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## Technical Appendices

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## Appendix 1. Analysis against IPCC Report

The United Nations (UN) released the Special Report on Global Warming of 1.5°C in October last year. The report outlines the need for urgent and deep emissions reductions. It includes several recommendations relevant to the built environment.

Last year, GBCA indicated strongly through the Carbon Positive Roadmap and the Green Star Future Focus paper that the next version of Green Star would aim to comply with recommendations in this report. Additionally, during the scoping phase for Green Star for New Buildings, 100% of respondents to the survey agreed that Green Star must respond to the stringent 1.5°C target.

Green Star for New Buildings introduces a number of credits and requirements in line with these recommendations. Green Star for New Buildings aligns with and responds to the Special Report. Driving carbon reductions in the built environment is a strategic priority for the GBCA.

The table below outlines the key recommendations made in the IPCC report, and illustrates how Green Star for New Buildings responds to these recommendations.

Sector	IPCC Recommendation	Report ref.	Green Star for New Buildings
<b>Buildings</b>	Electrification of the building sector, move away from fossil fuels	2.4.3.2.	Green Star for New Buildings is introducing credits and requirements around the adoption of renewable energy and the phase out of fossil fuels. The following credits in the Positive category respond to this recommendation directly: <ul style="list-style-type: none"> <li>• Energy source and fossil fuels</li> <li>• Other carbon sources</li> <li>• Carbon in materials</li> </ul>
	Decarbonisation through integrated renewable energy solutions	2.4.3.2.	Green Star for New Buildings requires all 6 Star-rated assets to be net zero carbon in operations, meaning they must be powered by 100% renewable energy through on-site and off-site solutions. All other ratings will be rewarded in the rating tool by adopting renewable energy solutions.
	Heating and cooling reductions due to building envelope improvements	2.4.3.2.	The 'Energy and Peak Demand' credit requires projects to demonstrate energy efficiency improvements over the National Construction Code 2019. Heating and cooling reductions will be a result of this.
	Energy savings from shifts to high-performance lighting, appliances, and water heating equipment	2.4.3.2.	The 'Energy and Peak Demand' credit requires projects to demonstrate energy efficiency improvements over the National Construction Code 2019. This improvement will translate into energy savings.
	Initiatives to improve Consumer choices, behaviour and building operation	2.4.3.2.	The 'Handover and Tenant Engagement' credit in the Responsible category will encourage significant engagement with tenants in buildings to change behaviours and take into consideration their energy use in buildings.



Sector	IPCC Recommendation	Report ref.	Green Star for New Buildings
Energy Grid	Rapid and profound near-term decarbonisation of energy supply (i.e. renewable energy)	2.4.1 and 2.4.2.	Green Star for New Buildings requires all 6 Star-rated assets to be net zero carbon in operations, meaning they must be powered by 100% energy through on-site and off-site renewable solutions.
	Switching from fossil fuels to electricity in end-use sectors	2.4.3.	The credit 'Energy Source and Fossil Fuels' has been introduced to encourage buildings to be built with electricity use for all major systems rather than having those systems use fossil fuels.
Transport	Increase in public transport, reducing number of carbon-emitting vehicles on roads	2.4.3.3.	The 'People Movement' credit in the Places category incentivizes and rewards projects that prioritise sustainable forms of transport. A minimum requirement is also being introduced encouraging active transport facilities in all buildings.
	Switch to electric or hybrid-electric vehicles	2.4.3.3.	The installation of infrastructure for the charging of electric vehicles in buildings will be included within the rating tool.
	Structural changes that avoid or shift transport activity	2.4.3.3.	Whilst this recommendation is best addressed through organisational policies (e.g. flexible working arrangements), Green Star for New Buildings will encourage and reward projects that can demonstrate an outright reduction in travel demand.
	Outright reductions in travel demand	2.4.3.3.	
Land Use	Carbon capture and storage (CCS) solutions through land use	2.4.2.3.	The Nature category includes the 'Offsite restoration' credit, which requires projects to contribute towards the protection, conservation or restoration of ecosystems. The credits 'Other Carbon Sources' and 'Embodied Carbon' in the Positive category will promote the use of offsets with a view to forestation and land use carbon capture technologies.
Materials	Reducing the embodied energy in building material	2.4.3.2.	<p>Green Star for New Buildings has the following proposed requirements for embodied carbon:</p> <ul style="list-style-type: none"> <li>• 4 Star show a 10% reduction in embodied carbon</li> <li>• 5 Star show a 10% reduction in embodied carbon</li> <li>• 6 Star show a 20% reduction in embodied carbon</li> </ul> <p>These requirements are to be met through building designs, not offsets. In addition a new credit in the Positive category, 'Embodied Carbon' recognizes further reductions in the carbon impact from materials.</p>



## Appendix 2. Analysis against United Nation’s Sustainable Development Goals

The UN’s Sustainable Development Goals (SDGs) are a call to action of 17 goals and 169 targets covering environmental, social and economic issues. Governments and private organisations report against the goals and targets to demonstrate their commitment to a better world. The GBCA has received considerable feedback that the issues the SGDs seek to address should be factored into Green Star. By doing so, Green Star users could use their certifications to align with the Goals and demonstrate that they are taking action and responding appropriately.

The analysis below details how Green Star for New Buildings responds to the goals and their respective targets. At this stage, the analysis is mostly at a conceptual level, as the details for Green Star for New Buildings credits have yet to be explored in depth. The targets and indicators will be factored in when developing the credit further.

For the purpose of this analysis, all SGD targets and the indicators used to measure them are taken from the Sustainable Development Goals Transforming Australia website. By doing so, the analysis is exclusively relevant to the Australian response to the goals.

Finally, the GBCA note that Green Star for Buildings addresses the goals and targets both *directly* or *indirectly*. When specific credits within the new framework seek to achieve the outcomes the SGDs demand, these have been stated as direct. Where a credit, a Green Star rating, or other GBCA initiatives (e.g. advocacy) would lead to a contribution to the SDG target, but not address the issue stated, these are considered indirect.

SDG	Target and/or Indicator	Direct / Indirect	Notes
<b>GOAL 3</b> <b>Good Health and Wellbeing</b> Ensure healthy lives and promote well-being for all at all ages.	<b>Target 3.4</b> By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being <b>Indicator:</b> Psychological distress, proportion of persons with high/very high psychological distress	Indirect	Whilst Green Star for New Buildings does not address the targets outlined in the goal, it does contribute towards the indicator. The Healthy category has many credits which deal with mental health, whilst the People category addresses social health. These credits intend to reduce psychological distress through responsible building designs and / or initiatives. These aspects are highlighted in the indicator in this goal.
<b>GOAL 5</b> <b>Gender Equality</b> Achieve gender equality and empower all women and girls	<b>Target 5.2</b> Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation	Indirect	Green Star for New Buildings addresses this issue through the Sustainable procurement credit in the Responsible category, which requires buildings to look down their supply chain. Human rights issues, notably modern slavery, will be factored into the design of the credit.



SDG	Target and/or Indicator	Direct / Indirect	Notes
<b>GOAL 6</b> <b>Clean Water and Sanitation</b> Ensure availability and sustainable management of water and sanitation for all	<b>Target 5.5.</b> Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.	Indirect	While not directly addressed in the rating tool, there are a number of credits targeting the exclusionary nature that can be created through the built environment. For example, the 'Amenities' credit in the Places category intends to enable building occupants to attend to personal tasks and duties on site. This includes childcare facilities, parent rooms, and better design of building facilities.
	<b>Target 6.3</b> By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	Direct	Green Star for New Buildings addresses this issue directly through the 'Water pollution and runoff' credit in the Nature category. Furthermore, 'Using water sustainably' in the Positive category deals with the harvesting and/or recycling of water.
	<b>Target 6.4</b> By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Direct	Green Star for New Buildings addresses this issue through the 'Using water sustainably' credit. This credit incentivises projects to adopt fixtures, appliances and systems that reduce water consumption within the building. This, in turn, reduces the demands on external water sources.
	<b>Target 6.5</b> By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	Direct	The concept of integrated water management is part of the 'Water pollution and runoff' credit in the Nature category.
	<b>Target 6.6</b> By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	Direct	The 'Impacts to Nature' and 'Water Pollution and Runoff' credits in the Nature category deals with protecting and enhancing ecosystems, water-related ones included.



SDG	Target and/or Indicator	Direct / Indirect	Notes
<b>GOAL 7</b> <b>Affordable and Clean Energy</b> By 2030, ensure universal access to affordable, reliable and modern energy services	<b>Target 7.2</b> By 2030, increase substantially the share of renewable energy in the global energy mix	Direct	Green Star for New Buildings addresses this issue directly through the Positive category, specifically the 'Energy source and fossil fuels' credit.  All 6 Star buildings will also be required to be net zero carbon in operations and reduce their embodied carbon. They need to be 100% powered by renewable energy, through both on-site and off-site solutions.
	<b>Target 7.3</b> By 2030, double the global rate of improvement in energy efficiency	Direct	Green Star for New Buildings includes the 'Energy and Peak Demand' credit, which deals with energy efficiency improvements. The requirement to be at least 10% more efficient than the NCC 2019 will remain.
<b>GOAL 8</b> <b>Decent Work and Economic Growth</b> Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	<b>Target 8.4</b> Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead	Indirect	A Green Star rating, and all it entail and delivers, contributes towards this target.
<b>GOAL 9</b> <b>Industry, Innovation and Infrastructure</b> Build resilient infrastructure, promote inclusive and	<b>Target 9.1</b> Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	Indirect	Green Star for New Buildings requires buildings to consider their impacts on surrounding infrastructure. Furthermore, many building types that could be rated under Green Star for New Buildings are can be classified as social infrastructure projects.



SDG	Target and/or Indicator	Direct / Indirect	Notes
sustainable industrialisation and foster innovation	<p><b>Target 9.4</b></p> <p>By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities</p>	Indirect	Green Star for New Buildings requires all developments, many of which fall under large-scale infrastructure projects, to embed sustainability into their design, construction and operations. , including the adoption of environmentally sound technologies.
<p><b>GOAL 10</b></p> <p><b>Reduce Inequality</b></p> <p>Reduce inequality within and among countries</p>	<p><b>Target 10.2</b></p> <p>By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status</p>	Indirect	The People category includes the Design for diversity credit. This credit was inspired by this SDG target, and while related, the ambitions of the Goal are beyond the scope of what Green Star can achieve through a building level rating.
<p><b>GOAL 11</b></p> <p><b>Sustainable Cities and Communities</b></p> <p>Make cities and human settlements inclusive, safe, resilient and sustainable</p>	<p><b>Target 11.2</b></p> <p>By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons</p>	Direct	Green Star for new buildings includes the 'People Movement' credit, which prioritises sustainable forms of transport and incentivise and rewards projects that provide low-carbon modes of transport for building occupants and visitors. The 'Goods Movement' credit also addresses this issue.



SDG	Target and/or Indicator	Direct / Indirect	Notes
	<p><b>Target 11.5</b></p> <p>By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations</p>	Indirect	<p>Green Star for New Buildings includes the Resilience category, which looks at the impact on people due to disasters, water-related ones included.</p>
	<p><b>Target 11.6</b></p> <p>By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management</p>	Direct	<p>Green Star for New Buildings includes numerous credits that address these issues:</p> <ul style="list-style-type: none"> <li>• Responsible: Responsible construction practices (for waste reduction and diversion);</li> <li>• Healthy: Exposure to toxins</li> <li>• Positive: Energy source and fossil fuels</li> <li>• Nature: Water pollution and runoff</li> </ul> <p>Other credits in the new framework address this issues indirectly.</p>
	<p><b>Target 11.7</b></p> <p>By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities</p>	Direct	<p>Green Star for New Buildings has the following credits that directly address this goal:</p> <ul style="list-style-type: none"> <li>• Places: Enjoyable places; Amenities</li> <li>• People: Design for diversity</li> <li>• Nature category, specifically the 'Human Connection to Nature' credit</li> </ul>



SDG	Target and/or Indicator	Direct / Indirect	Notes
<b>GOAL 12</b> <b>Responsible Consumption and Production</b> Ensure sustainable consumption and production patterns.	<b>Target 12.2</b> By 2030, achieve the sustainable management and efficient use of natural resources	Direct	This goal is a principle of the Green Star rating system. Specifically, Green Star for New Buildings includes the following credits that address this issue: <ul style="list-style-type: none"> <li>• Responsible: Sustainable Procurement; Sustainable products;</li> <li>• Positive: Energy source and fossil fuels; Carbon in materials; Impacts from materials</li> <li>• Nature: Offsite restoration</li> </ul>
	<b>Target 12.3.</b> By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	Indirect	Green Star for New Buildings does not include a credit that addresses this issue directly, however, it has been identified as an opportunity for a sector-specific credit, notably for retail buildings.  Addressing this issue will fall under the Leadership category too.
	<b>Target 12.4.</b> By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment	Direct	Green Star for New Buildings includes the following credits that directly address this issue: <ul style="list-style-type: none"> <li>• Responsible: Responsible construction practices</li> <li>• Healthy: Exposure to toxins</li> <li>• Positive: Energy source and fossil fuels; Impacts from materials</li> <li>• Nature: Water pollution and runoff</li> </ul>
	<b>Target 12.5</b> By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	Direct	Green Star for New Buildings actively rewards projects that reduce waste generation, at both the construction and operational phases. The following credits in the Responsible category address this issue directly: 'Collaborative design' (engagement of a waste specialist) and 'Responsible construction practices'; Positive: Impacts from resources



SDG	Target and/or Indicator	Direct / Indirect	Notes
<b>GOAL 13</b> <b>Climate Action</b> Take urgent action to combat climate change and its impacts	<b>Target 12.6</b> Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.	Direct	This requirement is geared more towards the Green Star for Building Performance rating tool under development, however there may exist an opportunity to build it into Green Star for New Buildings. The GBCA will explore this once the detailed credits are under development.
	<b>Target 13.1</b> Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	Direct	Green Star for New Buildings' framework has a Resilience category which seeks to address this specific issue. The category intends to build the built environment's capacity to respond to climate-related hazards and disasters, as well as man-made ones. Furthermore, it includes the Community resilience credit, to strengthen the wider community's resilience and adaptive capacity.
	<b>Target 13.2</b> Integrate climate change measures into national policies, strategies and planning	Indirect	Whilst the GBCA's advocacy work is the primary mechanism to respond to this issue, Green Star for New Buildings does include credits that require considerable coordination and collaboration with relevant stakeholders. This is particularly the case in the Resilience, Places and Nature categories.  The indicator to track progress with this target is Greenhouse Gas Emissions per unit of GDP, per capita, and total. Therefore, the Positive category, and particularly the stringent carbon requirements (10% improvement over NCC 2019 for 4 Star, net zero ready for 5 Star and net zero for 6 Star) contribute towards achieving this target too.
<b>GOAL 14</b> <b>Life Below Water</b> Conserve and sustainably use the oceans, seas and marine resources for sustainable development	<b>Target 14.1</b> By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.	Direct	Green Star for New Buildings includes the 'Water pollution and runoff' credit, which focuses on reducing pollution leaving the site. This has been included in the Nature category to enable the consideration of impacts on biodiversity.



SDG	Target and/or Indicator	Direct / Indirect	Notes
<b>GOAL 15</b> <b>Life on Land</b> Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss	<b>Target 15.1</b> By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Direct	Green Star for New Buildings addresses this issue directly through the Nature category, where the proposed minimum requirement is to not decrease the ecological value of the site, or be located on ecologically sensitive land. Ecosystems are further protected and enhanced elsewhere in the category.  Indirectly, the 'Sustainable procurement' and 'Sustainable products' credits seek to incentivise materials that are sustainably harvested.
	<b>Target 15.2</b> By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	Direct	Green Star for New Buildings addresses this issue predominantly through the Offsite restoration credit.  Please also see target 15.1 response.
	<b>Target 15.3</b> Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Direct	The Nature category fundamentally addresses biodiversity. The primary objective of the category is to bring nature back into the built environment by reintroducing habitats for biodiversity, and supporting human connection to nature.  All Nature credits address this issue directly: Impacts to nature; Human connection to nature; Habitat creation; Water pollution and runoff; Linking nature together; Offsite restoration
	<b>Target 15A</b> Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems	Direct	This is the intent of the Offsite restoration credit in the Nature category.



SDG	Target and/or Indicator	Direct / Indirect	Notes
<b>GOAL 16</b> <b>Peace, Justice and Strong Institutions</b>	<b>Target 16.2</b> End abuse, exploitation, trafficking and all forms of violence against and torture of children	Indirect	Green Star for New Buildings includes the 'Sustainable procurement' credit, which requires projects to look at their supply chain. This includes human rights issues, such as modern slavery.
	<b>Target 16.6</b> Develop effective, accountable and transparent institutions at all levels.  Two indicators are applicable: <ul style="list-style-type: none"> <li>• Level of trust</li> <li>• Community involvement - proportion of persons who feel they are able to have a say within the community on important issues (all or most of the time)</li> </ul>	Direct	Green Star for New Buildings includes the following:  <u>Level of trust</u>  The Privacy credit in the People category, which proposed companies have a responsible and robust process in place to manage people's personal data and disclose what happens with it.  <u>Community involvement</u>  The Community engagement credit in the Places category credit addresses this issue directly.



## Appendix 3. Analysis against the Task Force for Climate-Related Financial Disclosures (TCFD)

The TCFD is a market-driven initiative that was established to develop a set of recommendations for voluntary and consistent climate-related financial risk disclosures in mainstream filings. The TCFD aims to bring the challenges and opportunities surrounding climate reporting to the spotlight.

One of the most significant risks facing organisations today relates to climate change. An increasing number of organisations that use Green Star, or are GBCA members, are thus starting to report on the TCFD to fully understand and disclose their risks. Thus, it remains an important driving factor in the development of Green Star for New Buildings.

The TCFD's recommendations are structured around four thematic areas:

- Governance: The organisation's governance around climate-related risks and opportunities.

- Strategy: The actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.
- Risk Management: The processes used by the organisation to identify, assess, and manage climate-related risks.
- Metrics and Targets: The metrics and targets used to assess and manage relevant climate-related risks and opportunities.

\*Source: <https://www.fsb-tcfid.org/publications/final-recommendations-report/>

### Opportunities and Risk

The final report outlines, by way of example, some of the primary opportunities and risks that face organisations heading into an uncertain future. The report further recommends that these types of opportunities and risks are factored into their financial reporting under the TCFD.

### Opportunities

The below table outlines examples of climate-related opportunities and potential financial impacts taken verbatim from the TCFD's Final Report\*.

Type	Climate-related opportunity	Potential financial impacts	Green Star for New Building's credits to capitalise on opportunity
Resource efficiency	<ul style="list-style-type: none"> <li>• Use of more efficient modes of transport</li> <li>• Use of recycling</li> <li>• Move to more efficient buildings</li> <li>• Reduced water and energy consumption</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce operating costs</li> <li>• Increased value in fixed assets</li> <li>• Benefits to workforce management and planning (e.g. improved health and safety, employee satisfaction) resulting in lower costs</li> </ul>	<ul style="list-style-type: none"> <li>• Low energy demand (Positive)</li> <li>• People movement (Places)</li> <li>• Using water Sustainably (Positive)</li> </ul>
Energy source	<ul style="list-style-type: none"> <li>• Use of lower-emission sources of energy</li> <li>• Use of new technologies</li> <li>• Shift toward decentralized energy generation</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced operational costs (e.g., through use of lowest cost abatement)</li> <li>• Reduced exposure to future fossil fuel price increases</li> <li>• Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon</li> </ul>	<ul style="list-style-type: none"> <li>• Energy source and fossil fuels (Positive)</li> <li>• Low energy demand (Positive)</li> <li>• Other carbon sources (Positive)</li> <li>• Leadership category</li> </ul>



		<ul style="list-style-type: none"> <li>Returns on investment in low-emission technology</li> </ul>	
<b>Resilience</b>	<ul style="list-style-type: none"> <li>Participation in renewable energy programs and adoption of energy efficiency measures</li> <li>Resource substitutes/diversification</li> </ul>	<ul style="list-style-type: none"> <li>Increased market valuation through resilience planning (e.g., infrastructure, land, buildings)</li> <li>Increased reliability of supply chain and ability to operate under various conditions</li> <li>Increased revenue through new products and services related to ensuring resiliency</li> </ul>	<ul style="list-style-type: none"> <li>Energy source and fossil fuels (Positive)</li> <li>Low energy demand (Positive)</li> <li>Resilience category</li> </ul>

\*Source: Table 2 on page 11 of the TCFD Final Report: <https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf>

## Risks

The below table outlines examples of climate-related risks and potential financial impacts taken verbatim from the TCDF's Final Report\*.

Type	Climate-related opportunity	Potential financial impacts	Green Star for New Building's credits to mitigate risks
<b>Transition risks (Policy and legal)</b>	<ul style="list-style-type: none"> <li>Increased pricing of GHG emissions</li> <li>Enhanced emissions-reporting obligations</li> </ul>	<ul style="list-style-type: none"> <li>Increased operating costs (e.g., higher compliance costs, increased insurance premiums)</li> <li>Write-offs, asset impairment, and early retirement of existing assets due to policy changes</li> </ul>	<ul style="list-style-type: none"> <li>Energy source and fossil fuels (Positive)</li> <li>Low energy demand (Positive)</li> <li>Other carbon sources (Positive)</li> </ul>
<b>Transition risks (Technology)</b>	<ul style="list-style-type: none"> <li>Unsuccessful investment in new technologies</li> <li>Costs to transition to lower emissions technology</li> </ul>	<ul style="list-style-type: none"> <li>Write-offs and early retirement of existing assets</li> <li>Costs to adopt/deploy new practices and processes</li> </ul>	<ul style="list-style-type: none"> <li>Energy source and fossil fuels</li> <li>Low energy demand</li> <li>Leadership category</li> </ul>
<b>Transition risks (Reputation)</b>	<ul style="list-style-type: none"> <li>Increased stakeholder concern or negative stakeholder feedback</li> </ul>	<ul style="list-style-type: none"> <li>Reduced revenue from negative impacts on workforce management and planning (e.g., employee attraction and retention)</li> <li>Reduction in capital availability</li> </ul>	<ul style="list-style-type: none"> <li>Community engagement</li> <li>Healthy category</li> <li>People category</li> </ul>
<b>Physical risks (Acute)</b>	<ul style="list-style-type: none"> <li>Increased severity of extreme weather events such as cyclones and floods</li> </ul>	<ul style="list-style-type: none"> <li>Reduced revenue from negative impacts on workforce management and planning (e.g., employee attraction and retention)</li> <li>Reduction in capital availability</li> </ul>	<ul style="list-style-type: none"> <li>Healthy category</li> <li>Resilience category</li> </ul>



Type	Climate-related opportunity	Potential financial impacts	Green Star for New Building's credits to mitigate risks
<b>Physical risks</b> <b>(Chronic)</b>	<ul style="list-style-type: none"> <li>Changes in precipitation patterns and extreme variability in weather patterns</li> <li>Rising mean temperatures</li> <li>Rising sea levels</li> </ul>	<ul style="list-style-type: none"> <li>Write-offs and early retirement of existing assets (e.g., damage to property and assets in "high-risk" locations)</li> <li>Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)</li> <li>Increased capital costs (e.g., damage to facilities)</li> <li>Increased insurance premiums and potential for reduced availability of insurance on assets in "high-risk" locations</li> </ul>	<ul style="list-style-type: none"> <li>Resilience category</li> </ul>

\*Source: Table 1 on page 10 of the TCFD Final Report: <https://www.fsb-tcfid.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf>



## Appendix 4. Response to the GBCA's Carbon Positive Roadmap

The GBCA released the [Carbon Positive Roadmap](#) in June 2018. This document outlines the high-level outcomes, actions, targets and policy positions required to decarbonise our cities. As such, Green Star for New Buildings must respond appropriately to these requirements. The table below outlines the outcomes the Roadmap seeks to achieve, the actions requirements, the methods of engagement, and finally how the proposed changes to Green Star align with and respond to these.

Carbon Positive Roadmap			Future Focus' Response
Outcome	Action	Method of Encouragement	
<b>Commit to a permanent transition to buildings and fitouts with no greenhouse gas emissions</b>	Adopt a vision for a zero emissions built environment	Work with tenants to disclose energy information, seek operational fitout ratings, use renewables, and address other emission sources	The 'Handover and tenant engagement' credit will deal with tenant impacts and disclosure. For carbon, depending on the rating the credit will require tenants to have a green lease with requirements to disclose energy information or achieve a fitout energy rating.
	Measure, disclose, collaborate on, and improve, the ongoing performance of building and fitouts	Be commission and tuned	The consultation paper proposes 'commissioning and tuning' become a minimum requirement for a Green Star rating.
		Continue to use Green Star – Performance	Green Star - Performance has not been mandated, however Green Star for New Buildings encourages and rewards projects to pursue an operational rating, or undertake initiatives that promote the sustainable performance of the building.
<b>Switch to, install, or procure renewable energy, and support the decarbonisation of the grid</b>	Power buildings and fitouts with 100% renewable electricity and switch away from fossil fuel use	Be fully powered by renewables once they are built	6 Star will be 100% powered by renewables, as per the Carbon Positive Roadmap. 5 Stars will be net zero ready, and be transitioning to net zero.
		Be fossil fuel free	World leading will be fossil fuel free with minor exceptions, whilst best practice will be required to minimise fossil fuels use and have a transition strategy in place.



Carbon Positive Roadmap			Future Focus' Response	
Outcome	Action	Method of Encouragement		
	Increase the use of on-site, or near site, renewables, and measures to support the decarbonisation of the grid	Have on-site, or access to near-site, renewables, install battery storage systems, or technologies that promote grid decarbonisation.	Through the Positive category, on-site and off-site renewables.	
<b>Build, operate, or occupy low energy intensive buildings and fitouts</b>	Reduce building and fitout energy demand by prioritising passive design, demand control, and energy efficient systems	Have 40 to 50% reduction in total energy demand compared to the 2016 NCC	Modelling is required to determine appropriate reductions over the NCC 2019. The aim would be for roughly a 40 to 50% reduction over NCC 2016.	
		Reduce by 10% their embodied carbon against a reference building	<p>The Carbon in Materials credits falls under the Positive category, which proposes:</p> <ul style="list-style-type: none"> <li>• 4 Star have a 10% reduction</li> <li>• 5 Star have a 10% reduction</li> <li>• 6 Star have a 20% reduction</li> </ul> <p>These requirements are more stringent than the Carbon Positive Roadmap stipulates; however, industry feedback since the development of the Roadmap indicates that this may be appropriate for Green Star buildings.</p>	
	<b>Adopt zero carbon materials, products, and services</b>	Stimulate markets for carbon neutral products and services		See above.
			Reduce by 20% their embodied carbon against a reference building	
			Select carbon neutral products and services	The Sustainable Products and Sustainable Procurement credits require carbon neutral products.
	Increase the use of low-GWP refrigerants	Phase down high-GWP refrigerants in existing buildings	The Other Carbon Sources credits in the Positive category requires the use of low GWP refrigerants with an accompanying transition strategy.	



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**Carbon Positive Roadmap****Future Focus' Response**

<b>Outcome</b>	<b>Action</b>	<b>Method of Encouragement</b>	
	Support high quality offsets for remaining emissions as a transition strategy	Offset total remaining embodied carbon emissions from construction.	The 'Other Carbon Sources' credit will encourage projects to offset remaining emissions if they wish to do so.
<b>Support the transition to electric vehicles</b>	Increase access to active transport facilities and public transport	Increase access to active transport facilities, and advocate for the improvement of local cycling infrastructure.	This is proposed to be a minimum requirement in Green Star for New Buildings.
	Support the adoption of electric vehicles	Provide or pre-install electric vehicle charging infrastructure	This will be captured in the new framework.



## Appendix 5. Analysis against trends in the Global Real Estate Sustainability Benchmark (GRESB) survey

The purpose of this Appendix is to outline how the trends found in GRESB are addressed in Green Star for New Buildings. While GRESB reporting is aimed at the organisational level, the trends found within the survey outline issues that are material to investors and the property sector. These trends influenced the concepts behind the new rating system framework as well as influencing credits within.

This analysis is based on the GRESB Real Estate Assessment for June 2019. Only issues related to items of concern about the building are considered. In some cases organisational issues are relevant, though issues related to entity governance tend to be excluded as these sit outside the remit of the new rating tool. This analysis assumes knowledge of the GRESB survey and terminology.

### Acronyms for this analysis

- RC - Entity and Reporting Characteristics
- PD - Policy & Disclosure
- RO - Risks & Opportunities
- PI - Performance Indicators
- ME - Monitoring and EMS
- SE - Stakeholder Engagement
- NC - New Construction and Renovations
- BC - Building Certifications

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Issue as found in GRESB	Relevant indicator	Issue as addressed in Green Star for New Buildings
Energy efficiency and consumption	<ul style="list-style-type: none"><li>• R05</li><li>• ME3</li><li>• PI1.0</li><li>• NC6</li></ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"><li>• Low energy demand</li></ul>

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Issue as found in GRESB	Relevant indicator	Issue as addressed in Green Star for New Buildings
Renewable energy	<ul style="list-style-type: none"> <li>PI1.3</li> <li>NC7.1</li> </ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"> <li>Energy source and fossil fuels</li> </ul>
Net zero	<ul style="list-style-type: none"> <li>NC7.2</li> </ul>	<p>Investor interest in net zero buildings and targets resulted in the introduction of the 6 Star Green Star-rated buildings requirement to be net zero carbon in operations.</p>
Greenhouse Gas Emissions	<ul style="list-style-type: none"> <li>PI2.1</li> </ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"> <li>Energy source and fossil fuels</li> <li>Other carbon sources</li> <li>Carbon in materials</li> </ul>
Resilience	<ul style="list-style-type: none"> <li>GRESB Resilience Module</li> </ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"> <li>Climate change resilience</li> <li>Infrastructure dependency</li> <li>Resilience to other impacts</li> <li>Stakeholder engagement</li> <li>Community resilience</li> <li>Resilience communication and review</li> </ul>
Water management, efficiency and consumption	<ul style="list-style-type: none"> <li>R06</li> <li>PI3.0</li> <li>PI3.1</li> <li>NC8</li> </ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"> <li>Using water sustainably</li> <li>Water pollution and runoff</li> </ul>
Waste management	<ul style="list-style-type: none"> <li>R07</li> <li>NC9</li> </ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"> <li>Collaborative design and construction (operational waste)</li> <li>Responsible construction practices (construction and demolition waste)</li> </ul>
Sustainable procurement	<ul style="list-style-type: none"> <li>SE4.1</li> </ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"> <li>Sustainable procurement</li> <li>Sustainable products</li> </ul>



Issue as found in GRESB	Relevant indicator	Issue as addressed in Green Star for New Buildings
Tenant engagement	<ul style="list-style-type: none"><li>• SE7</li><li>• SE10.1</li></ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"><li>• Handover and tenant engagement</li><li>• Resilience communication and review</li></ul>
Community impact and engagement	<ul style="list-style-type: none"><li>• SE11.1</li><li>• SE11.2</li><li>• NC13</li></ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"><li>• Community engagement</li><li>• Culture and heritage</li><li>• Enjoyable places</li><li>• Contribution to place</li><li>• Goods movement</li><li>• Stakeholder engagement</li><li>• Community resilience</li></ul>
Health and wellbeing	<ul style="list-style-type: none"><li>• SE12.1</li><li>• SE12.2</li><li>• NC11</li></ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"><li>• Sustainable procurement (modern slavery)</li><li>• Clean air</li><li>• Light quality</li><li>• Exposure to toxins</li><li>• Noise levels</li><li>• Amenity and comfort</li><li>• Mobility</li><li>• Design for diversity</li><li>• Privacy</li><li>• Community engagement</li><li>• Human connection to nature</li></ul>



Issue as found in GRESB	Relevant indicator	Issue as addressed in Green Star for New Buildings
Sustainability strategy and policies	<ul style="list-style-type: none"><li>• PD1</li><li>• NC1</li></ul>	<p>Some credits in Green Star for New Buildings will require the development of strategies and/or policies, including:</p> <ul style="list-style-type: none"><li>• Climate change resilience</li><li>• Community resilience</li><li>• Resilience communication and review</li><li>• Responsible construction practices</li><li>• Verification and monitoring</li><li>• Sustainable procurement</li><li>• Energy source and fossil fuels</li><li>• Goods movement</li><li>• Culture and heritage</li><li>• Nature connectivity</li></ul>
Site selection for new developments	<ul style="list-style-type: none"><li>• NC2</li></ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"><li>• Impacts to nature</li></ul>
Building material attributes	<ul style="list-style-type: none"><li>• NC3.4</li></ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"><li>• Sustainable procurement</li><li>• Sustainable products</li><li>• Impacts from materials</li></ul>
Supply chain	<ul style="list-style-type: none"><li>• NC10.1</li></ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"><li>• Sustainable procurement</li></ul>
Procurement process	<ul style="list-style-type: none"><li>• SE4.1</li></ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"><li>• Sustainable procurement</li></ul>
Risk assessments	<ul style="list-style-type: none"><li>• R03.1</li></ul>	<p>The following credits in Green Star for New Buildings address this issue:</p> <ul style="list-style-type: none"><li>• Climate change resilience</li><li>• Infrastructure dependency</li><li>• Resilience to other impacts</li></ul>



## Appendix 6. Green Star – Design & As Built credits into Green Star for New Buildings

Green Star’s revised framework builds on the legacy of the current system. To demonstrate that GBCA have mapped where Green Star – Design & As Built would sit in the new framework. The table below outlines where the credits outcomes would be expected to sit.

Category	Credit in Green Star – Design & As Built	Proposed credit	New Category	Notes
<b>Management</b>	Green Star Accredited Professional	Collaborative design	Responsible	
	Commissioning and Tuning - Environmental Performance Targets	Verification and Monitoring	Responsible	
	Commissioning and Tuning - Building Commissioning	Verification and Monitoring	Responsible	This is proposed to be a minimum requirement in Green Star for New Buildings
	Commissioning and Tuning - Building Systems Tuning	Verification and Monitoring	Responsible	This is proposed to be a minimum requirement in Green Star for New Buildings
	Commissioning and Tuning –Independent Commissioning Agent	Verification and Monitoring	Responsible	
	Independent Commissioning Agent	Verification and Monitoring	Responsible	
	Adaption and Resilience	Climate change Resilience category	Resilient	The Adaption and Resilience credit deals with climate change resilience. The new Resilience category takes a more comprehensive approach, looking into all types of shocks and stresses and community resilience.
	Building information	Collaborative design Handover and tenant engagement	Responsible	Some initiatives within this credit are proposed to be a minimum requirement in Green Star for New Buildings.



Category	Credit in Green Star – Design & As Built	Proposed credit	New Category	Notes
	Commitment to Performance	Handover and tenant engagement	Responsible	
	Metering and monitoring	Verification and monitoring	Responsible	This is proposed to be a minimum requirement in Green Star for New Buildings.
	Responsible construction practices	Responsible construction practices	Responsible	Some initiatives within this credit are proposed to be a minimum requirement in Green Star for New Buildings.
	Operational waste	Collaborative design	Responsible	
<b>Indoor Environment Quality</b>	Indoor air quality	Clean air	Healthy	Exhaust of pollutants may fall within the Exposure to toxins credit. Some initiatives within this credit are proposed to be a minimum requirement in Green Star for New Buildings
	Acoustic comfort	Noise levels	Healthy	Some initiatives within this credit are proposed to be a minimum requirement in Green Star for New Buildings.
	Lighting comfort	Light quality	Healthy	Some initiatives within this credit are proposed to be a minimum requirement in Green Star for New Buildings.
	Visual comfort	Amenity and comfort	Healthy	
	Indoor pollutants	Exposure to toxins	Healthy	Some initiatives within this credit are proposed to be a minimum requirement in Green Star for New Buildings.
	Thermal comfort	Amenity and comfort	Healthy	The update to the National Construction Code 2019 (NCC) addresses thermal comfort.



Category	Credit in Green Star – Design & As Built	Proposed credit	New Category	Notes
				However, Green Star will retain the Advanced Thermal Comfort.
<b>Energy</b>	Greenhouse Gas Emissions	Positive category	Positive	In Green Star – Design & As Built, this was one single credit. Green Star for New Buildings breaks down the issues into separate credits.  10% improvement over NCC 2019 will remain a minimum requirement for a Green Star rating.
		Low energy demand		
		Energy source and fossil fuels		
		Other carbon sources		
	Peak Demand Management	Low energy demand	Positive	
<b>Transport</b>	Sustainable Transport	People movement	Places	Some initiatives within this credit are proposed to be a minimum requirement in Green Star for New Buildings
		Goods movement		
		Amenities		
<b>Water</b>	Potable water	Using water sustainably	Positive	Some initiatives within this credit are proposed to be a minimum requirement in Green Star for New Buildings.
<b>Materials</b>	Life Cycle Assessment	Carbon in materials	Positive	
	Concrete	Impacts from resources		
	Steel	Sustainable procurement		
	Building reuse	Sustainable products		
	Structural timber			
	Responsible Building Materials	Carbon in materials	Positive	
	Impacts from resources	Responsible		
		Sustainable procurement		
	Sustainable Building Products	Sustainable products	Responsible	



Category	Credit in Green Star – Design & As Built	Proposed credit	New Category	Notes
	Construction and Demolition Waste	Responsible construction practices	Responsible	
<b>Land Use &amp; Ecology</b>	Ecological value	Impacts to Nature Habitat creation Linking nature together	Nature	Some initiatives within this credit are proposed to be a minimum requirement in Green Star for New Buildings
	Sustainable Sites	Impacts to nature	Nature	Some initiatives within this credit are proposed to be a minimum requirement in Green Star for New Buildings
	Heat Island Effect	Resilience category	Resilient	
<b>Emissions</b>	Stormwater	Water pollution and runoff	Nature	
	Light pollution	Impacts to nature	Nature	
	Microbial control		Minimum Requirement	
	Refrigerant impacts	Other carbon sources	Positive	
	Innovation	Leadership	Leadership	
<b>Innovation</b>	<b>Selected Innovation Challenges</b>	<b>Category</b>		
	Powered by renewables	Positive		
	Responsible carbon impacts	Positive		
	Carbon positive – new buildings	Positive		
	Community benefits	Places		
	Culture, heritage and identity	People & Places		
	Environmental product declarations	Responsible		



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<b>Category</b>	<b>Credit in Green Star – Design &amp; As Built</b>	<b>Proposed credit</b>	<b>New Category</b>	<b>Notes</b>
	Occupant engagement	People		
	Reconciliation action plan	People		
	Universal design	People		

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## Appendix 7. Future Focus Scoping Paper Feedback Summary

The Future Focus Scoping Paper was released in March 2018 and received 120 responses.

Question / Proposal	Support rate (yes)	Main comments, questions or concerns	Green Star for New Buildings response
<b>Meet Paris Agreement target of 1.5 degrees.</b>	100%	<ol style="list-style-type: none"> <li>1. What the targets will be and how will they be measured.</li> <li>2. Green Star should exceed the Paris Agreement targets.</li> </ol>	<ol style="list-style-type: none"> <li>1. The Carbon Positive Roadmap sets the targets and milestones for Green Star buildings to meet the Paris Agreement. Appendix 5 in this document shows how Green Star for New Buildings is responding to the Carbon Positive Roadmap.</li> <li>2. The GBCA have specifically selected the more ambitious 1.5°C target as opposed to the 2°C target, to push Green Star buildings to exceed the standard Paris Agreement goals.</li> </ol>
<b>GBCA Vision for Future Focus</b>	97%	<ol style="list-style-type: none"> <li>1. The vision neglects to address environmental sustainability sufficiently.</li> <li>2. Green Star should cater to mid-tier developers.</li> </ol>	<ol style="list-style-type: none"> <li>1. Environmental sustainability will remain a key focus of GBCA and is featured in Green Star for New Buildings through numerous categories.</li> <li>2. Green Star for New Buildings addresses the mid-tier through by retaining the level of difficulty for an entry-level rating. By providing additional guidance to the minimum requirements, through standard contract clauses etc., the GBCA are also making a Green Star rating easier to achieve.</li> </ol>
<b>Best practice has low energy demand, reduce embodied carbon.</b>	97%	<ol style="list-style-type: none"> <li>1. Embodied carbon shouldn't have to be quantified for best practice.</li> <li>2. Avoid prescribing certain technologies like solar, whilst neglecting other forms of renewables (e.g. wind).</li> <li>3. Environmental impacts of batteries. Why only prescribe batteries and not other forms of storage.</li> <li>4. Must energy demands be met using only on-site renewables?</li> </ol>	<ol style="list-style-type: none"> <li>1. This is noted, however feedback from the groups indicates that the 10% requirement be set. This is not final, and will be revised back on industry feedback to this paper.</li> <li>2. This discussion paper presents the outcomes sought, not the technologies required. This will remain going forward when Green Star for New Buildings enters the technical development stage.</li> <li>3. This will feed into the detailed conversations when the credits are discussed with the expert reference panels.</li> <li>4. No, off-site solutions are acceptable.</li> </ol>
<b>Scope expanded to include resilience, social sustainability, and human rights.</b>	97%	<ol style="list-style-type: none"> <li>5. Uncertainty around what would be included, how it would work and measured.</li> <li>6. Requirements based on ratings and need to be slowly introduced over time.</li> <li>7. Careful of broadening Green Star's scope too much – remain focused on strengths (i.e. carbon emissions)</li> <li>8. Keep to what a project/building can readily influence.</li> </ol>	<ol style="list-style-type: none"> <li>1. Social sustainability metrics in this new framework fall under specifically the Places, People, Healthy, Resilience categories and some credits in the Responsible category. How they are measured will be discussed at a later stage.</li> <li>2. There will be an 18 month transition period to allow industry to develop the capacity to deliver a Green Star for New Buildings rating, and manage the risk.</li> <li>3. Please provide feedback as to whether you believe the scope is sufficient.</li> <li>4. In collaboration with the various expert reference panels, the GBCA are cognisant of this and has been factored into many decisions in this proposal. For example, all of the minimum requirements are directly within the building owners responsibility / ability to achieve.</li> </ol>



Question / Proposal	Support rate (yes)	Main comments, questions or concerns	Green Star for New Buildings response
<b>Influence social sustainability in the supply chain.</b>	97%	<ol style="list-style-type: none"> <li>1. Beware broadening Green Star's scope too much – remain focused on strengths (i.e. carbon emissions)</li> <li>2. Keep to what a project/building can readily influence.</li> </ol>	<ol style="list-style-type: none"> <li>1. Please provide feedback as to whether you believe the scope is sufficient.</li> <li>2. In collaboration with the various expert reference panels, the GBCA are cognisant of this and has been factored into many decisions in this proposal. For example, all of the minimum requirements are directly within the building owners responsibility / ability to achieve.</li> </ol>
<b>Increase benchmarks for ecology, biodiversity, transport and health and wellbeing.</b>	97%	<ol style="list-style-type: none"> <li>1. General responses as to how this could work.</li> <li>2. Biodiversity undervalued in Green Star.</li> </ol>	<ol style="list-style-type: none"> <li>1. The new framework includes a list of credit, which give an indication of how the category would look.</li> <li>2. An entire new category, with six credits, is included in the new framework.</li> </ol>
<b>New conditional requirements for Green Star rating.</b>	94%	<ol style="list-style-type: none"> <li>1. Don't overcomplicate the rating system</li> <li>2. Concerns with cost and complexity</li> </ol>	Green Star for New Buildings only includes conditional requirements for carbon-related issues.
<b>Consider whole-of-asset approach (i.e. include tenant impacts).</b>	84%	<ol style="list-style-type: none"> <li>1. Limitations to what a landlord can control.</li> <li>2. Tenant commitments should be optional.</li> <li>3. Additional administration and complexity to rating.</li> </ol>	Based on further engagement with industry, setting / mandating tenant benchmarks will not be required for all Green Star ratings. Rather, projects that do so will be rewarded.
<b>Demonstrate sustainability in operations (i.e. rating expires unless commit to a Performance rating).</b>	80%	<ol style="list-style-type: none"> <li>1. Perceived as a GBCA money grab.</li> <li>2. Challenges with ownership and certain building typologies (e.g. residential)</li> <li>3. Need to continue to recognise design team for achievements.</li> <li>4. Adding costs and complexity.</li> <li>5. Barrier for mid-tier developers.</li> <li>6. Encourage use of NABERS.</li> <li>7. General comments on the details to how it would work.</li> </ol>	<p>Based on subsequent feedback, the GBCA have not included this requirement in Green Star for New Buildings at this stage. Projects that implement features, initiatives or policies that promote sustainable operations of the building will be rewarded in Green Star for New Buildings.</p> <p>Furthermore, it's intended that Green Star for New Buildings will flow seamlessly into the new Green Star for Building Performance.</p>
<b>World leading assets using 100% renewable energy, reduce embodied carbon.</b>	92%	<ol style="list-style-type: none"> <li>1. How will offsets work in Green Star?</li> <li>2. The details will be closely followed by industry.</li> <li>3. Careful of prescribing certain technologies like solar, whilst neglecting other forms of renewables (e.g. wind)</li> <li>4. Accurate method to measure embodied carbon.</li> </ol>	The consultation paper for Green Star for New Buildings includes a table defining net zero. No specific technologies have been prescribed.



## Appendix 8. Resilience badging example

The GBCA has received feedback to help users better promote exception achievements. One proposal in the consultation paper is that of badges. By way of example, below is how the GBCA anticipate the badges may work.

**Step 1:** A badge will only be awarded to projects that successfully achieve Green Star certification.

**Step 2:** Achieve all credits in the Resilience category

**Step 3:** Achieve three other pre-determined credits that enhance the resilience of the built environment

To achieve a 'Resilience badge' you must achieve:

All credits in the Resilience category	And these other credits	(reason for the other credits)
Climate change resilience	Energy Source and Fossil Fuels	Credit intended to support adoption of renewable energy; diversification of the energy grid
Infrastructure dependency	Energy and Peak Demand	Credit intended to improve grid reliability
Resilience to other impacts	Impacts to Nature	Increases greenery in the built environment, thereby reducing the urban heat island effect.
Stakeholder engagement		
Community resilience		
Resilience communication and review		

\*These are displayed as an example only. They are subject to change.