio of planting surface to work settings, distributed over the NLA.

CIR Ruling: The Credit Interpretation Request (CIR) to deem one plant (for one point) or two plants (for two points) per 30m² NLA as equivalent of the current Criteria is **granted** provided that the plants are distributed across the NLA as per the Technical Manual:

- 1 point = one large or two small plant per 30m² NLA; and
- 2 points = one large or two small plants per 15m² NLA.

For Green Star – Office Interiors v1 and Green Star – Office Interiors v1.1, both approaches (the one in the Technical Manual and the one outlined above) are acceptable.

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Indoor Environment Quality

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Energy

Ene-1 'Energy' and Ene-2 'Energy Improvement'

Whatever the occupant density, the default of one occupant per 18 sq. m. must be used.

CIR Ruling: The Credit Interpretation Request to alter the time schedules of the ABGR Validation Protocol is denied because Green Star seeks to assess fitouts on an equitable basis, therefore prescribing any variables that are operational in nature. Please refer to the CIR Ruling for this credit on the website.

CIR Ruling: Equipment in non-office spaces can be excluded from the assessment provided that it meets the requirements of the ABGR Validation Protocol for Tenancy Energy Estimation such as separate metering (refer to clause 4.4.2).

CIR Ruling: Projects may use actual values for the peripheral loads in the ABGR Validation Protocol for Tenancies formula if they demonstrate (via a schedule with supporting documentation) that their peripheral loads are less than the normalized 80 w/person. The rest of the values used for the estimation must be as per the current ABGR Validation Protocol for Tenancies.

In the Validation Protocol, the default allowance for peripherals of 80W per PC should be subtracted from the default allowances for standard office equipment:

Case	Default Equipment Load per Desk (80W peripheral load included):	Equipment Load per Desk if actual peripheral loads are calculated and used:
Standard office equipment, unknown screen type OR with all CRT screens	220W	140W + actual peripheral load
Standard office equipment, with all LCD screens	190W	110W + actual peripheral load
Standard office equipment, with all laptops	100W	20W + actual peripheral load

The allowance for peripheral loads includes standard office equipment (if applicable):

- server/computer rooms (a conservative default is 1,000W/m² (excluding HVAC); it is acceptable to give actual value from the previous site on a per-square-meter basis)
- printers
- photocopiers
- fax machines
- scanners
- PC peripherals
- task lighting
- tea room facilities (other than refrigerators, freezers, refrigerated drink dispensers and hot water/chilled water units, which are addressed separately - see the Validation Protocol)

Therefore, values for the same equipment must be included in the calculations of actual peripheral loads.

According to the ABGR Validation Protocol, the actual number of computers must be used, whether it is higher or lower than one unit per workstation. You may calculate this on the number of CPUs (i.e. disregard multiple screens per CPU).

Projects can use the version of the ABGR Validation Protocols stipulated in the Technical Manuals or subsequent versions, unless otherwise state on the GBCA website.

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Energy

CIR Ruling: For the purposes of energy modeling in accordance with the ABGR Validation Protocol, fitouts in Victoria and South Australia may specify New South Wales as their location.

CIR Ruling: It is not the intent of Green Star - Office Interiors to benchmark the operational performance of fitouts and, as a result, the tool provides comparable benchmarks of the fitout's capability rather than estimates of actual performance. Therefore, operational data and/or an ABGR Certificate are not acceptable evidence for Ene-1 or Ene-2. An estimation of the fitout's potential to reduce Greenhouse Gas emissions must be undertaken in accordance with the ABGR Validation Protocol for Tenancies.

CIR Ruling: The Credit Interpretation Request (CIR) to use an approximation of the estimated thermal and visual properties of an existing façade (e.g., the U-values and shading coefficients of walls/glazing) is granted conditionally on the ability of the submission to justify that at all times, the assumptions have been conservative, i.e. described the 'worst case scenario'. Should any project seek confirmation whether its assumptions are sufficiently conservative, CIRs justifying the assumptions must be submitted.

CIR Ruling: The Credit Interpretation Request (CIR) to alter the time schedules of the ABGR Validation Protocol to reflect automatic shutdown of equipment each night is denied because this would alter default values used by all projects, jeopardising equitable assessment and disadvantaging projects that have already gone through assessment.

CIR Ruling: The Credit Interpretation Request (CIR) to attribute the energy generated by the tenancy on site towards its reduction in greenhouse emissions is **granted conditionally** on the following points being clearly demonstrated in the submission:

- The power generated by the tenancy (wherever the generation occurs in the building) is recirculated directly to the substation power board with contractual metering between the building owner and the tenant;
- A single-line electrical diagram demonstrating that the tenant loads and the co-generation connection;
- Evidence that the energy subtraction is factored in the ABGR energy modelling as per Green Star – Office Interiors v1.1 Ene-1 requirements; and
- Evidence that the co-generation supply will be attributed wholly to the tenant's electrical bill (e.g. that the tenant has not installed authority sub-meters).

Ene-2 'Energy Improvements'

CIR Ruling: The Credit Interpretation Requests (CIR) to alter the equipment or time schedules of the ABGR Validation Protocol to reflect automatic shutdown of equipment each night is **denied** because this would alter default values used by all projects, jeopardising equitable assessment and disadvantaging projects that have already gone through assessment.

Ene-3 'Electrical Sub-Metering'

Lighting and small power must be sub-metered separately, i.e. one meter for lighting and one meter for small power.

Ene-4 'Office Lighting Zoning'

An 'individually addressable lighting system' is one in which lighting fixtures can be readdressed/regrouped without rewiring.

As there can be a significant difference in the load between lighting and power, it has been clarified that tenancy lighting and power must be sub-metered separately from each other.

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Transport

Tra-1 'Public Transport'

CIR Ruling: The Credit Interpretation Request (CIR) to deem the private bus transport system with an established route and timetable equivalent to public transport is **granted conditionally** on the project's ability to demonstrate that the future operation of this service is as certain to public transport (i.e. demonstrates alternative but equivalent compliance in respect to longevity, publicity, etc.). Please enter the number and frequency of services into the Public Transport Calculator and provide evidence stipulated in the Compliance Requirements.

CIR Ruling: The Credit Interpretation Request (CIR) to deem the average frequency of services (which individually do not meet the frequency requirements) to be entered into the Public Transport Calculator is **denied** as services with average frequency intervals greater than 30 minutes are not considered to be of the same benefit to building occupants commuting to work.

Revised CIR Ruling: Whenever mandatory parking requirements for the project exist, either within the local planning allowances or Development Approval requirements, they must be used.

However, in cases where requirements:

- do not exist at all; **OR**
- are not specified for the tenancy; **OR**
- are optional; **OR**
- are recommended;

the following two options are available to projects:

- 1) Clearly demonstrate that parking is not provided in excess of one parking space per 100m² of NLA to achieve one point or one parking space per 200m² to achieve two points;
OR
- 2) Submit a Credit Interpretation Request (CIR) to substantiate an argument for equivalent yet alternative compliance with the Credit Criteria.

Tra-2 'Car Parking'

CIR Ruling: The Credit Interpretation Request (CIR) to demonstrate compliance via an alternative benchmark due to the absence of car parking limits provided in the projects DA is **denied** whenever local planning allowances exist.

Tra- 3 'Cyclist Facilities'

In Green Star - Office Interiors, this credit addresses tenancy occupants at the prescribed occupancy of 1 occupant per 15 sq.m. of NLA, not staff and visitors separately like Green Star - Office Design or Green Star - Office As Built.

For owner-occupier projects, cyclist facilities cannot be claimed for the additional point if they were rewarded in the base building rating.

The number of disabled toilets mandated by statutory requirements must be excluded from the calculation. The minimum number of disabled toilets mandated by the BCA cannot contribute to the total number of changing or shower facilities provided, as doing so may detract from their availability for use by disabled persons.

The Technical Manual states that bicycle storage must be "designed to allow both a wheel and the frame to be locked securely to the structure in accordance with AS 2890.3-1993". The referenced AS 2890.3-1993 standard actually stipulates that the bike must be able to be locked to both wheels and the frame (see extract below). The standard must be followed.

"Even if they are fitted out as showers or changing rooms, the minimum number of disabled toilets mandated by statutory requirements cannot contribute to the total number

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Transport

of changing or shower facilities provided, as doing so may detract from their availability for use by disabled persons ” (AS 2890.3-1993, bottom of table 1.1).

The minimum number of disabled toilets mandated by the BCA cannot contribute to the total number of changing or shower facilities provided, as doing so may detract from their availability for use by disabled persons.

Even if they are fitted out as changing rooms, the minimum number of disabled toilets mandated by statutory requirements cannot contribute to the total number of changing facilities provided, as this may detract from their availability for use by disabled persons. Disabled showers do contribute towards the total number of showers provided if they are not stipulated in statutory requirements for the project.

Changing/shower facilities do not have to be aggregated. However, access must be guaranteed and convenient for all building occupants (e.g. not through another tenancy). If changing/shower facilities are located within tenancies rather than in common area, they must be adequately sized for each tenancy based on the default occupancy rate of one person per 15m²., and each location must individually meet the Credit Criteria (e.g. providing excess facilities within one tenancy will not compensate for insufficient facilities in another).

To support the Aim of the Credit, lockers must be located within the changing facilities. Showers must be located within or immediately adjacent to the changing facilities.

Changing facilities (with lockers and showers) do not have to be in the same location as the secure bicycle storage. It is not necessary to provide weather protected access from the secure bicycle storage to the changing/shower facilities. However, the access between the changing/shower facilities and the occupied space (e.g. office) must be weather protected.

CIR Ruling: The Credit Interpretation Request (CIR) to deem any specific bicycle parking system appropriate for meeting the Credit Criteria in respect to bicycle storage is **granted conditionally** on the project’s ability to demonstrate, through its submission for this credit, how the attributes of this system meet the criteria of AS2890.3.

CIR Ruling: The Credit Interpretation Request (CIR) to deem the location of visitor bicycle parking in the third level of basement equivalent to “near a public entrance” is **denied** because the proposed location is not considered to be suitable for visitor bicycle parking and does not meet the Aim of the Credit.

CIR Ruling: The Credit Interpretation Request (CIR) to provide visitor bicycle parking in two different locations is **granted conditionally** on the projects ability to demonstrate that the two different locations individually meet the Credit Criteria.

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Water

Wat-1 'Potable Water Efficiency'

Previously unused water from high-value fresh water sources (e.g., lake, river or bore water) cannot contribute to the amount of non-potable water used. In addition to the surface water table dropping, there is a deficit of groundwater every year, and extracting water from any fresh-water sources merely localises what otherwise would take place on the municipal or state level.

As custodian closet taps are not an occupant amenity, they are not included in the Potable Water Calculator.

The following is acceptable to demonstrate fitting/fixture performance for the Water Calculator for the first six months after the release of a new product, after which the WELS rating will be required:

- a letter from the manufacturer stating the flowrate; and
- results of on-site commissioning demonstrating the achievement of the claimed rate.

For calculating the value (in litres) for dual-flush toilets, please use the 1:2 ratio for full:half flush (e.g. enter "4" for 6/3 toilet (as per page 3 of the credit) or "3.3" for 5/2.5 toilet).

The National Water Conservation Rating and Labeling Scheme ('A' ratings) has been superseded by the Water Efficiency Labeling Scheme ('Star' ratings), and will formally cease on 1 July 2006. However, it does not impact the Green Star Potable Water Calculator, as all inputs must be in litres. Therefore, please convert either rating to litres to use the Calculator.

For more information on the WELS scheme, see www.waterrating.gov.au

The Potable Water Calculator assesses AMENITY fixtures and fittings. Most of the time this will be limited to base building fixtures/fittings, but an executive en suite, for example, would also need to be included. Kitchenette fixtures/fittings are excluded.

Fitouts do not get credit for water recycling initiatives of the base building (the Technical Manual presents a false notion that it should, while the Calculator does not take that into account).

The Potable Water Calculator is not intended to reward fitouts for such base building initiatives as rainwater harvesting or grey- or blackwater recycling. However, if those initiatives were tenant-initiated, the fitout may qualify for Innovation credit. Please provide clear evidence (i.e., proof of payment) of the tenant's contribution to the installation of non-potable water systems.

In order to determine the water consumption (per flush) of dual-flush toilets for the Calculator, it is appropriate to use the current Green Star method (1:3 ratio) OR the WELS calculation method (1:4 ratio).

Although 5A-rated dishwashers are not available in Australia, project can use the 5A water consumption in litres as performance criteria, and demonstrate equivalent savings of potable water. This credit is included in order to communicate the need for change to the supplier industry.

Within this credit, a point can only be awarded for dishwashers where it is demonstrated that the dishwasher(s) installed are equivalent to 5A rated, independent of occupant behaviour. Please use the data provided in the Table below to ascertain the performance of a 5A dishwasher. Alternatively, to make this point in Wat-1 'na', the project can demonstrate that no dishwashers are installed.

'A Rating' for Dishwashers (table below):

<http://www.waterrating.gov.au/publications/pubs/strategic-study.pdf>

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Water

Product	Units of Measurement	A	AA	AAA	AAAA	AAAAA
Dishwashers	Litres/place	>2 to 2.8	>1.5 to 2	>1 to 1.5	>0.8 to 1	0.8 or less

For refurbishment projects **ONLY**, waterless urinals can be deemed 'waterless' without completely removing existing plumbing **IF** the water supply to them has been permanently disabled (i.e., physically dismantled in such a way that reconnection water supply for flushing is NOT an option without additional construction work).

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Materials

General

To claim 'reused' items, a statement from the Interior Designer (DIA or IAID) and supporting evidence must clearly demonstrate that the items were previously used.

If the specification states that the item must be reused, a statement from the Interior Designer must confirm that the specified item was installed on site. The following can also be used as evidence by the Interior Designer:

- The final schedule of furniture, fitting and finishes;
- Purchase receipts should the items have been acquired from a second-hand retailer; and
- A removalist's inventory from the previous location of the item.

Acceptable documentation for Good Environmental Choice Australia (GECA) certified products

1. A copy of the GECA license agreement for the nominated product(s);

OR

2. Printout(s), dated within 12 months immediately preceding Round 1 submission, from the GECA website products register are sufficient evidence of GECA certification and will be accepted in lieu of actual copies of the GECA license agreement.

Materials Calculators

'Manufacturer' refers to the final manufacturer that assembles the product, not all the manufacturers of individual components from raw materials (e.g., steel). If there are two primary manufacturers (e.g., one of the base and one of the tabletop), both would need to provide evidence that is required of the 'manufacturer'.

To discourage the removal of new base building carpet installed prior to the tenancy fitout, such carpet can be deemed 'reused'. However, such a claim disqualifies the project from claiming Eco-5 'Shell and Core or Integrated Fitout', as that credits rewards a preferable environmental outcome, i.e. avoiding unnecessary installation in the first place.

Mat-1 'Workstations' through Mat-7 'Joinery'

A product that has been awarded the Good Environmental Choice label by the Australian Environmental Labeling Association (AELA) **automatically** achieves 'product score' of 100 in the calculators. Choose 'Environmentally Innovative' under the pull-down menu for Product Type. These products need to present no documentation for the assessment besides their AELA Certificate.

Reused components (e.g., tabletop) count towards the 'Eco-preferred Content' of a product, assuming relevant evidence is available.

For 'Durability', evidence for "<7 years" does not need to be provided as it does not increase the 'Product Score'.

All columns of the Calculators refer to the entire product. 'Durability' may be established against **only** the 'white' (non-upholstered) item **IF** the 'white' item is clearly designed for disassembly to allow for reupholster **AND** the supplier of the upholstering fabric commits to product stewardship (reclaiming the current fabric if the tenant chooses to reupholster). In all other cases, 'Durability' **must** be documented against the 'weakest link' of the product. For example, if the fabric has warranty for 10 years and the 'white' chair - for over 15 years, enter '7 to 10 years' in the cell.

Where evidence is provided for ISO 14001 certification of the EMS, evidence of EMS is not necessary.

In practical terms, a workstation often consists of the work surface itself, the storage element(s) and screening device(s). All those elements from one manufacturer provided by one workstation supplier can be considered a 'workstation' for the purpose of Mat-1 'Workstations'. The complete workstation should be entered into one line of the Calculator, and inputs should reflect 'the weakest link', should there be a difference (e.g., durability should be assessed against the least durable of the components). All

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Materials

individually purchased storage units and partitions shall be assessed within the respective Mat-3 'Walls & Partitions' and Mat-6 'Storage' Calculators.

Product stewardship is a product-centred approach to environmental protection that implies that those in the product's life cycle (e.g., manufacturers, retailers, users) need to share responsibility for reducing its environmental impact. Practically, product stewardship is understood as the supplier's service to the customer to collect the product for reuse, recycling or reprocessing whenever the customer no longer requires its service.

As an interim step in the industry's transition, Green Star - Office Interiors v1 and Green Star - Office Interiors v1.1 allow for this commitment to take force "at the end of [the product's] service life", e.g. after the warranty period has expired. The submission must include the supplier's contractual obligation to collect the product for reuse, recycling or reprocessing. The Certified Assessor(s) look for a confirmation that the item will not be sent to the landfill, such as a description of what will happen to the product and what facilities or arrangement will enable the supplier to divert it from landfill.

Mat-2 'Flooring'

Whenever underlay is used, it must be assessed by the Flooring Calculator. The floor finish and underlay can be jointly entered into one line of the Calculator, in which case inputs should reflect "the weakest link" (e.g., durability should be assessed against the least durable of the two components). Otherwise, the floor finish and underlay can be entered into the Calculator separately (on separate lines). This will increase the "Total Floor Area within the Fitout", as the same floor area is deemed to be covered twice. The Certified Assessors will not award points unless the impact of the underlay has been taken into account.

Mat-3 'Walls & Partitions'

Doors are excluded from this Calculator.

All tenant-installed partitions (including the stud-and-gypsum partitions constructed on site) are to be included in the 'Walls & Partitions' Calculator.

Workstation partitions are considered partitions, not workstations. The complete workstation should be entered into one line of the Calculator, and inputs should reflect 'the weakest link', should there be a difference (e.g., durability should be assessed against the least durable of the components). All individually purchased storage units and partitions shall be assessed within the respective Mat-3 'Walls & Partitions' and Mat-6 'Storage' Calculators.

As stipulated within the Technical Manual, the "Built Zone" must be enclosed by full height walls or partitions therefore it only includes areas enclosed on all four sides. However, any space that is enclosed by full height walls and/or partitions on four sides is a 'built zone', regardless of whether the enclosure is solid or interrupted by glazing or openings (e.g. full height door opening with no door).

Mat-4 'Shell & Core or Integrated Fitout'

While the Credit Criteria states "shell and core OR integrated fitout", any combination of these is acceptable, i.e. areas delivered as shell-and-core and areas delivered as integrated fitout must jointly contribute the required proportion of the NLA.

CIR Ruling: The installation of the raised floor system and the perimeter cell air conditioning displacement system is appropriate for Shell & Core project delivery as long as carpet tiles are not installed.

Mat-9 'Waste Management for Tenancy Operation'

Storage space provisions of this credit are **in addition** to base building provisions and must be provided on **each** floor of a multi-storey tenancy.

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CIR Ruling: It is acceptable to meet the Credit Criteria of Mat-9 'Waste Management for Tenancy Operation' with more than one dedicated storage area. However, all storage areas dedicated to recycling must meet all the Credit Criteria and Additional Guidance requirements and be functional (e.g., an area may not be so small that it cannot house at least 3 bins). An area dedicated exclusively to storage of rubbish (non-recycling waste) should be excluded. In addition, where other tenants are present in the building, it must be clearly demonstrated that the fitout's use of the recycling waste storage facilities is not compromised (e.g., how a proportion of facilities is dedicated for exclusive use of the fitout).

Mat-10 'PVC Minimisation'

If specified cabling has PVC sheathing but not PVC insulation, the submission must include documentation by the manufacturer to justify the reduction in PVC through avoidance of PVC insulation. The same logic would hold true for other composite products commonly including PVC.

It must be clear that the evidence accounts for all uses of the relevant material in the project, i.e. through using the word 'all' in the specification or, where appropriate, providing a summary table listing all uses and the attributes of the material(s) used.

Mat-11 'Sustainable Timber'

The last 'hands' to touch a FSC-certified piece of timber (e.g., reseller of a finished product) must have a Chain of Custody Certificate; otherwise there is no sure way to know that the timber product is in fact FSC-certified.

A current list of holders of the FSC chain-of-custody and management Certificate can be found on the following website: <http://www.fsc-info.org/>.

It must be clear that the evidence accounts for all uses of the relevant material in the project, i.e. through using the word 'all' in the specification or, where appropriate, providing a summary table listing all uses and the attributes of the material(s) used.

For a product to receive points within this credit for FSC certification, a full chain of custody (CoC) must exist. That is, if a board manufacturer who has FSC certification sells the board to a contractor for installation on the building, full chain-of-custody exists. However, if the board manufacturer provides product to the workstation manufacturer who doesn't have FSC certification, who then sells it to the project, then CoC is lost, and points will not be awarded for that workstation. The following is an extract from the Forest Stewardship Council website: www.fsc.org

Chain-of-custody certification provides a guarantee about the production of FSC-certified products. Chain-of-custody is the path taken by raw materials from the forest to the consumer, including all successive stages of processing, transformation, manufacturing and distribution. Companies or individuals that process, transform, or trade (take ownership of) FSC certified forest products must be CoC certified.

Industry Type	Process Stage	Chain-of-custody required?
Building & Construction	<i>Sawmills, Lumberyards</i>	YES
	<i>Manufacturers of forest products</i>	YES
	<i>Timber brokers</i>	YES
	<i>Artisans, carpenters</i>	YES
	<i>Building contractors</i>	NO*
	<i>Retailers (i.e. DIY stores)</i>	NO

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<i>Printing & Paper</i>	<i>Pulp, paper producer</i>	<i>YES</i>
	<i>Paper merchant</i>	<i>YES</i>
	<i>Broker</i>	<i>YES</i>
	<i>Printers</i>	<i>YES</i>
	<i>Publisher</i>	<i>NO</i>

**The last person in the chain of ownership for materials being supplied to the construction project does NOT need to be CoC certified, but the company those materials are being received from does. The important issue here is ownership. For example, a spec contractor must be CoC certified as they will not be the final owner of the FSC materials.*

Products made completely of laminate which are not pressed onto a wood-product substrate, (e.g. High-Pressure Laminate and Compact Laminate) are not considered to be composite wood products and are therefore not subject to the sustainable timber credit in Green Star rating tools.

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Land Use & Ecology

Eco-1 'Green Star - Office As Built Certified Building'

In order for a fitout to claim points, its base building must have been certified by the time of the Round 2 assessment at the latest; neither a Green Star - Office Design Certified Rating nor registration for Green Star - Office As Built will suffice. It is in the interest of the fitout to stay informed about the base building assessment process, and to coordinate the fitout submission after the base building submission has been reviewed.

A Green Star - Office Design Certified Rating does not qualify a project for this credit. The Green Star - Office As Built assessment is undertaken after practical completion and validates that the commitments made in the design phase were carried through construction. In order for this credit to be claimed, the base building must have been certified under Green Star - Office As Built at the time of the fitout's submission.

CIR Ruling: The Credit Interpretation Request (CIR) to deem this credit 'Not Applicable' due to the building being an existing building is denied because the credit aims to create an incentive for base building owners to achieve a Green Star rating for the completed development. However, in response to this CIR, the Credit Criteria has been expanded: compliance can also be achieved with a Green Star - Office Existing Building (PILOT or final) Certified Rating.

Eco-2 'Building Layout Efficiency'

CIR Ruling: If the tenancy fitout covers numerous floors, the BLE must be calculated as a total figure over all whole floors OR over all the floors of the building.

The perimeter atrium is considered a part of Core Structure.

The credit assesses the base building efficiency, NOT the efficiency of the furniture layout (i.e., how many people can be accommodated), hence for calculations, disregard the furniture layout and superimpose the required Primary Circulation, 1.5m wide (secondary and tertiary circulation are irrelevant), in the manner prescribed. All the measurements in the definition of Primary Circulation must be adhered to.

Eco-3 'Building Environmental Management' and Eco-4 'Commitment to Building Performance'

Where the lease is already in place, a separate contract between the tenant and the landlord is acceptable in place of the lease as stipulated in the Technical Manual. However, the submission would need to include evidence of contractual obligations, including penalty clauses, for the adherence to the requirements in Eco-3 and Eco-4.

Eco-5 'Shell & Core or Integrated Fitout'

While the Credit Criteria states "shell and core OR integrated fitout", any combination of these is acceptable, i.e. areas delivered as shell-and-core and areas delivered as integrated fitout must jointly contribute the required proportion of the NLA.

CIR Ruling: The installation of the raised floor system and the perimeter cell air conditioning displacement system is appropriate for Shell & Core project delivery as long as carpet tiles are not installed.

If a tenant moves into a space newly fitted-out by the base building:

- A. The fitout will be deemed "an integrated fitout" for the purpose of this credit (to qualify for points) if the tenant accepts the fitout as is, i.e., undertakes no modification to 95% of the fitout. This solution is considered to demonstrate equivalent but alternative compliance with the Credit Criteria, as it delivers the same environmental outcome as an integrated fitout (i.e., no waste from re-fit). To confirm that 95% of the base building fitout has not been modified, please submit a report from the tenant detailing the modifications that took place (substantiated with "before"

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and "after" documentation, e.g. photographs or drawings, where appropriate), in addition to any other relevant documentation stipulated in the Technical Manual.

Such a project can claim flooring as 'reused' in the Mat-2 'Flooring' Calculator.

B. The fitout will not be deemed "an integrated fitout" for the purpose of this credit if the tenant modifies over 5% of the fitout. However, if any of the floor finish is retained, it can be deemed 'reused' for the purpose of Mat-2 'Flooring' to discourage unnecessary removal of new flooring.

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Emissions

NONE

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Innovation

NONE

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