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# Unlocking the value

A practical guide for sustainable finance in  
the Australian real estate sector

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# Unlocking the value

## A practical guide to sustainable finance in the Australian real estate sector

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# Forewords



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Around the world, the real estate industry has increasingly embraced sustainable finance instruments such as green loans and green bonds, recognising their potential to drive decarbonisation efforts and support sustainable development projects.

Despite significant developments in addressing climate change, resource management, and biodiversity in the real estate sector, Australia's contribution to global sustainable finance products in real estate hasn't progressed as rapidly.

This practical guide to sustainable finance aims to deepen the understanding of sustainable finance within the Australian real estate

Harnessing the power of private capital is core to achieving ASFI's vision of a resilient, sustainable and inclusive Australian financial system. Sustainable finance and investment are important tools to support climate mitigation and adaptation, as well as broader environmental and social goals. In the property sector green loans and bonds are already starting to facilitate and accelerate the building and retrofitting of more efficient, low carbon, resilient and comfortable buildings.

But growing Australia's nascent market for sustainable finance in the building sector requires a supportive ecosystem and enabling environment. This includes working together to establish common definitions and approaches for sustainable finance that are environmentally credible, understood and useable by industry, and inter-operable with global standards.

sector. It is designed to facilitate the more efficient adoption of sustainable finance mechanisms and drive positive environmental impact.

Improved collaboration between the real estate and finance sectors in Australia will be essential to meet our nation's climate goals. Australia is on the brink of a sustainable finance revolution within the real estate industry, and if this opportunity can be unlocked, the gains for global sustainability would be enormous.

Together, we can harness the power of sustainable finance to shape a brighter, more sustainable future for Australia and the world.

That is why ASFI is delighted to partner with the GBCA on this Practical Guide to Sustainable Finance for the Property Sector. The Guide is a valuable tool for practitioners and policy-makers to understand the current landscape of sustainable finance tools and frameworks for Australian buildings.

It also provides an important input into the development of an Australian Sustainable Finance Taxonomy for the building sector – which ASFI is currently leading with funding and oversight from the Australian Government. The taxonomy will further facilitate the creation of green lending products for Australian homes and commercial buildings.

This is the technical, collaborative work that will underpin greater ambition for the property sector and finance sector, leveraging the capabilities of each to support a safer and more prosperous future for all.





# At a glance: Australia’s property sector targets and the sustainable finance revolution

1. [Environmental and sustainability claims - Draft guidance for business | ACCC](#)  
2. [Australia’s green buildings performing as promised | Green Building Council of Australia \(gbca.org.au\)](#)

In the past decade there has been a significant shift in the finance sector to support sustainable projects through green bonds and loans. This sustainable finance revolution demands asset owners and entities deliver high quality, verified outcomes against a large number of criteria set by multiple international frameworks. This guide demonstrates that the tools used by the Australian property sector are ready to be used to demonstrate compliance. In particular,

- **Green Star Buildings** and **Green Star Performance** meet all the impact categories under the EU Taxonomy, and comply with all the requirements for Green Bonds, Green Loans, Social Bonds, and Social Loans. This means that industry is well placed to access sustainable finance through these tools.
- **Green Star Homes** provides a strong basis to access sustainable finance under the Green Buildings criteria, as well as the Energy Efficiency, Renewable Energy, and Climate Adaptation as defined in the Green Bonds and Green Loan guidelines used internationally. It’s well suited to serve as the foundation for sustainable finance uptake in the residential sector. As an alternative, a 7-7.5 star **NatHERS rating**, with additional safeguards, can also be used.
- **NABERS Energy, NABERS Water, NABERS IE, and NABERS Waste** are powerful tools that align with various criteria in the Green Bond and Green Loan guidelines. In particular, a high NABERS Energy of 5 Star or above would meet the current requirements under the EU Taxonomy for existing buildings,

while the use of NABERS ratings to show improvements would comply with the requirements for building upgrades.

- Other international rating tools can also be used. **Living Building Challenge** is comparable to Green Star for purposes of sustainable finance and can also be used to achieve the same categories.<sup>1</sup> Meanwhile, **Passivhaus**, while more limited in breadth, though not in achievement, can be used to show compliance against climate related targets. **WELL Standard and programs (WELL)** can support a holistic approach to green and sustainable bond frameworks by incorporating a focus on health and well-being, assuming that the traditional green building criteria are met. **WELL** can also serve as a key performance indicator under the social pillar for sustainability-linked loans or bonds and can guide use of proceeds within social bonds or loans. Even the **Cleaning Accountability Framework**, a tool used for addressing poor social outcomes in the cleaning sector, provides value under the social bond and social loan guidelines.

A review of multiple frameworks shows significant commonality and preference for the use of independent verification. Furthermore, recent communications from the Australian Competition and Consumer Commission (ACCC)<sup>1</sup> as well as recent studies of the performance from NABERS and Green Star,<sup>2</sup> clearly show that Second Party Opinion auditors should use external validation and be extremely cautious of any form of self-certification particularly when suggesting equivalent to a third-party rating tool.

## How to read this paper

This guide is divided into several sections. It is designed to help you understand the relevant finance mechanisms, the real estate sector, the multiple frameworks that drive and support sustainable finance, guidance on how to address each sector, and case studies.

CHAPTER	DESCRIPTION
1. Purpose	Describes the purpose of the paper, and gives a quick summary of the findings.
2. The opportunity in numbers	Highlights key financial information, relevant to understand the opportunity that green buildings provide to the market.
3. Understanding sustainable finance	Details general concepts in sustainable finance such as bonds, loans, and key concepts like use of proceeds, as well as the multiple sustainable finance frameworks considered.
4. General concepts for the built environment in Australia	Defines general terms used by the sector such as emission scopes, market-based accounting, and other concepts.
5. Case studies	Showcases examples of how the above has been successfully used to drive positive change in the Australian real estate sector.
6. Real estate verification frameworks	Highlights the multiple rating systems used in Australia and compares them for suitability against the Sustainable finance frameworks.
7. Use of proceeds: Benchmarks for Australia	Provides sample targets and model language that can be used in Australia to access sustainable finance for use of proceeds.
8. General Purpose instruments – Recommended KPIs	Provides sample KPIs that can be set for general purpose instruments and links them to real estate verification frameworks.
9. Guidance for second party opinion providers	Provides clear guidance on the misuse of equivalency and how targets were chosen.
10. Appendix A	Contains detailed analysis of all frameworks and benchmarks.

1. Purpose

1.1 Why we've created this paper

The real estate sector offers multiple opportunities to address climate, resource, and biodiversity issues – but it can't do it by itself. The finance sector has a key role to play in this space to enable sustainable financing for development and operational improvement projects.

Globally, sustainable finance instruments such as green loans and green bonds are on the rise, as companies committed to decarbonisation see their investment potential. However, limited understanding of how the Australian property sector can access sustainable finance and how it can be applied in the broader Australian property sector is holding back progress and opportunities are being missed.

The Green Building Council of Australia has created this practical guide to help demystify sustainable finance and increase its application in our real estate sector.

This guide explains the various sustainable finance instruments that are currently being used, and why our own property market is such an appropriate place for them to be applied.

We have also reviewed current green building certifications, benchmarks and rating tools and we explain how they can be used to assess the green credentials of projects – and whether they are suitable candidates for sustainable financing.

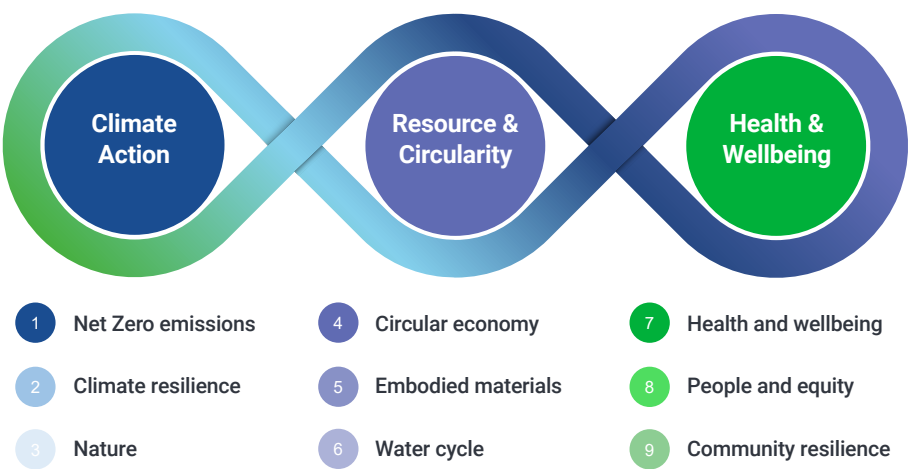
By building a deeper understanding of sustainable finance in the Australian real estate sector, we hope to drive greater and more efficient uptake of sustainable finance mechanisms.

**This guide will be updated regularly. If you would like to contact us to provide with feedback, help us address any issues, or offer opportunities for improvements, please contact [MEteam@gbca.org.au](mailto:MEteam@gbca.org.au)**

1.2 What is needed for the built environment to succeed?

Global megatrends are shaping the built environment like never before. Climate action, resource depletion and a focus on people are megatrends that the built environment must address.

In response to these megatrends, the built environment has focused on three strategic imperatives: climate action, resource efficiency & circularity, and health & wellbeing. Issues related to these, such as resilience, biodiversity and nature losses, and a stronger focus on social impacts, are rising in importance. Figure 2 outlines how these strategic imperatives and issues are both distinct and interrelated.



**Climate action:** Sustainable finance in the real estate sector is a powerful tool for climate action. By investing in green buildings and sustainable infrastructure, the sector can significantly reduce its carbon footprint for both operational emissions and upfront carbon emissions. The integration of sustainability assessments into real estate decision-making processes can lead to more environmentally friendly construction practices where embodied or upfront carbon is reduced.<sup>3</sup> Furthermore, green mortgages and energy-efficient loans can incentivise homeowners and developers to invest in low-carbon technologies and renewable energy systems, contributing to the global effort to combat climate change.<sup>4,5</sup>

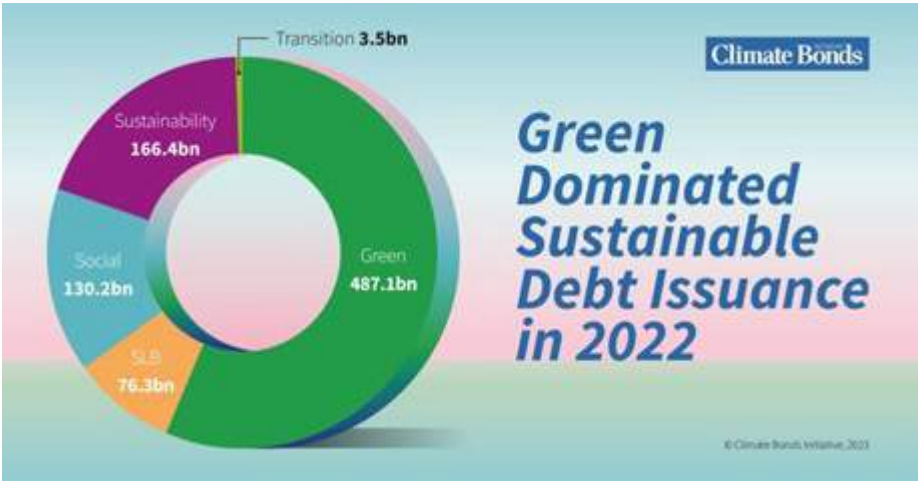
**Resource depletion:** The real estate sector can also contribute to addressing resource depletion through sustainable finance. By prioritising investments in buildings that incorporate circular economy principles, such as the use of recycled materials and waste reduction strategies, the sector can promote resource efficiency. Efforts are already in place to create environmental performance indicators in real estate,<sup>6</sup> which can guide the industry towards more sustainable resource use and build a more circular supply chain.<sup>7</sup>

**Health, equity and wellbeing:** Sustainable finance in the real estate sector can yield significant health benefits. Investments in green buildings can improve indoor air quality, reduce noise pollution, and promote healthier lifestyles, thereby contributing to public health. The World Green Building Council reports that green buildings can improve occupant health and wellbeing, leading to productivity benefits for businesses.<sup>8</sup> Moreover, sustainable finance can support the development of health facilities and services within real estate developments, contributing to health equity and resilience. Lastly, sustainable finance in the real estate sector can contribute to social equity and wellbeing. By investing in affordable and inclusive housing, the sector can address social inequalities. The Global Impact Investing Network highlights the potential of impact investing in real estate to generate measurable social and environmental impact alongside a financial return.<sup>9</sup> Furthermore, by considering ESG factors, investors can support real estate developments that promote community engagement, fair labour practices, and inclusive environments, thereby contributing to societal wellbeing.<sup>10</sup>

## 2. The opportunity in numbers

In 2022, lifetime total labelled sustainable debt volume grew to USD3.7tn, with a drop to USD863.4bn in 2022 compared to USD1.2tn in

2021 when the market saw its largest growth and diversification spurt. Green bond issuance remained at just over half of labelled issuances in 2022.



See [section 2.3.1](#) for definitions of the types of sustainable finance.

In 2022, for the first time, more money was raised in the debt markets for climate-friendly projects than for fossil-fuel companies.

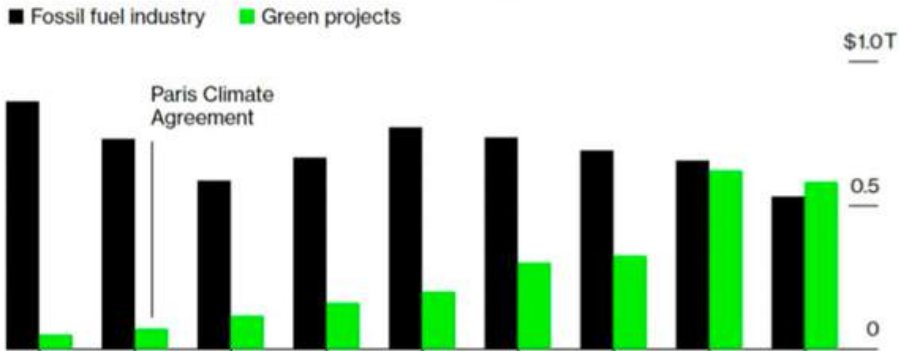
Renewable energy and other environmentally responsible ventures were funded to the tune of around

\$580 billion. Meanwhile, the figure for oil, gas and coal industries was closer to \$530 billion.

All indications are that 2023 will see further growth in these figures. All of this data points to a global 'green turnabout' in the world of debt issuance.

### Green Turnabout

Green debt issuance exceeds oil, gas and coal-related financing for first time since the Paris climate announcement at the end of 2015



Source: [Bloomberg](#)

11. [Every Building Counts 2023 Edition | GBCA](#)
12. [ABS Population Projections, Australia 2012 to 2101](#)
13. [Banking on the climate transition \(kpmg.com\)](#)
14. [10.9 million dwellings in Australia in June 2022 | Australian Bureau of Statistics \(abs.gov.au\)](#)
15. [Household and Family Projections, Australia, 2016 - 2041 | Australian Bureau of Statistics \(abs.gov.au\)](#)
16. [energynetworks.com.au/resources/fact-sheets/reliable-and-clean-gas-for-australian-homes-2/](#)
17. [connectnow | What We Connect | Bottled Gas](#)
18. [Green Finance | Australia Research - Opportunity in green buildings and low carbon retro-fits \(flowpaper.com\)](#)

### The need

Buildings account for over 50% of electricity use in Australia and almost a quarter of its emissions. The built environment has the technology to decarbonise now, but we must do this at speed and scale to smooth the way for other hard-to-abate sectors and achieve Australia's legislated emission reduction targets.<sup>11</sup> It is expected that 74% of Australians will live in cities by 2061.<sup>12</sup> Sustainable financing of the new buildings and infrastructure required will ensure continued reduction in emissions.

The commercial real estate sector has boasts over 859 million square metres<sup>13</sup> of floor space. This number is projected double by 2050 to accommodate the growing demand for offices, retail spaces, and other facilities. The residential sector has approximately 10.9 million dwellings<sup>14</sup> as of June 2022, with approximately 200,000 built every year, about 50% of which are apartments. By 2040, it is expected that number to increase by 43%.<sup>15</sup> Of the existing dwellings, approximately 5.2 million are connected to the gas network,<sup>16</sup> with another million using propane.<sup>17</sup>

80% of the buildings that will exist in 2050 already exist today. Improving energy efficiency and transitioning these buildings to renewable energy represents another major opportunity for sustainable financing.

Transition funding is crucial for various projects, including electrification, HVAC system upgrades, chiller system revamps, and the introduction of building

management systems to continue reducing energy demand. In fact, to achieve net-zero carbon targets by 2050, Australia must:

- Electrify more than 500 homes a day, every day, including weekends, and also improve the energy efficiency of 100 more (approximately 200,000 homes and apartments a year)
- Retrofit nearly 3.5% of its current non-residential stock annually, a significant jump from the present rate of 1%. This would mean increasing the current rate of investment in retrofits from \$500m AUD to about 1.5b to 2b AUD.<sup>18</sup>

Energy efficiency measures in buildings alone could deliver \$20 billion in energy bill savings for businesses and households, and 64MT of avoided CO<sub>2</sub>e emissions by 2050. Electrifying the built environment could deliver \$49 billion in energy savings between 2024 and 2050 compared to BAU, along with 199MT of avoided CO<sub>2</sub>e emissions.

While the built environment has enormous capacity to reduce overall emissions, in its latest report the Intergovernmental Panel on Climate Change (IPCC) highlights the critical role the finance sector must play. There is sufficient global capital to rapidly reduce greenhouse gas emissions if existing barriers are reduced - increasing finance to climate investments is important to achieve global climate goals.



What have been the obstacles to date?

- Limited understanding and awareness of sustainable finance mechanisms has led to unwarranted scepticism, and unrealistic expectations around their performance
- Misaligned priorities between stakeholders (landlord, tenants and investors) can compromise projects’ eligibility for sustainable finance.
- Technical misalignments between property-related processes and finance-related processes, e.g. a net zero development can take many years before final verification that it has achieved net zero status, and very difficult to demonstrate on an annual basis in qualifying for sustainable finance
- A lack of standardised international benchmarks makes it difficult to effectively evaluate projects’ sustainability performance.
- Regional variations (such as in supply chain, heating/cooling requirements and local building regulations) also make it difficult to compare green credentials between assets.

This guide aims to help address these challenges.



Accelerated climate action will only come about if there is a many-fold increase in finance. Insufficient and misaligned finance is holding back progress.

Christopher Trisos,  
IPCC Scientist Lead Author Intergovernmental Panel on Climate Change report 2023

The opportunities

There is a rise in sustainability finance products designed for use in property, making it easier for real estate businesses to align funding to their values and sustainability strategies.

- The real estate industry is a key contributor to the global sustainable finance debt market (across loans and bonds). According to BloombergNEF, total issuance volume (USD equiv.) for the real estate sector in 2021 and 2022 are \$178bn and \$127bn respectively. That equates to approx. 10% and 8% of the total sustainable finance issuance volume for 2021 and 2022 respectively.
- Within the sustainable finance debt market (across loans and bonds) in the real estate industry, issuance

volume is dominated by European and North American issuers/ borrowers. Australia contributed approx. 3% and 2% of issuance volumes in 2021 and 2022 respectively.

- In the years since 2020 the percentage of **loans** issued to the real estate sector in Australia that are labelled sustainable finance is estimated to range from 25% to 44%.
- For **bonds** issued to the real estate sector in Australia, the percentage labelled sustainable finance has ranged from 1% to 6% in the years since 2020.

19. Source: Refinitiv/Loanconnector and ANZ. Please note this above data provides an estimate only of the Loan Market volume and number of deals in Australia – as not all deals are disclosed publicly to the market / participants and thus some deals not captured and / or some data sourced internally where ANZ has been a participant

20. Source: Bloomberg. Please note that this above data is illustrative only as some bonds may not be notified to Bloomberg and / or captured incorrectly

Sustainable Finance Labelled Loans – Real Estate Sector Australia<sup>19</sup>

Year	No. of Deals	No. of Deals Sustainable Finance label	Total Volume (A\$m)	Volume Sustainable Finance label (A\$m)	% Total Sustainable Finance label
	Real Estate	Real Estate	Real Estate	Real Estate	Real Estate
2020	4	1	2,209.00	550	25%
2021	22	4	14,378.80	5,180.00	36%
2022	15	2	7,067.00	1,505.00	21%
YTD 2023	17	5	11,619.70	5,089.50	44%



Sustainable Finance Labelled Bonds - Real Estate Sector Global (Note amounts in US\$)<sup>20</sup>

Australian bond market							
Amt issued, AUDbn					Sustainable Finance Label RE, % total RE	Sustainable Finance Label RE, % Sustainable Finance Label all	Total RE, % total all
	Real estate (RE)		All				
	Sustainable Finance-labelled	Total	Sustainable Finance-labelled	Total			
2020	0.5	6.2	9.8	634.6	8.1%	5.1%	1%
2021	0.9	20.1	5	333.8	4.7%	19%	6%
2022	1.1	9.1	2	405.8	12.6%	58.9%	2.2%
H1 2023	0.2	10.9	1	202.6	1.6%	17.5%	5.4%

20. Source: Bloomberg. Please note that this above data is illustrative only as some bonds may not be notified to Bloomberg and / or captured incorrectly

Sustainable Finance Labelled Bonds - Real Estate Sector Global (Note amounts in US\$)<sup>20</sup>

Global bond market							
Amt issued, USDbn					Sustainable Finance Label RE, % total RE	Sustainable Finance Label RE, % Sustainable Finance Label all	Total RE, % total all
	Real estate (RE)		All				
	Sustainable Finance- labelled	Total	Sustainable Finance- labelled	Total			
2020	36.5	575.8	481.3	60,911.90	6.3%	7.6%	0.9%
2021	86.4	1,149.60	530.4	58,594.60	7.5%	16.3%	2%
2022	46	883.7	328.2	53,483.80	5.2%	14%	1.7%
H1 2023	12.2	531.8	180.8	27,746.20	2.3%	6.7%	1.9%

How can sustainable finance benefit the real estate sector?

- **Access to Capital:** Many financial institutions and investors are increasingly incorporating ESG criteria into their lending and investment decisions. Property developers and owners who embrace sustainable finance principles may have better access to capital and lower borrowing costs.
- **Regulatory Compliance:** Sustainable finance aligns with evolving regulatory frameworks related to ESG factors including building codes and energy efficiency standards, and emissions reductions targets. Complying with these regulations can reduce legal and financial risks.
- **Risk Mitigation:** Sustainable finance encourages property developers and investors to consider long-term environmental and social risks.

By doing so, they can identify and mitigate potential risks related to climate change, regulatory changes, and reputational damage.

- **Long-Term Resilience:** Sustainable properties are generally more resilient to the physical and regulatory challenges associated with climate change. This resilience can protect the property's value and financial performance over time.
- **Reporting and Disclosure:** Sustainable finance comes with specific governance and reporting requirements, providing climate-related disclosure opportunities.





### 3. Understanding sustainable finance

There are two main types of sustainable finance:

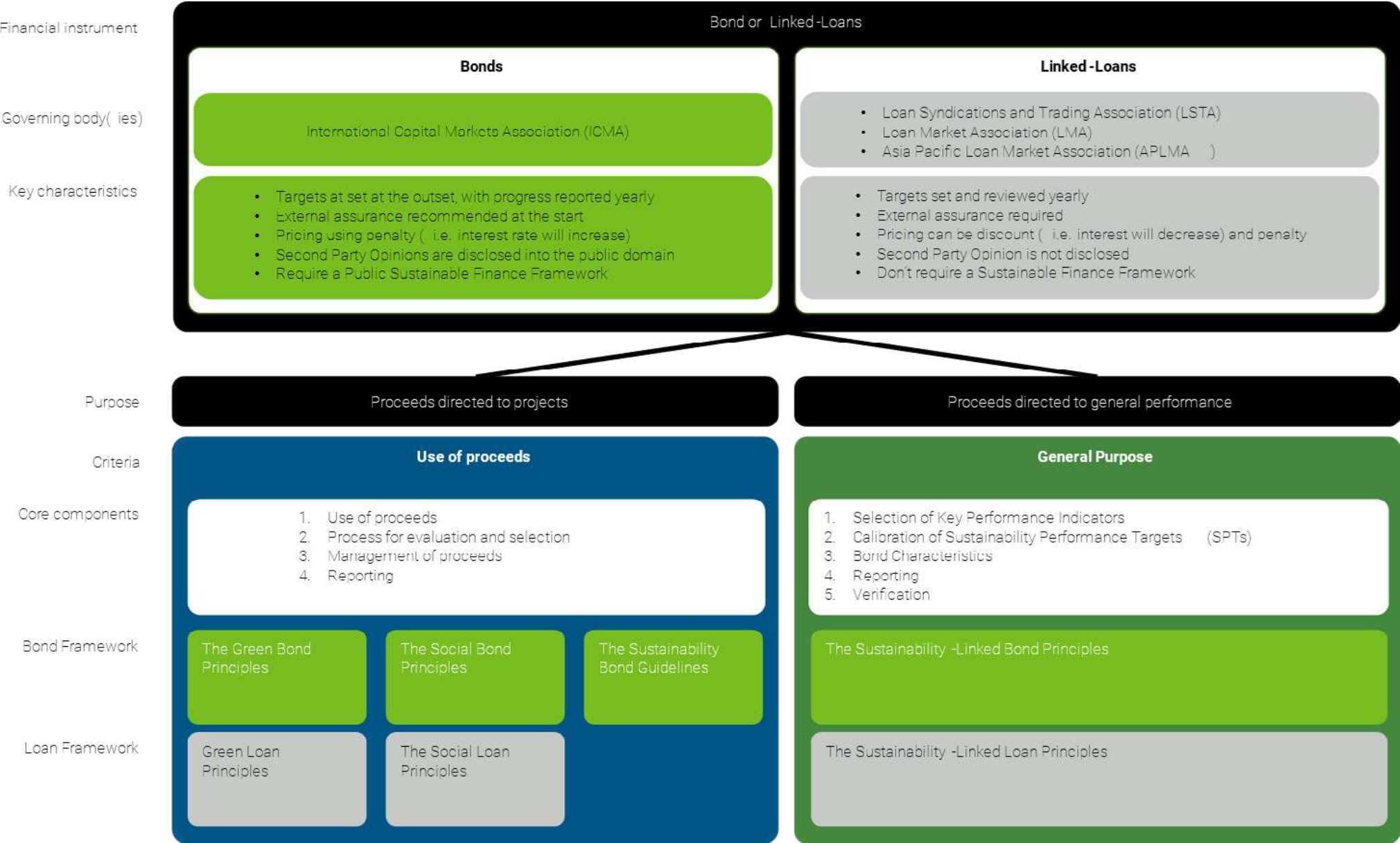
- **Use of Proceeds** – where the money is exclusively being invested in identified green or social projects.
- **General Purpose** – entity level finance where borrowers are incentivised to meet pre-agreed sustainability targets, but the money can be used for broader purposes.

Under both these types of financing, there are two main types of instruments: bonds and loans. Each has different principles, governing bodies, core components and key characteristics.

All sustainable finance products are underpinned by a set of core components: a set of requirements that borrowers are required to meet. These differ according to whether it's a Use of Proceeds or General-Purpose instrument.



**Figure 1**  
**Characteristics and requirements of key types of sustainable finance – bonds and linked-loans.**



#### Second Party Opinions and Third-party assurance

As well as forming part of the bond and loan principles, the use of external third parties to provide verification and assurance of sustainable finance transactions is emerging as best practice in sustainable finance.

**Second-party Opinion (SPO)** – typically performed by external consultants. Opinions are typically limited to the issuer’s alignment to bond and loan principles such as sustainable finance frameworks, use of proceeds criteria and ambitiousness of KPIs. No assurance is obtained.

**Third-party assurance** – typically performed by professional accounts or audit firms. Assurance is provided in accordance with recognised auditing and assurance standards, typically to a limited assurance level. Assurance for bonds and loans include assurance over allocation of funds, expected impacts of the sustainable debt instrument and performance against KPIs and SPTs.

**Third-party assurance** and Second Party Opinions play a critical role in sustainable finance through enhancing stakeholder confidence in the sustainable finance transaction.

**Chapter 8** has important information for Second Party Opinion providers on how to avoid greenwashing claims and ensure sustainable finance outcomes go well beyond minimum legislation in Australia. It also provides guidance on how to review claims during reporting requirements against verification frameworks.



### 3.1 Use of Proceeds: the 5 instruments

With Use of Proceeds instruments, money is exclusively invested in green or social projects. The types available are explained below

TYPE	FRAMEWORKS	PURPOSE
Green Bond	<i>Green Bond Principles</i>	Finance or re-finance projects that have environmental benefits.
Green Loans	<i>Green Loan Principles</i>	Finance or re-finance new and/or existing eligible projects with environmental benefits.
Social Loans	<i>Social Loan Principles</i>	Finance or re-finance new and/or existing eligible Social Projects.
Social Bonds	<i>Social Bond Principles</i>	Finance or re-finance projects that address or mitigate a specific social issue and/or seek to achieve positive social outcomes for a target population(s).
Sustainability Bonds	<i>Various</i>	Finance or re-finance a combination of Green and Social Projects in line with both Green Bond Principles and Social Bond Principles.



#### 3.1.1 What projects are eligible?

Generally, ‘green’ instruments apply to projects focused on positive environmental impacts, while ‘social’ instruments are for socially-oriented projects. Sustainability instruments need to satisfy both criteria.

##### ELIGIBLE FOR GREEN BONDS & GREEN LOANS

Typical projects include energy efficiency upgrades on existing portfolios, new developments, and provision of on-site renewable energy. Possible broader uses could include climate adaptation upgrades, EV charging roll out, or reuse and/or recycling for a circular economy.

- Renewable energy installations.
- Energy efficiency upgrades.
- Pollution prevention and control systems.
- Environmentally sustainable management of living natural resources and land use.
- Conservation of terrestrial and aquatic biodiversity.
- Sustainable water and wastewater management.
- Climate change adaptation.
- Circular economy.
- Electrification.

##### ELIGIBLE FOR SOCIAL BONDS & SOCIAL LOANS \*

In real estate, most pure social bonds and loans are used for affordable or social housing – very few are issued by corporates.

- Affordable basic infrastructure.
- Access to essential services.
- Affordable housing.
- Employment generation.
- Socioeconomic advancement and empowerment.

##### ELIGIBLE FOR SUSTAINABLE BONDS

Typically, these projects will be eligible for green financing (such as an energy efficient development). But they also include at least one component that qualifies for social financing – such as affordable housing, employment generation or community infrastructure.

\* Criteria for Social Bonds and Social Loans are still in development. This paper outlines the current criteria in the Social Bonds and Loans Principles, and makes recommendations for additional ones in Chapter 6.4.



3.1.2 Core Components

CORE COMPONENT	WHAT THE ICMA REQUIRES FROM ISSUERS TO MEET THAT COMPONENT	PATHWAY TO COMPLIANCE FOR REAL ESTATE
Use of proceeds	Clearly communicate the eligibility of the project to the investor.	Identify projects that are in line with the eligibility criteria of the relevant principles, and are verified by nationally recognised schemes, or should they not exist, through international verification frameworks.  See Chapter 6 for suitable benchmarks for project-based targets in Australia.
Process for project evaluation and selection	Clearly communicate to investors: <ul style="list-style-type: none"><li>• The project’s sustainability objectives.</li><li>• The process you have followed to determine its eligibility for sustainable financing.</li><li>• Any additional information on processes you have used to identify and manage perceived risks associated with the project (environmental and social).</li></ul>	Demonstrate how the evaluation and selection of this project relates to your organisation’s strategy. As a minimum, the project should: <ul style="list-style-type: none"><li>• Be aligned to your company’s overarching sustainability and business strategy.</li><li>• Meet your company’s minimum standards.</li><li>• Have governance processes embedded across every stage to ensure sustainability outcomes will be achieved.</li><li>• Have the relevant selection criteria embedded into the bid or investment decision process.</li></ul> See Chapter 6 for suitable benchmarks for project-based targets in Australia and provides model language that can be used to describe the above.
Management of proceeds	Track the use of funding in an appropriate manner. For every eligible project, you must have a formal internal process that is linked to your lending and investment operations for eligible projects.  In addition, ICMA encourages that the issuer’s management of proceeds be supplemented by an external auditor, or other third party, to verify the methods and allocation of funds.	In real estate, the management of proceeds is typically done in two ways: <ul style="list-style-type: none"><li>• Tracking: where the allocation of funds is tracked through to each project (typically used in portfolio upgrades where specific funds are allocated and tracked to an energy efficiency initiative across multiple buildings).</li><li>• Earmarking: where the funds are earmarked for certain projects but not tracked to those specific initiatives (typically done when the eligible projects may change over time, such as when you’re financing a complex development pipeline).</li></ul>

Reporting	Issue an annual report that includes: <ul style="list-style-type: none"><li>• A description of eligible projects that have been allocated funding.</li><li>• The amounts allocated to each project.</li><li>• The expected or actual impact (environmental or social), using qualitative performance indicators and, where feasible, quantitative indicators.</li><li>• Key assumptions and methodologies of impact.</li></ul>	When disclosing environmental impacts, real estate companies can lean on green rating systems, supplemented by additional reporting information.  For Green Bonds and Green Loans, the ICMA Harmonised Framework for Impact Reporting outlines core indicators that need to be reported for energy efficiency projects and green building projects. They also outline other sustainability indicators for green buildings that can be reported.  For Social Bonds and Social Loans, indicators are less harmonised, but the ICMA Harmonised Framework for Impact Reporting for Social Bonds does include sample criteria that can be used to report against.  Regardless, best practice also suggests that reports should be externally audited or verified by a third party.  Chapter 6 provides an outline of how the most common used rating tools for Australia can be used in line with the above reporting requirements.
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## 3.2 General Purpose instruments: the 2 types

Generally, ‘green’ instruments apply to projects focused on positive environmental impacts, while ‘social’ instruments are for socially-oriented projects. Sustainability instruments need to satisfy both criteria.

TYPE	FRAMEWORKS	DESCRIPTION
<b>Sustainability-Linked Loans</b>	Sustainability-Linked Loan Principles.	Any types of loan instruments and/or contingent facilities (such as bonding lines, guarantee lines or letters of credit) which incentivise the borrower’s achievement of ambitious, predetermined sustainability performance objectives or Key Performance Indicators.
<b>Sustainability-Linked Bonds</b>	Sustainability-Linked Bond Principles.	Any type of bond instrument where the issuer achieves predefined Sustainability or Environmental Social Governance (ESG) objectives or Key Performance Indicators, within a predefined timeline.

### 3.2.1 Setting suitable targets for real estate companies

The goal of Sustainability-Linked Loans and Bonds is to improve the borrower’s sustainability profile over the long term, by aligning the loan terms to the borrower’s performance. This is done via the use of Key Performance Indicators. For each of these, a Sustainability Performance Target is then set. ICMA keeps a register of relevant, but not exhaustive, KPIs to real estate and construction activities. Examples are noted below:

	CONSTRUCTION	REAL ESTATE
<b>ENVIRONMENT</b>		
Climate change (GHG Emissions and Energy)		Y
Water	Y	
Waste	Y	Y
Raw material sourcing and recycling	Y	Y
Biodiversity	Y	Y

	CONSTRUCTION	REAL ESTATE
<b>SOCIAL</b>		
Access and affordability	Y	Y
Community & Human rights	Y	
Occupational Health & Safety	Y	
Diversity, equity, and inclusion	Y	Y
Just transition	Y	
Working condition	Y	Y
<b>GOVERNANCE</b>		
Value chain	Y	
Business ethics	Y	Y
Product governance	Y	

Sustainability-Linked Loans have typically been used by real estate companies at corporate level with KPIs restricted to absolute Scope 1 and 2 emissions. Meanwhile, Sustainability-Linked Bonds have been issued for REITs, funds or pure leasing companies, with KPIs for absolute Scope 1 and 2 emissions, or emissions intensity per m<sup>2</sup> of the underlying real asset portfolio or fund,

as the Sustainability Performance Target. To meet the requirements for both Sustainability-Linked Loans and Bonds, it’s increasingly common for real estate companies to include downstream Scope 3 targets, as well as Scope 1 and 2. Chapter 7 outlines recommended Key Performance Indicators, and how Australia’s real estate framework helps achieve these goals.



### 3.2.2 General Purpose: Core Components

CORE COMPONENT	LOAN MARKET ASSOCIATION REQUIREMENTS TO MEET THE COMPONENT	PATHWAY TO COMPLIANCE FOR REAL ESTATE
Selection of KPIs	<p>Sustainability-Linked Loans and Bonds align the loan terms to the borrower's performance using one or more KPIs to the Sustainable Performance Targets (SPT). KPIs should be:</p> <ul style="list-style-type: none"> <li>• Relevant, core and material to the borrower.</li> <li>• Measurable or quantifiable on a consistent methodological basis.</li> <li>• Able to be benchmarked using an external reference (so the correlating SPTs can be assessed in context).</li> </ul>	<p>Typical KPIs of green financing are Scope 1 and 2 emissions, with Scope 3 becoming more commonplace.</p> <p>KPIs for corporate-level social financing tend to focus more on workplace outcomes (related to things like such as gender equality, training, health &amp; safety).</p>
Calibration of Sustainable Performance Targets (SPT)	<p>Setting targets involves setting SPTs that:</p> <ul style="list-style-type: none"> <li>• Significantly exceed regular practices.</li> <li>• Compare to external references.</li> <li>• Match the borrower's sustainability <b>strategy</b>.</li> <li>• Be set before or at loan origination.</li> </ul> <p>Cross benchmarks should consider:</p> <ul style="list-style-type: none"> <li>• The borrower's 3-year history.</li> <li>• Current sector standards.</li> <li>• Relevant regional scientific targets.</li> </ul> <p>Disclosure should include:</p> <ul style="list-style-type: none"> <li>• Expected target achievement date.</li> <li>• Verified reference point.</li> <li>• Conditions for baseline adjustment.</li> <li>• Plan to achieve the SPTs.</li> <li>• Uncontrollable factors affecting target achievement.</li> </ul>	<p>The selected KPIs and SPTs must be material connected to its sustainability / ESG strategy.</p> <p>In large organisations, a corporate target can be used as a disaggregated target for a fund or portfolio, as long as the fund or portfolio was part of the baseline year assessment and ongoing corporate emissions boundary.</p> <p>With Sustainability-Linked Bonds, the SPT is usually set as a mid-point of the bond.</p> <p>With Sustainability-Linked Loans, the SPT is tested every year, with the margin adjustment being applied to the loan for the following year.</p> <p>The level of ambition of SPTs is typically assessed based on their 1.5 Degree alignment, using Second Party Opinions (SPOs).</p>

CORE COMPONENT	LOAN MARKET ASSOCIATION REQUIREMENTS TO MEET THE COMPONENT	PATHWAY TO COMPLIANCE FOR REAL ESTATE
Calibration of Sustainable Performance Targets (SPT) CONT.		The Science Based Targets initiative (SBTi) is a measure for Sustainability-Linked Loans internationally, while the Climate Bonds Initiative is commonly used for Sustainability-Linked Bonds. As shown in this document, GRESB scores, or Green Star Performance Portfolio or NABERS Portfolio ratings can also be used (Chapter 7).
Loan Characteristics	An economic outcome is linked to whether the SPTs are met.	No differences in loan characteristics that are specific to the real estate sector.
Reporting	<p>Borrowers must update lenders with information that allows them to monitor the performance of the SPTs and assess whether the SPTs remain ambitious and relevant to the borrower's business.</p> <p>These reports must be issued annually at a minimum, and the LMA recommends they are made publicly available where appropriate.</p>	<p>No differences in reporting that are specific to the real estate sector.</p> <p>Aligning the reporting cycle of the loan to corporate or fund reporting will avoid multiple reporting cycles, reduce resourcing needs for the borrower.</p>
Verification	Borrowers must obtain independent and external verification of their performance against each SPT. The LMA recommends that this verification is also made publicly available where appropriate.	No differences in verification that are specific to the real estate sector. Including the SPTs in the auditor's current assurance scope of work will avoid doubling up.



### 3.3 Sustainable finance frameworks

In addition to those described above, several other global frameworks exist to help identify projects suitable for green financing. This section describes the additional ones and how they work.

Chapter 6 outlines appropriate benchmarks for Australia and compares them against these frameworks and those described in items 3.1 and 3.2.

#### 3.3.1 The EU Taxonomy

The EU Taxonomy is a complex system to classify which parts of the economy may be marketed as sustainable investments. The EU Taxonomy provides companies, investors and policymakers with appropriate definitions for which economic activities can be considered environmentally sustainable. In this way, it should create security for investors, protect private investors from greenwashing, help companies to become more climate-friendly, mitigate market fragmentation and help shift investments where they are most needed.

The taxonomy uses EU directives, policies and tools such as the Energy Performance Certificate (EPC) to generate common language for comparing investment opportunities across countries in the EU. For example, it allows the level of ambition for a new development in Finland to be compared with the level of ambition for the acquisition of an existing building in Spain, even though the climate, building regulations etc. are quite different.

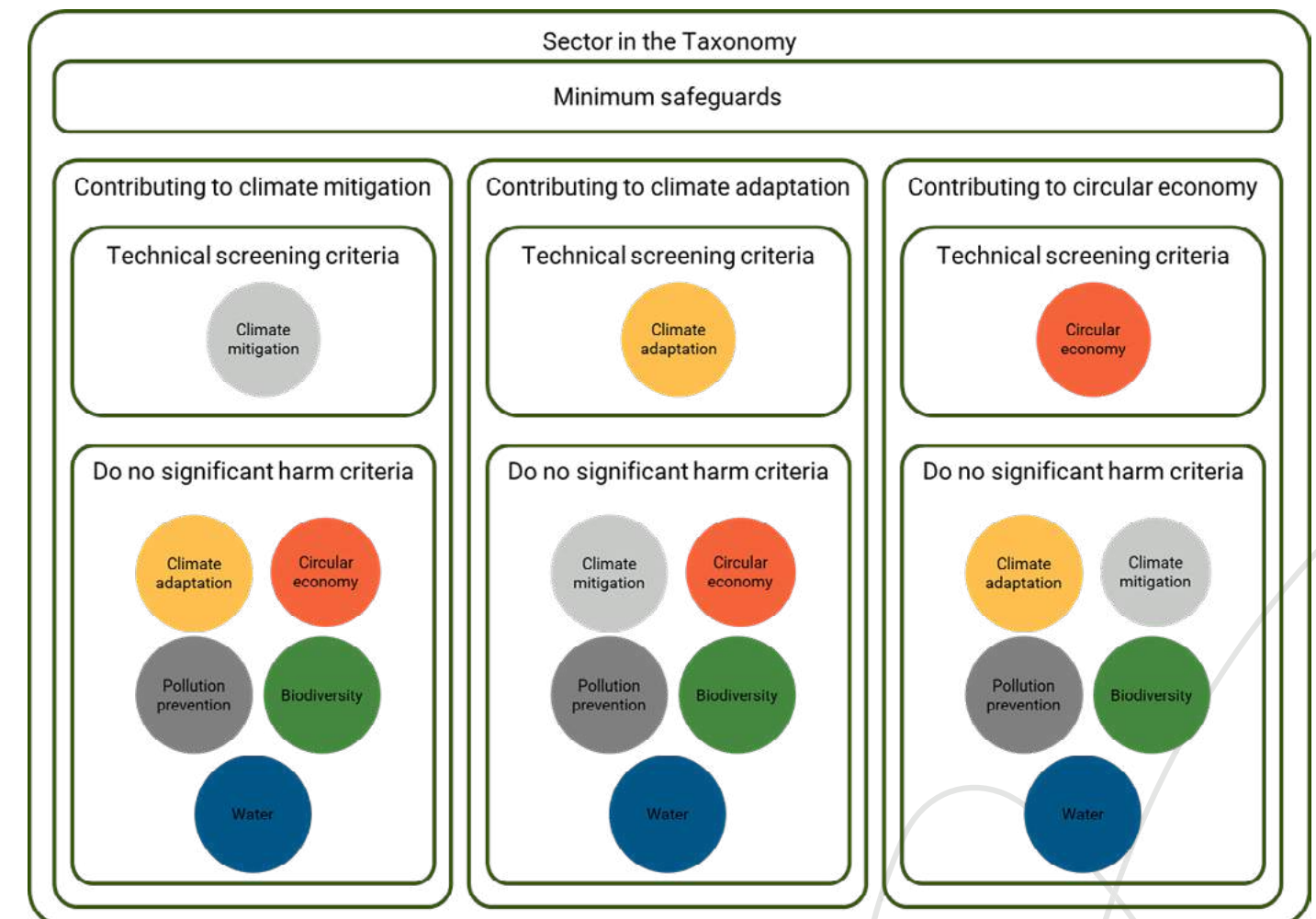
The Taxonomy Regulation also sets out 4 overarching conditions that an economic activity must meet to qualify as environmentally sustainable:

- Make a substantial contribution to at least one environmental objective (e.g. Climate Mitigation);
- Do no significant harm to any of the other five environmental objectives;
- Comply with minimum safeguards; and,
- Comply with the technical screening criteria set out in the Taxonomy delegated acts.

For the built environment, at the time of writing of this document technical screening criteria had been set for economic activities that can make a substantial contribution to climate change mitigation and climate change adaptation, with additional technical screening criteria to be adopted in 2023.<sup>21</sup>

FIGURE 2

Examples of how the taxonomy applies to projects that are targeting making a substantial contribution to climate mitigation, climate adaptation, and circular economy. In these diagrams, the projects must comply with minimum safeguards, then comply with 'substantial contribution' criteria, then ensure they comply with all 'do no significant harm' criteria.



21. Future versions of this guide will include more detail on the 'Substantial contribution to the transition to a circular economy' technical screening criteria which will cover the built environment. The criteria for construction and real estate activities is outlined here: [https://finance.ec.europa.eu/system/files/2023-06/taxonomy-regulation-delegated-act-2022-environmental-annex-2\\_en\\_0.pdf](https://finance.ec.europa.eu/system/files/2023-06/taxonomy-regulation-delegated-act-2022-environmental-annex-2_en_0.pdf)



Rules for most sectors came into effect in 2022, including rules for new buildings, building ownership, and building renovations. The criteria for each of the sectors are summarised in the following table. **Chapter 6** compares them against the multiple potential benchmarks, while **Appendix A** provides a more detailed analysis.

TOPIC	REQUIREMENT FOR EXISTING BUILDING RENOVATIONS	REQUIREMENT FOR BUILDING ACQUISITION	REQUIREMENT FOR NEW BUILDINGS
<b>Climate mitigation</b> (Substantial contribution criteria includes all items. * delineates: Do no significant harm criteria)	<ul style="list-style-type: none"><li>• 30% energy savings after refurbishment, or</li><li>• Building sits in the top 15% of each national stock.</li></ul> For either, the performance must be verified through an Energy Performance Certificate.  The building is not dedicated to extraction, storage, transport, or manufacture of fossil fuels*.	The performance of the building must be within the top 15% of the local existing stock.  The performance must be verified through an Energy Performance Certificate.  For building is energy efficient, depending on the age of the building*.	The building’s primary energy demand is at least 10% lower than the threshold set for the nearly zero-energy building requirements*.  For buildings larger than 5000 m², <ul style="list-style-type: none"><li>• They must be tested for air tightness or have a quality façade, and;</li><li>• The carbon life cycle impacts are calculated and disclosed.</li></ul>
<b>Climate adaptation</b> (Substantial contribution criteria includes all items. * delineates: Do no significant harm criteria)	The building must reduce all material physical climate risks.*	The building must reduce all material physical climate risks.*	The building must reduce all material physical climate risks.*  Ensure adaptation efforts don’t harm others or their assets, prioritise nature-based solutions and infrastructures, and ensure solutions align with local plans and meet specific screening criteria, with monitoring for effectiveness.*
<b>Circular economy</b> (As of June, Technical screening criteria for substantial contribution has been proposed and has not been included in this guide. This will be addressed in future versions of the guide)	70% of all construction must be recycled or recovered.		<ul style="list-style-type: none"><li>• 70% of all construction must be recycled or recovered.</li><li>• Construction and demolition waste must be reduced, and</li><li>• Buildings must be built to be adaptable and efficient.</li></ul>
<b>Water</b>	Water appliances and fixtures are efficient.		Water appliances and fixtures are efficient
<b>Pollution</b>	<ul style="list-style-type: none"><li>• Building has no substances of high concern.</li><li>• Noise, dust, and pollutant emissions are minimised.</li><li>• Occupants are not exposed to toxic materials.</li></ul>		<ul style="list-style-type: none"><li>• Building has no substances of high concern.</li></ul> Noise, dust, and pollutant emissions are minimised.  <ul style="list-style-type: none"><li>• Occupants are not exposed to toxic materials.</li></ul>
<b>Biodiversity</b>			The building is not built on land of high ecological value, has endangered species, or prime agricultural land.

3.3.2 Development of an Australian Taxonomy

In July 2023, the Australian Sustainable Finance Institute (ASFI) commenced the development of the Australian Sustainable Finance Taxonomy.

The Australian Government has partnered with and is providing funding for the initial taxonomy development, which is being overseen by the Australian Council of Financial Regulators’ Climate Working Group (CWG). This partnership reflects a shared appetite across government and industry for new frameworks that support the growth of credible sustainable finance markets in Australia.

The taxonomy’s initial development phase will run for 12 to 18 months and includes the creation of climate mitigation technical screening criteria for priority sectors and associated technical work on data requirements, the methodology for incorporating transitional activities, Minimum Social Safeguards and a Do No Significant Harm framework.

The first three priority sectors for taxonomy development are:

- Electricity generation and supply (Energy);
- Minerals, mining and metals; and
- Construction and the built environment.

Contingent on additional resourcing, up to three of the below additional priority sectors could be developed over an 18-month period:

- Manufacturing/ industry;
- Transport; and
- Agriculture.

ASFI has convened a Taxonomy Technical Expert Group (TTEG) to provide strategic direction over,

input into, and endorsement of an Australian Sustainable Finance Taxonomy. The TTEG, endorsed by the CWG, comprises 25 senior leaders with expertise in sustainable finance; whole-of-economy decarbonisation; climate and environmental science and policy; human rights; and Indigenous rights and perspectives.

The technical work that will inform the Australian Sustainable Finance Taxonomy is being developed by a consortium of technical experts, led by global standard setter, the Climate Bonds Initiative (CBI). CBI has provided technical assistance for the development of several taxonomies around the world, including the European Union and Singapore’s taxonomies.

As part of its work, the TTEG will provide advice on the future development priorities for the Australian taxonomy including expanding the taxonomy to cover additional sectors for climate mitigation, and the development of criteria for the other sustainability objectives: climate adaptation, environmental protection, the transition to a circular economy and key social outcomes.

The CWG will oversee the TTEG’s outputs, as part of its role in supporting the development and implementation of the Australian Government’s forthcoming sustainable finance strategy. Led by the Department of Treasury, the CWG will review products endorsed by the TTEG and provide feedback through ASFI to facilitate alignment with the Government’s key sustainable finance policy objectives and wider market and regulatory developments in sustainable finance.



22. Use-of-Proceeds(UoP) is used as shorthand throughout this document for a variety of targeted finance instruments, including green loans, repos, and asset-backed securities. Annex 1 of the Climate Bonds Standard v4.0 details the full list of instruments that can be certified.

3.3.3 The Climate Bonds Initiative (CBI)

Investor demand for climate bonds is strong and is expected to increase in line with the delivery of quality products into the market. However, investor concerns about the credibility of green labelling are also growing. Standards, assurance & Certification will be essential to improve confidence and transparency, which in turn will enable further strong growth in the market. Today, the Climate Bonds Standard and Certification Scheme is an easy-to-use screening tool that provides a clear signal to investors and intermediaries on the climate integrity of Certified Climate Bonds. A key part of the Standard is a suite of sector-specific eligibility Criteria. Each sector-specific Criteria sets climate change benchmarks for that sector that are used to screen debt instruments, assets and/ or entities, so that only those that have climate integrity, either through their contribution to climate mitigation, and/or to adaptation and resilience to climate change, will be certified. These sector-specific Criteria are determined through a multi-stakeholder engagement process, including Technical Working Group and Industry Working Group, convened, and managed by Climate Bonds, and are subject to public consultation. Finally, they are reviewed and approved by the Climate Bonds Standard Board (CBSB). The second key part of the Climate Bonds Standard (CBS) is the overarching Climate Bonds Standard v4.0..

Climate Bonds Low-carbon Buildings Criteria

The Low-Carbon Buildings Criteria pertain to eligible assets and projects related to building investments, encompassing both commercial and residential properties with the potential to meet the stringent standards set forth in the Climate Bonds Criteria. Use-of-Proceeds<sup>22</sup> instruments and Assets, and in some circumstances Sustainability-Linked Debt Instruments and Entities can be Certified using these Criteria. These Certifications are based on the emissions performance of the underlying residential and/or commercial buildings and/ or the built environment, depending on the focus.

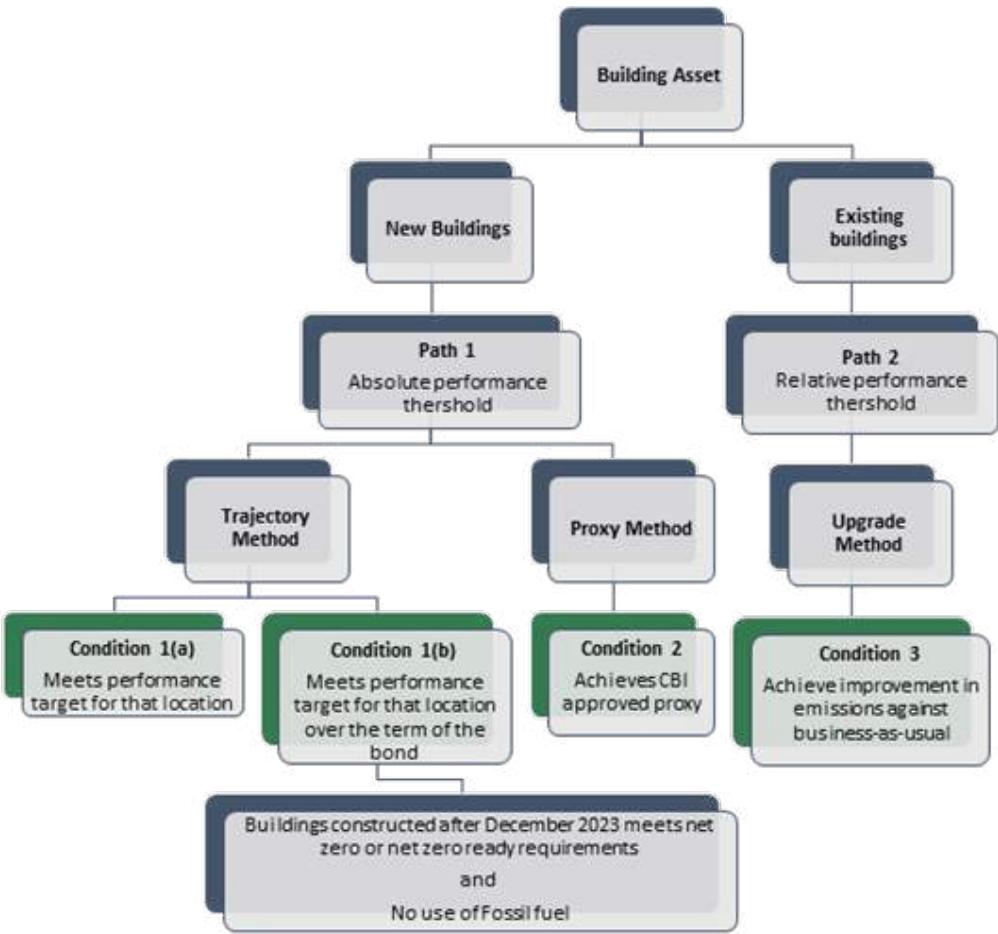
Eligibility criteria for buildings and built environment projects

There are two routes to eligibility for Certification of Use-of-Proceeds instruments, Assets, Sustainability Linked Debt instruments and Entities relating to buildings and/ or the built environment:

- ① Absolute Performance Improvement Pathway
- OR

- ② Relative Performance Improvement Pathway.
- The diagram below illustrates these eligibility pathways. Pathway 1 can be used for Certifications relating to buildings/ buildings portfolios. Pathway 2 can be used for Certifications relating to buildings/ building portfolios and those relating to built environment projects.

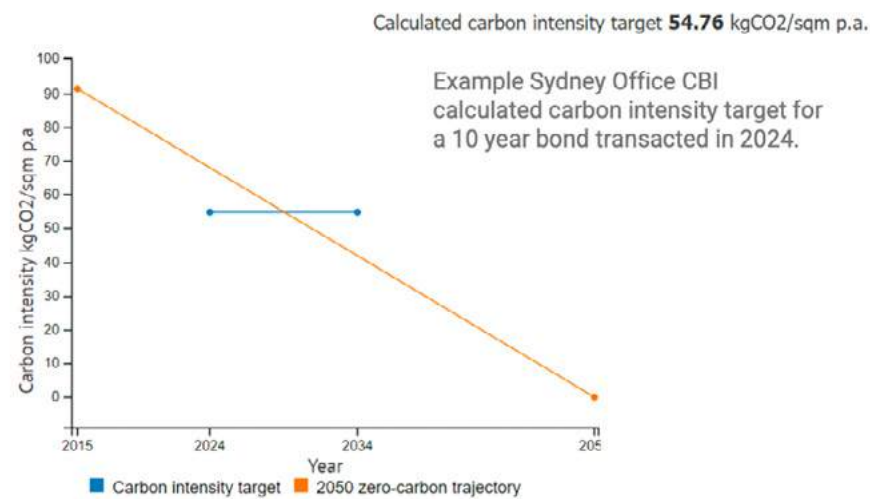
FIGURE 3  
Certification pathways



For new buildings to gain certification:

- Low carbon trajectories are calculated for each city and established by taking a baseline representing the top 15% in terms of carbon intensity (kg CO<sub>2</sub>/m<sup>2</sup>.) and drawing a linear line down to zero carbon in 2050. This rate of decarbonisation is considered to be broadly in alignment with the Paris Climate Agreement and a 1.5°C warming scenario.
- If a borrower’s asset or portfolio is aligned with this trajectory, they can gain a Climate Bonds Certification. And even if it doesn’t, they can still qualify for certification retrospectively, providing they can demonstrate comparable improvement to their portfolio’s performance over the life of the bond.

FIGURE 4  
Certification pathways



**For building upgrades to gain certification:**

- The upgrade has to achieve a CO<sub>2</sub> emissions reduction target determined by the term of the bond. For a 5-year bond, the CO<sub>2</sub> emissions reduction target is 30%. For a 30-year bond, the target is 50%.



**3.3.4 The Carbon Risk Real Estate Monitor (CRREM)**

Created for the European property sector, CRREM creates ‘target decarbonisation pathways’ for the built environment using downscaling of global carbon budgets. Pathways have been created to align with both 1.5°C and 2°C increases in global warming – and they target both emissions intensity (kgCO<sub>2</sub>/m<sup>2</sup>) and energy intensity (kWh/m<sup>2</sup>). CRREM’s pathways and targets provide investors in European commercial real estate with a roadmap for reducing the carbon footprints of large portfolios over the next two decades.

CRREM’s pathways work best when considering averages of portfolios with a very large number of buildings, proportional to the distribution of the market that it is analysing. This is because of the top-down nature of the analysis – the closer the portfolio is to the data used, the more confidence one has that the result is accurate. The further away the analysis is from this distribution, the less confidence one should have about its accuracy. Therefore, when using CRREM for large portfolios,

say for financed emissions across a bank’s entire portfolio, there will likely be a significant amount of correlation. Whereas when applied to an individual asset, the result should be used as a guide at best. CRREM continues to be improved based on significant consultation with global green building councils worldwide, including GBCA. Over time, CRREM may provide more meaningful advice for individual assets.

CRREM provides two pathways for Australia, a carbon curve, and an energy curve. Both curves have been adapted initially for Australia, but significant work remains particularly for the energy curve, which relies on data and assumptions that continue being refined. The carbon curves however, are a good indicator of a building’s potential decarbonisation pathway, particularly when accurate grid decarbonisation factors are used.

**Appendix A outlines an analysis of typical Australian benchmarks against CRREM pathways, adjusting for current grid decarbonisation factors.**



# 4 General concepts for the built environment in Australia

These are typical concepts  
and terms used in the  
Australian property sector.

23. [Net Zero by 2050 - A Roadmap  
for the Global Energy Sector, IEA,](#)  
page 144

24. [Idem,](#) page 62

## 4.1 Net zero, carbon neutral, climate positive, and zero-carbon ready buildings

### Zero-carbon ready buildings

In 2021, the International Energy Agency published 'Net Zero by 2050<sup>23</sup> – A Roadmap for the Global Energy Sector'. This groundbreaking document outlines clear goals for multiple sectors, including buildings. For the buildings sector, the IEA outlined a clear definition of what is now recognised as the pathway for the sector: zero-carbon ready buildings.

This definition states:

*A zero-carbon-ready building is highly energy efficient and either uses renewable energy directly, or uses an energy supply that will be fully decarbonised by 2050, such as electricity or district heat. This means that a zero-carbon-ready building will become a zero-carbon building by 2050, without any further changes to the building or its equipment.*

It then further defines this, it notes that zero-carbon ready buildings should eliminate fossil fuel use, be on average 35% more efficient than 2020,<sup>24</sup> have flexible power systems, and reduce their emissions from construction and material use.

### Net zero

The Paris Agreement started the shift towards net zero, which the United Nations defines as “cutting greenhouse gas emissions to as close to zero as possible, with any remaining emissions re-absorbed from the atmosphere, by oceans and forests for instance”. Net zero is often considered a synonym of carbon neutrality, but that is changing. Net zero is now more often used in reference to a ‘state’ or end point, and carbon neutrality to a ‘journey’.

For real estate, to achieve net zero, all Scope 1 and Scope 2 emissions must be eliminated without offsets. Offsets can then be used for Scope 3 providing a significant effort has been made to reduce emissions. In contrast, carbon neutrality means doing your best to eliminate Scopes 1,2 and 3 and then offsetting the rest.

### Carbon neutral

The term carbon neutral is used where all carbon emissions from all three scopes are addressed so that the carbon account is zero through any combination of measures.

In Australia, the term ‘carbon neutral’ is currently defined by the federal government through the Climate Active carbon neutral program. “Carbon neutral means reducing emissions where possible and compensating for the remainder by investing in carbon offset projects to achieve net zero overall emissions,” Climate Active says. “Offsets are generated from an activity that prevents, reduces or removes greenhouse gas emissions from being released into the atmosphere.”

Recently the term ‘carbon neutral’ has become controversial, due to the misuse in communicating actual emissions reduction. The Australian government has announced that it is considering dropping the term from the Climate Active program as part of a broader [review](#).

### Climate positive buildings

A building that addresses emissions in line with or ahead of the Paris Agreement’s 1.5°C trajectory. These buildings are fossil fuel free, highly efficient, fully powered by renewables and offset their carbon in nature-based solutions, like reforestation.

GBCA established this definition in 2017 to describe a 1.5C degree pathway for the built environment. It addresses both assets and entities. It recognises that different scopes need to be treated differently, under the principle that each must separately be addressed so that at any given time, each scope is zero. So, for example, in new buildings all fossil fuels and Scope 2 emissions must be eliminated, but refrigerants must be reduced and then offset (because they cannot be eliminated now). This definition also sets specific energy and upfront carbon reduction targets to drive transformation at the asset level.

GBCA uses this definition to reconcile all the above elements into the optimal pathway for Australia. The diagrams below show how Green Star Buildings, and Green Star Performance, have set targets around this definition, over time. See section 11.4 for details.

## 4.2 Understanding asset energy and emissions profiles

There are broadly speaking three main sources of emissions in a building:

- **Operating emissions** – emissions from the consumption of energy (fuel or electricity) and direct refrigerant emissions from leakage. Of all these, on average, the largest source of emissions is electricity, then natural gas, finally refrigerants.
- **Embodied emissions** – emissions from the manufacture and transport of building materials, and construction, maintenance, and end-of-life activities. These are known as upfront emissions, in-use emissions, and end-of-life emissions. Of these three, upfront emissions are the largest by far, with these occurring at the beginning of building works.
- **Other emissions** include emissions from waste emissions and water consumption emissions, though these are minor.

Between Operating and Embodied emissions, Operating emissions are rapidly decreasing as buildings electrify and the grid decarbonises. Operating emissions can be modified over time. Meanwhile most of the embodied emissions from a building are upfront emissions. These cannot change once the building has been built.

For a new, high-performing office building in Sydney, most of the emissions are likely to be from operating emissions, where tenant emissions are being included. But, depending on the building, this split can now be 50% operating and 50% embodied. As the grid decarbonises, the split will shift rapidly to most emissions being from embodied carbon particularly upfront. The total emissions for a building, including fitouts operating emissions is shown below:

Operating emissions are heavily influenced by two factors – energy consumption at the asset level, and the emissions factor of the energy consumed. For all-electric buildings, the decarbonisation of the grid will drive most emissions reduction – with this being particularly true for tenant emissions. For embodied carbon emissions, it is both design solutions, reuse of existing assets, and material choices that will drive emissions down, particularly those upfront.

In Australia the electricity grid is rapidly decarbonising. This has implications for what actions should be taken to decarbonise the built environment. This means that for buildings in operations, the focus is on electrifying the building, and ensuring base building services are highly efficient. Where possible renewable energy can be installed on site, but it should be recognised that this should be done for reasons beyond emissions reductions (such as to reduce energy costs, backup power, or resilience questions).

25. Climate Positive Buildings and our net zero ambitions, GBCA

## 4.3 Carbon accounting methods for electricity emissions (scope 2) in Australia

The Greenhouse Gas Protocol provides two methods to account for Scope 2 emissions - the location-based method and the market-based method. They're designed to provide a comprehensive and nuanced understanding of an organization's electricity-related carbon footprint. Where available, the protocol recommends that both methods be used, as they provide relevant, but distinct information.

- **Location-based method:** This approach uses average emission factors that reflect the average carbon intensity of grids on which electricity consumption occurs (also known as "grid-average" emission factor). This method reflects where energy is consumed. This method doesn't consider any green energy purchases that a company may make. In Australia, this method mostly reflects the grid's overall decarbonisation, and is mostly outside the control of a building owner, noting that on-site renewable installations may have an effect in lowering this intensity.

- **Market-based method:** This approach reflects the emissions from electricity that an entity has purposely chosen (or its lack of choice) and contracted. It allows companies to claim specific types of power resources. For this method, companies need to apply emission factors from contractual instruments, and show custody of the attributions for the renewable energy source that includes the emission profile. In Australia, this is managed through the surrender of Large-scale Generation Certificates (LGCs) to the Clean Energy Regulator. While there are variations on how these are purchased and received,<sup>25</sup> in all cases the LGC needs to be surrendered.

The dual reporting requirement in the GHG Protocol Scope 2 Guidance ensures that companies transparently report their efforts to procure low carbon electricity and allows for the comparison of companies' emissions based on a geographically consistent emission factor.

Both methods help companies to better understand their energy supply chains, develop strategies to reduce emissions, and make progress towards global sustainability goals.



## 4.4 Asset management, entity reporting and carbon accounts

While at the asset level emissions can be divided into embodied and operating emissions, assigning these to an entity's scopes changes based on who owns the building, and how it is managed. The two most common options for managed assets are owner occupier, and leased assets.

As the name suggests, owner occupier buildings are those where the occupant also owns the building. In these cases, the owner is accountable for all emissions associated with energy used in the building in their Scope 1 & 2 boundaries. This includes base building emissions, which are generated by the use, maintenance, and replacement of core systems like the air conditioning, ventilation, heating and hot water, common area lighting and car park ventilation. It also includes the emissions from day-

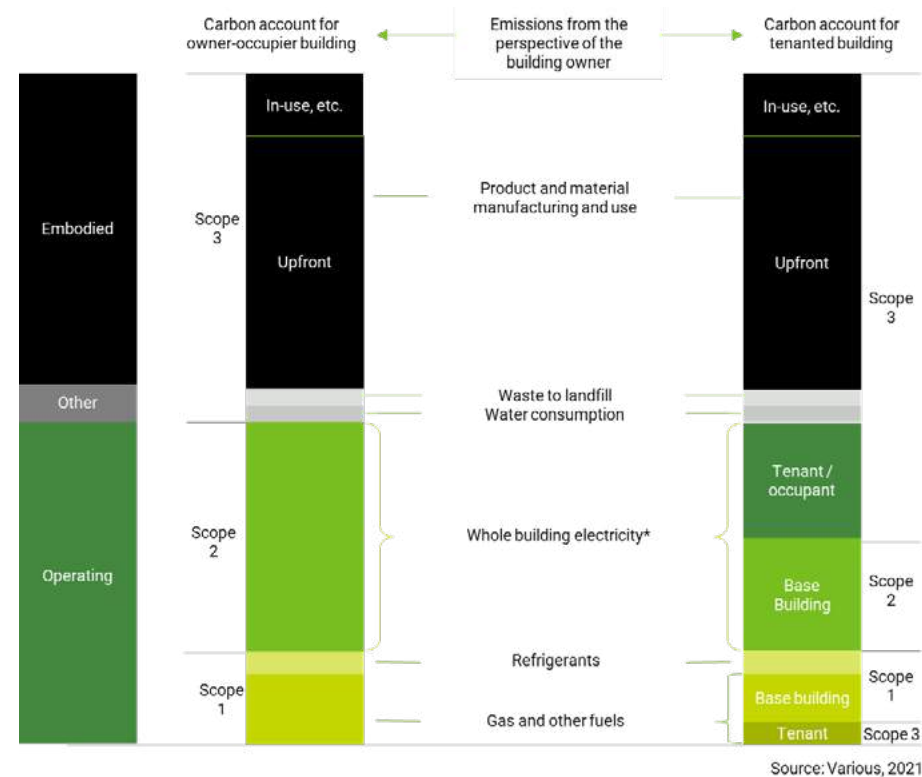
to-day operations (such as equipment or appliances within tenancies).

When a building isn't occupied by its owner, it's typically leased. In these cases, the owner is still responsible for all the building's emissions – however the base building emissions are part of their Scope 1&2, while the tenant emissions are reported as Scope 3 (specifically Category 13 Downstream leased asset emissions).

It is possible to map these emissions to an entities' scope of emissions, but there are nuances based on the operating model for an asset, depending on metering, leasing, and stakeholders involved. The diagram below illustrates an example of how the sources of emissions for an office building in Sydney are accounted by the building owner entity depending on whether the building is owner occupied or it is a tenanted building.

FIGURE 5

Diagram showing how operating and embodied carbon emissions at an asset level are accounted for in different types of buildings.

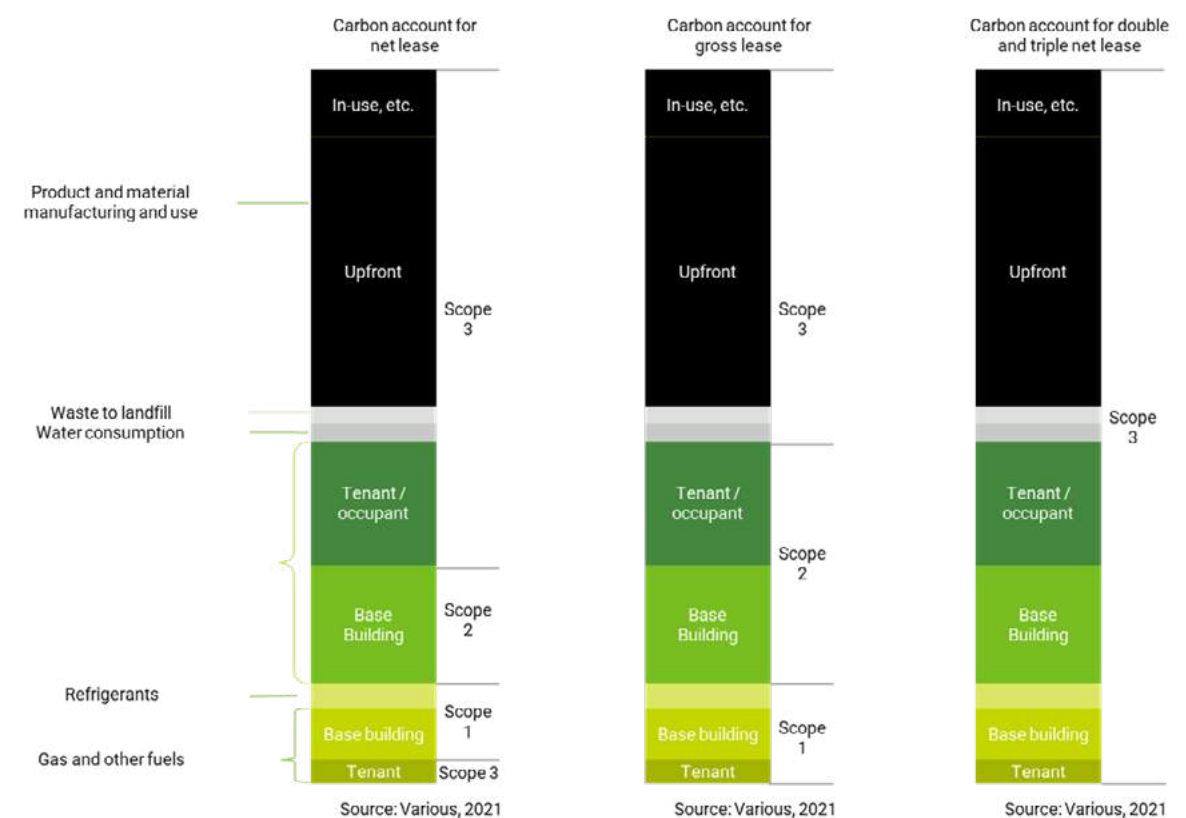


TYPE OF LEASE	DESCRIPTION <sup>26</sup>	WHERE EMISSIONS ARE REPORTED
<b>Gross Lease</b>	A commercial lease where the landlord pays all operating expenses, including energy costs. The tenant pays a base rate that covers their share.	As all energy costs are paid by the landlord, these emissions appear in the landlord Scope 1 and 2 account. These emissions should be reflected in the tenant Scope 3 emissions.
<b>Net Lease</b>	A commercial lease where the tenant pays a base rent and their own energy costs. This is a typical lease agreement for commercial office buildings and retail buildings.	All base building emissions appear in Landlord Scope 1&2 and tenant's Scope 3 emissions.  Emissions from energy-consuming equipment provided within the lease are classed as Landlord Scope 3 emissions and the tenant's direct Scope 1&2 emissions.  Emissions from the maintenance and upgrade of base building systems are classed as Landlord Scope 3 emissions.
<b>Double &amp; Triple Net Lease</b>	In a triple net lease, tenants pay for all three main expense categories in addition to their base rent. This typically includes all maintenance costs, utilities and operating expenses, so the tenant would be responsible for their own energy costs.	There are no landlord Scope 1&2 emissions.  No differences in verification that are specific to the real estate sector. Including the SPTs in the auditor's current assurance scope of work will avoid doubling up.  Scope 3 from maintenance and upgrade typically lie with the tenant.

26. For purposes of this paper, the lease type is described as including utility costs. However, even in a gross lease, certain costs can be excluded if outlined clearly in the agreement.

FIGURE 6

Diagram showing how distinct lease types affect the accounting of emissions from the building owner's perspective.



27. Ishizaki, E., Worden, K., et al. (2021). Centering Health Equity: An open-source, beta action framework for built environment projects. Mithun and Green Health Partnership. Available from: <https://www.centeringequity.org>

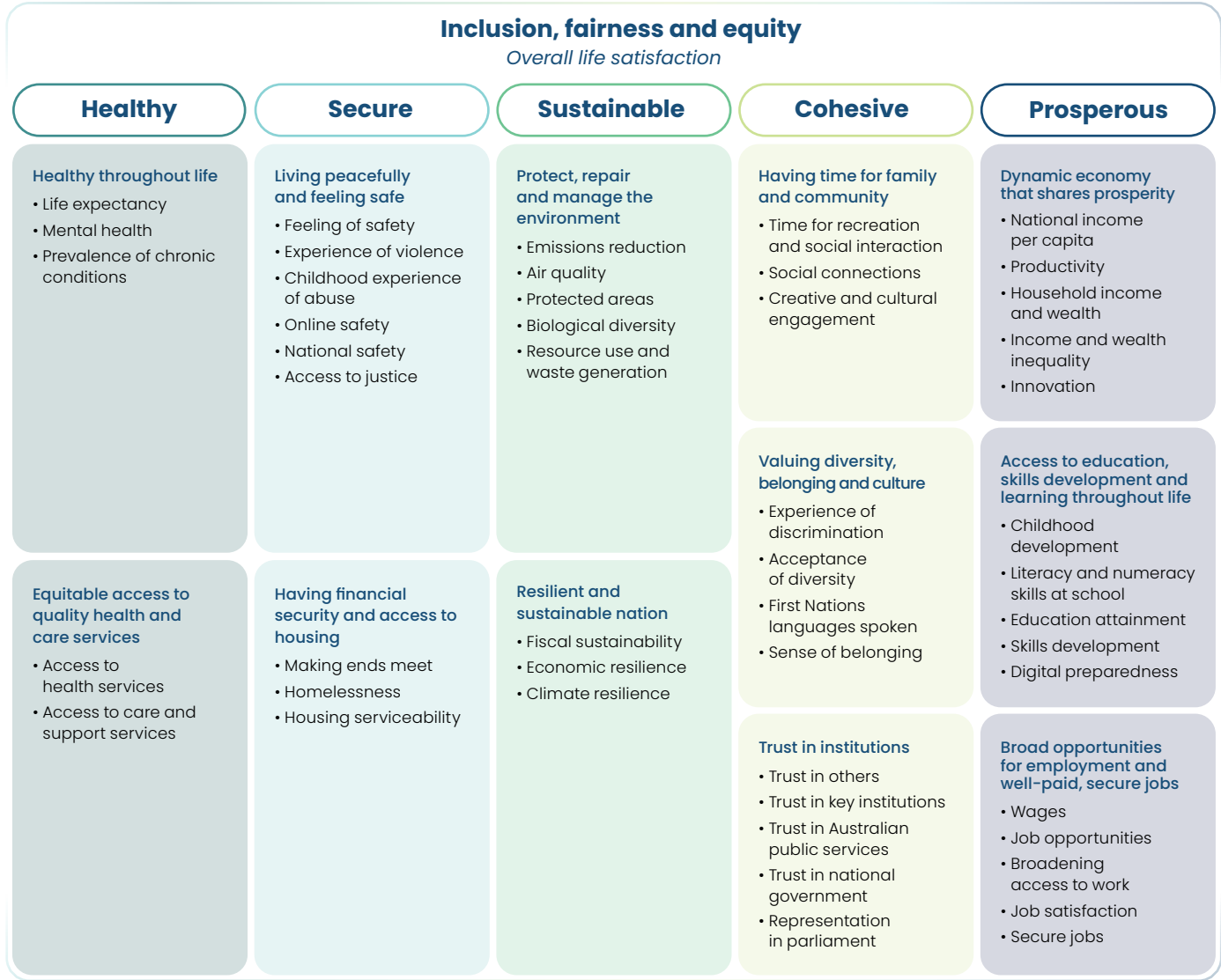
28. Commonwealth Treasury, 2023, "Measuring What Matters" Available online at: [Measuring What Matters \(treasury.gov.au\)](https://www.treasury.gov.au) Accessed 21 July 2023.

4.5 The social impacts of the built environment

In Australia, like most of the world, the measures of success in real estate have been defined first by capital benefits, then by environmental impact reductions. It is only recently that social and health outcomes have been considered as an investment metric.<sup>27</sup> This is due to the lack of metrics, particularly for the sector. Performance metrics for measuring environmental impacts are now mature – the same is not the case for social impacts in the built environment.

There are several frameworks that can be used to measure increased equity and social impact, noting that more work is needed. Key is the Commonwealth Government’s recent release of the first National Wellbeing Framework<sup>28</sup> which underscores a more inclusive approach that considers social factors such as quality of life alongside economic measures to guide resource allocation and policy decisions. The Framework is summarised in the diagram below.

FIGURE 7  
National Wellbeing Framework



Source: Commonwealth Treasury: [Measuring What Matters \(treasury.gov.au\)](https://www.treasury.gov.au)

29. ACT Wellbeing Framework, available at: <https://www.act.gov.au/wellbeing> accessed 19/07/2023

30. [Collective Social Impact Framework - Property Council Australia](#), 2021

The ACT government has adopted a Wellbeing Framework designed to help the government and community work in partnership to increase the quality of life for Canberrans, especially for those most vulnerable.<sup>29</sup> At a local government level, councils have developed strategies for inclusion, such as the Inclusive Melbourne Strategy and are integrating positive social and environmental outcomes into planning schemes. Organisations like Committee for Economic Development of Australia (CEDA) are also actively researching and promoting wellbeing as a key indicator of societal progress, influencing policy development. These efforts recognise the importance of a holistic viewpoint on prosperity beyond economic measures such as GDP.

These and many other international actions and policies, such as the [UN Sustainable Development Goals](#) reflect the growing global commitment to social value, encouraging governments, organisations, and individuals to prioritise positive impact and contribute to a more equitable and sustainable future.

More specifically for the real estate sector, the Property Council of Australia (PCA) released its [Collective Social Sustainability Framework](#),<sup>30</sup> which outlines metrics that can be used to set targets against which social bonds and loans could be assessed. The targets are summarised as follows:

TOPIC	OUTCOMES	OUTCOME DESCRIPTION	TARGET (BASE AND STRETCH)
Commitment to wellbeing	A healthier and more active local community.	Encouraging access to and engagement in active lifestyles for all.	<ul style="list-style-type: none"><li>Investment in nearby local active lifestyles.</li><li>Investment in partnerships to promote health.</li><li>Report on outcomes.</li></ul>
	Better mental health support for employees and contractors.	Encouraging access to and engagement in mental health and wellbeing services for all.	<ul style="list-style-type: none"><li>Investment in nearby mental health.</li><li>Investment in partnerships to promote mental health.</li><li>Report on outcomes.</li></ul>
	Better safety for occupants.	Delivering communities that promote safety and security.	<ul style="list-style-type: none"><li>Design features to maximise the safety of occupants.</li></ul>
Collaboration on resilient places and climate action A more climate resilient community Collaborating on resilient places and climate action	A more climate resilient community.	Collaborating on resilient places and climate action.	<ul style="list-style-type: none"><li>Local climate resilience and mitigation plan developed with community response and recovery.</li><li>Emission targets.</li></ul>



TOPIC	OUTCOMES	OUTCOME DESCRIPTION	TARGET (BASE AND STRETCH)
A more inclusive community	Commitment to advancing universal design outcomes.	Improving the design of buildings, environments, and experiences to include stakeholders and help accommodate everyone, including people with a disability.	<ul style="list-style-type: none"> <li>• Universal design features applied.</li> <li>• Dedicated specialist engaged.</li> </ul>
	Commitment to cohesive and inclusive communities, with a focus on vulnerable stakeholders.	Creating local opportunities to strengthen social connection.	<ul style="list-style-type: none"> <li>• Investment in programs, initiatives, and partnerships to strengthen local social connection.</li> </ul>
	Collective support and progress on reconciliation.	Advancing Indigenous reconciliation and inclusion.	<ul style="list-style-type: none"> <li>• Contribution to RAP or indigenous inclusion plan.</li> <li>• Consultation with indigenous communities.</li> <li>• Percentage of staff completing indigenous cultural awareness.</li> </ul>
A fairer, more diverse value chain	Collective support for job creation and skills development.	Creating job opportunities for under-represented people.	<ul style="list-style-type: none"> <li>• Investment in educational or employability initiatives.</li> <li>• Measure changes of employability in under-represented groups.</li> </ul>
	Supporting social enterprise and Indigenous business.		<ul style="list-style-type: none"> <li>Targets for procurement of goods and services for indigenous enterprises, social enterprises or disability enterprises.</li> <li>• Risk based approach to monitoring and responding to risks.</li> </ul>
	Collective progress on modern slavery and ethical supply chain	Responding to modern slavery risks and impacts	<ul style="list-style-type: none"> <li>• Capacity building on the team and supply chain.</li> </ul>
	Collaboration with industry, government, and civil society on affordable housing solutions.	Supporting increase supply of social, affordable rental and supported housing.	<ul style="list-style-type: none"> <li>• Deliver a minimum of 5% affordable and community housing.</li> </ul>

While this growing commitment towards social and environmental sustainability, diversity, inclusion, and reconciliation in Australia is extremely positive, the number of initiatives highlight the need for a

coordinated, common approach within the built environment sector to reduce duplication and provide clarity on how social value can be created, measured, and reported.

### Opportunities for improvement

We performed a scan of multiple framework as part of the development of this document. While 'green' criteria was well developed and easy to translate, the same was not the case for 'social' criteria, with significant gaps on criteria for the social value of good building interventions. This particularly true on the basis of health-related criteria – with the key one being essentially related to toxics in materials or air quality.

However, issues related to ergonomics, acoustics, thermal comfort, light quality have significant design-related interventions that are not captured by neither green nor social criteria effectively. Future work should be to develop potential criteria for discussion with the relevant bond and loan providers either through updates to this guide or through other means.

5

Case studies

GBCA spoke to Treasury and Sustainability Managers from Lendlease, Frasers Property Australia, Investa, and Charter Hall about their sustainable finance journeys. Each company identified similar observations and recommendations from their experience with sustainable finance, which have been grouped into the following categories:

The Importance of a robust sustainability strategy

Each organisation noted that having a robust and established sustainability strategy was key to the successful uptake and delivery of their sustainable finance instruments. The strategy forms the foundation of each organisation’s internal approach to sustainability, including what sustainability themes are to be prioritised. Without this, ensuring strategic alignment between the company’s strategy and its debt funding would be a significant challenge.

Having an established data platform to link sustainable finance deliverables to

The companies identified the risk that the issuance of sustainable finance has the potential to create a burdensome amount of work if not carefully considered. Building on the alignment of sustainable finance to company strategy, they also highlighted the importance of leveraging existing data to form the sustainability deliverable of each transaction.

Awareness of the costs of issuing sustainable finance

Whilst there may be additional transactional costs associated with labelling debt as a sustainable finance instrument and to satisfy additional reporting and ongoing assurance requirements, interviewees noted that these costs were low compared with the range of benefits. Benefits including greater engagement with investors and lenders and increased demand from lenders and investors for sustainable finance instruments.

Early engagement with Treasury

Every company that we spoke to highlighted the opportunity that sustainable finance provides for deep collaboration between Sustainability and Treasury teams. For many Sustainability professionals, the concepts and language used by Treasury teams can be new, and so engaging with one another well in advance of a transaction can help to ensure alignment between both teams for the success of the transaction.

Leveraging your network

Sustainable finance is still a nascent field, which presents opportunities for professional growth for both sustainability and treasury professionals. The companies that we spoke to noted the benefits of engaging widely and broadly before embarking on a sustainable finance journey. This could include formal engagements with consultants and advisors to guide companies through the sustainable finance as well as informal channels, such as personal and professional networks.



Charter Hall has embedded sustainability performance within its portfolio and broader strategy and has a target of achieving net zero emissions by 2025 for assets within operational control (scope 1 and 2). Charter Hall is committed to its ESG initiatives to deliver lasting change and maximising benefits for individuals, communities and environment within which it operated. The organisation has a sustainable financing strategy which is aligned with their Group ESG targets and frameworks, including Charter Hall’s Green Financing and Sustainability Linked Loan Frameworks.

As part of its annual reporting, Charter Hall publishes an ESG databook which is aligned with GRI standards and includes a Sustainable Finance Register that outlines the alignment of its assets with their sustainable finance instruments. Charter Hall has noted the benefit of using existing datapoints for its sustainable finance as it increases the efficiency of its activities while enabling transparency for its investors and other stakeholders. They also note the importance of putting in place a Sustainable Finance Framework that clearly outlines how the sustainable finance transactions will meet the governing body criteria and be managed/monitored on an ongoing basis.

For Charter Hall, non-financial benefits of sustainable finance outweigh additional costs that may arise from it. For its sustainable finance instruments, Charter Hall’s starting point is the consideration of sustainability performance rather than the financial benefits. Although there are additional costs associated with a sustainable finance transaction, such as annual assurance of data,

these are considered the cost of doing business and are not material relative to the size of a transaction. Charter Hall has integrated financial considerations into the governance of its sustainable finance strategy, including by providing the rationale for a sustainable finance instrument and the expected costs of initiating a sustainable finance transaction, as part of the board approval process.

The origination of a sustainable finance instrument is a collaborative process at Charter Hall and is led by the company’s Group Treasury team. This includes engagement with the ESG and individual fund teams to best leverage the performance of a portfolio for a sustainable finance transaction. They note the importance of coordinating internally between the Treasury, ESG, and Fund teams to have a clear understanding of the ESG metrics and initiatives for an asset portfolio to be able to set meaningful targets within a sustainable finance program.

Engagement with networks at all levels has been key to the success of Charter Hall’s sustainable finance program, whether at the Treasurer level or amongst delivery teams. The sustainable finance space is one that is continuing to evolve and change, so it is important for Charter Hall to stay close to the governing bodies criteria to ensure that the targets and initiatives that are implemented are still relevant and can drive change. Charter Hall also highlights the value of engagement with sustainable finance teams within banks, and assurers and other professional advisors, who have been willing to provide education on sustainable finance concepts as part of their relationship with Charter Hall.





Frasers Property Australia released its “A Different Way” strategy in 2015 which laid the strategic foundation for sustainability within the business. The strategy prioritised key focus areas and aligned with Frasers Property Group’s overall sustainability roadmap, which guides the business’s approach to continuous improvement. In 2023, the proportion of green or sustainability-linked corporate facilities for Frasers Property Australia’s platform reached 100%, which was driven by its 2021 Group target to finance the majority of its sustainable asset portfolio with green and sustainable financing by 2023.

Fraser’s Property Australia’s Sustainable Finance Framework stipulates that net proceeds raised from sustainable finance must be used to finance investment properties or development assets portfolios that achieve at least a 4-star rating from the latest available GRESB Benchmark Report. GRESB annual reporting is an existing business requirement, hence the data required to support sustainable finance transactions is not novel.

By linking sustainable finance to their GRESB assessment, Fraser’s Property Australia has limited the amount of assured data required for transactions beyond those already required for annual assurance. They have noted that, as the market matures, there is appetite for more specific sustainability performance metrics, such as year-on-year reduction in carbon emissions, which may increase annual assurance costs.

They recommend reviewing each transaction individually to assess interest rate savings, factoring in the additional costs from advisors, assurance, and other resources necessary for the delivery of a sustainable finance transaction.

Fraser’s Property Australia’s Sustainability and Treasury teams engaged each other at an early stage of their sustainable finance journey, enabling each team to learn one another’s language and ways of working to advance the company’s sustainable development objectives while also diversifying financial sources. Fraser’s Property has embedded sustainability as a key driver of value creation, and has highlighted the criticality of ensuring everyone within the organisation has clarity about the sustainability strategy and their role in supporting it.

An early mover and leader in sustainable finance, Fraser’s Property Australia has observed that the real estate industry is still at a stage that involves investment partners with differing maturity. While major banks have deeper expertise than smaller investors, there are opportunities for collaboration to achieve your and your investors’ objectives to sustainable financing, which can range from education about the fundamentals of sustainable finance to identifying opportunities for its expansion to include social benefit and governance metrics within the real estate industry.



Investa has a strong focus on sustainability performance, and pursued its first sustainable financing issuance in 2017 with a \$100 million A\$MTN green bond certified by the Climate Bond Initiative, which was one of the first of its kind in the Australian real estate sector. Since then, Investa has continued to pursue sustainable finance instruments in tandem with its strategic target of net zero in scope 1 and 2 carbon emissions by 2025.

Investa’s ESG reporting regime collects asset-level data including energy consumption and GHG emissions, the results of which are reported as part of the sustainable finance instruments. Investa recommends having a data platform in place well before entering the sustainable finance space to enable the robustness of information required for delivering and maintaining the framework to support sustainable finance instruments.

Investa’s key recommendation for ESG teams seeking to explore sustainable finance is to engage early with the business and Treasury teams. Although spontaneous encounters are a regular occurrence at Investa, sustainable finance represents one of the few projects where the ESG, Treasury and Investment Management teams need to collaborate closely with one another. To enable this, it is important to understand each teams’ language and approach to work, as well as the key drivers behind the project and each teams’ objectives. In establishing these strong relationships, there is an ability to jointly upskill across the various teams in order to successfully deliver and maintain sustainable finance instruments.



Building on their '20% by 2020' targets, released in 2014, in 2020 Lendlease released their Mission Zero strategy, which includes the target of achieving net zero carbon (scopes 1 & 2) by 2025 and absolute zero carbon (scope 1, 2, & 3) by 2040, which has served as the foundation for their pursuit of sustainable finance. The company notes the value of a sustainability strategy that is clear, ambitious, core to business strategy, and simple to describe before embarking on a sustainable finance journey.

As part of pursuing sustainable finance opportunities, Lendlease ensures the historic track record, quality and robustness of existing sustainability data and pursues the alignment of each transaction to their sustainability strategy. For use of proceeds transactions, this includes whether our buildings are successfully targeting or have achieved internationally recognised environmental building certifications of an appropriate standard. For sustainability-linked transactions supported by a specific metric, Lendlease has noted the importance of the metric being core to the company's existing sustainability strategy and data platform, and publicly stated targets, such as year-on-year decarbonisation.

Lendlease's annual Green Bond Impact Report forms part of the organisation's annual reporting suite and is a key external document for investors and stakeholders. Lendlease looks to ensure reporting is relevant and efficient by leveraging existing data sources, assurance, and

reporting mechanisms. They note that is also important to consider what information is relevant to investors and stakeholders and to tailor it effectively so that is meaningful.

The robustness of Lendlease's approach to sustainability allowed a strong starting point for collaboration. Each team is conscious of their own contribution to Mission Zero, with sustainable finance being a valuable opportunity for collaboration between Lendlease's Treasury and Sustainability teams. Early engagement was key to the success of the company's sustainable finance transactions, as it enabled both teams to upskill and become familiar with their counterparts' subject matter expertise. This included the presence of sustainability team members throughout investor engagements to act as a direct point of contact for specific sustainability-related questions, which in turn enhanced the sustainability teams' understanding of the specific investor requirements of a sustainable finance transaction.

For companies embarking on their sustainable finance journey, Lendlease recommends utilising existing relationships with banks and other advisors, and to have a clear understanding of your requirements for sustainable finance. Leveraging informal networks to engage with other treasury and sustainability professionals, as well as specialised consultants and peer networks, and learning from their experiences while utilising the resources available from bodies such as the GBCA and the Property Council of Australia, will also set up an organisation for success.





# 6. Real estate verification frameworks

Information in this chapter is derived from ASBEC's Rating's Snapshot.

## 6.1 Australian frameworks

### 6.1.1 Green Star

An internationally recognised rating system that aims to create healthy, resilient, and positive places for people and the natural environment. Green Star covers new buildings (Green Star Buildings), existing buildings (Green Star Performance), new homes (Green Star Homes), new fitouts (Green Star Fitouts), and precincts (Green Star Communities).

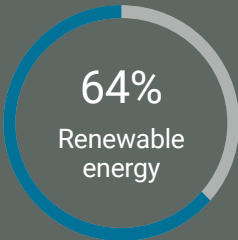
Green Star uses a rating scale to measure and reward projects that achieve best practice or above in their sustainability outcomes. Green Star rated buildings, fitouts and precincts can achieve a Green Star certification of 4 – 6 Star Green Star. Existing building operations assessed using the Green Star – Performance rating tool can achieve a Green Star rating of 1 – 6 Star Green Star.

Green Star is the most used holistic rating system in Australia by far, with more than 4000 certifications awarded, and a further 3000 registered. More information can be found here.

Projects achieving 4 Star Green Star rating represent Best Practice, 5 Star represent Australian Excellence, and 6 Star represent World Leadership in sustainable design and construction.

In summary, the certification process for the rating system involves a rating applicant providing detailed information to GBCA. GBCA then arranges an independent, third-party assessor (one or multiple experienced industry professionals) to review the information provided. The assessor(s) review the documentation and award a score, which determines their rating.

Figure 9  
The NABERS rating scale



### 6.1.2 NABERS

The National Australian Built Environment Rating System (NABERS) is a government program that measures the environmental performance of Australian buildings. NABERS measures the energy efficiency, water usage, waste management and indoor environment quality of a building or tenancy and its impact on the environment.

NABERS ratings are performed by independent assessors and then audited and verified by NABERS to ensure compliance and reliability.

The program uses a 6-star rating scale to communicate a building's operational performance across sectors such as hotels, shopping centres, apartments, offices, data centres, and more.

Additionally, NABERS provides a Renewable Energy Indicator for all NABERS Energy ratings. This displays the proportion of the buildings' energy from on-site renewable generated energy and off-site renewable

energy procured. The Renewable Energy Indicator helps recognise and reward the generation and purchase of renewable energy as more organisations commit to net zero emissions targets.

NABERS ratings help building owners understand their building's operational performance versus other similar buildings, providing a benchmark for progress and encouraging better building efficiency, leading to lower costs and reduced emissions.

The rating system has driven financial growth and solid returns in portfolios across building sectors and has directed corporate procurement by demonstrating building operational performance and sustainability achievements. NABERS is one of Australia's most successful government initiatives and is widely considered one of the key programs that has helped Australian property companies become world leaders in building sustainability.

Figure 8  
The Green Star rating scale for new buildings. The rating scale for existing buildings includes a 1, 2, and 3 Star rating to encourage any building to enter the program and work towards a certified 4 star rating as a minimum.



### 6.1.3 NatHERS

A star rating system (out of ten) that rates the thermal envelope efficiency of a home, based on its design. NatHERS is a regulated scheme, with a 7-star rating soon being the required minimum for homes in Australia as determined in the National Construction Code 2022.

NatHERS is administered by CSIRO. To achieve a rating, a builder is required to get an accredited NatHERS assessor to review the plans for the residence. The plans are modelled in a software program, and the rating is achieved. In the 2022 update to the code, a 'whole of home' NatHERS measure is being introduced. NatHERS is also exploring delivering ratings for existing homes, through a program called RapidRATE.

NatHERS is currently working to develop criteria for sustainable finance, with the guidance expected next year. The next version of this practical guide will incorporate this guidance.

### 6.1.4 Climate Active

A voluntary standard to manage greenhouse gas emissions and to achieve carbon neutrality. It provides best-practice guidance on how to measure, reduce, offset, report and audit emissions for the delivery phase and operations of buildings and precincts.

Climate Active is owned and managed by the Australian Government. NABERS and the Green Building Council of Australia provide certification services on behalf of the Australian Government to deliver Climate Active certifications for buildings in operation.



## 6.2 Other international certification schemes used in Australia

### 6.2.1 WELL

The WELL Building Standard (WELL Standard) is a library of holistic, evidence-based solutions and criteria to promote health, well-being and social equity through organizational and building performance. The WELL Standard contains over 100 features organised within 10 concepts: air, water, nourishment, light, movement, thermal comfort, sound, materials, mind and community.

The WELL program (WELL) is the application of the WELL Standard by enterprises and locations. WELL can be applied within buildings of all types, both new and existing. WELL Core is a distinct pathway for core and shell buildings (also known as base buildings) seeking to implement fundamental features to benefit tenants. In these projects, the majority of regular occupants are not affiliated with the project owner.

Location specific WELL achievements include WELL certification and WELL ratings. WELL certification is the most comprehensive solution; it requires performance testing and verification across all ten concepts of the WELL Standard and is available at the Bronze, Silver, Gold or Platinum level. WELL ratings are achievements earned on a targeted subset of strategies from within the WELL Standard. Available ratings include:

- The WELL Health-Safety Rating: a set of strategies for supporting health and safety through operational policies, maintenance protocols and emergency plans.
- The WELL Performance Rating: a set of strategies for measuring, benchmarking and improving building performance to support human health and well-being.
- The WELL Equity Rating: a set of strategies for taking action toward diversity, equity and inclusion goals.

WELL at scale guides a portfolio level application, allowing fund managers to pursue asset level WELL achievements throughout their portfolio and, for enterprise wide participants, benchmark their progress through the WELL score which is awarded at the entity level. The WELL Community Standard applies the principles of WELL to a larger footprint with the goal of creating fully integrated and health-focused communities and districts.

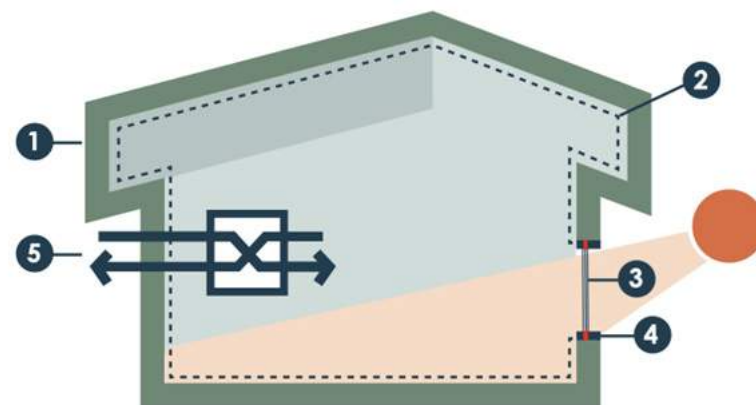
Achievement of WELL certifications and WELL ratings is based on third-party verification of documentation by the third-party WELL Reviewer. On site performance verification is performed by an approved performance testing agent. All WELL Certified projects must pass the on-site performance verification step to confirm that the space is performing as intended.



### 6.2.2 Passivhaus / EnerPHit

The Passivhaus Standard is a world leading standard in energy efficient building design developed by the PassivHaus Institute in Germany. The standard focuses on energy efficiency, health and comfort, and is based on decades of building science and research. The Passivhaus Standard has a version for new buildings, and a version for refurbishments called EnerPHit. Research undertaken by the PHI has shown that a Certified Passivhaus generally achieves a 50 to 90% reduction in energy demand compared with local minimum building-code-compliant buildings.

Passivhaus buildings attain a quantifiable and rigorous level of energy efficiency within a specific quantifiable comfort level under a “fabric first” design philosophy. To that end, a Passivhaus building is designed and built in accordance with five building-science principles around thermal comfort(1), airtight construction(2), appropriate glazing (3), reducing thermal bridging (4), and providing adequate ventilation(5).



The Passivhaus Standard uses its own calculation methods (known as PHPP), and therefore can be difficult to directly compare with other rating tools, such as NatHERS star ratings.

Certified buildings provide a rigorous quality assurance that protects building owners and operators from the common performance gaps that emerge once the building becomes operational. Passivhaus is an established, unambiguous standard by committing to achieving Passivhaus certification, building owners and operators are protecting themselves from surprises. The building standard is recognised for greater benefits for health and wellbeing, people and performance, building performance, financial, social and climate resilience.

### 6.2.3 Living Building Challenge

The Living Building Challenge (LBC) is the world’s most rigorous proven performance standard for buildings. People from around the world use the regenerative design framework to create spaces that, like a flower, give more than they take.

Living Buildings are:

- Based on actual performance. Projects must be operational for at least twelve consecutive months prior to audit to verify Imperative compliance.
- All LBC projects must be holistic – addressing aspects of all seven performance areas, or “Petals”.
- Regenerative buildings that connect occupants to light, air, food, nature, and community.

- Self-sufficient and remain within the resource limits of their site.
- Create a positive impact on the human and natural systems that interact with them.

The seven “Petals” of the LBC include: Place, Water, Energy, Health + Happiness, Materials, Equity and Beauty. Each Petal is subdivided into Imperatives, for a total of twenty Imperatives in the Full Challenge. The Imperatives can be applied to almost every conceivable building project, of any scale and any location—be it a new building or an existing structure. Full Living is the Summit of the Living Future Certifications, others include Petal Certification, Zero Carbon and Zero Energy.





## 6.3 Other programs of note for the real estate sector

### 6.3.1 Global Commitment for Net Zero Carbon Buildings

In 2018, World Green Building Council (WorldGBC) released the Net Zero Carbon Buildings Commitment is developed to recognise and promote advanced climate leadership action from businesses, organisations, cities and subnational governments in decarbonising the built environment, to inspire others to take similar action and remove barriers to implementation.

The Net Zero Carbon Buildings Commitment calls on organizations,

businesses, and cities to take action to reduce all operational and embodied carbon emissions within their building portfolios by 2030, and to advocate for all buildings to be net zero whole life carbon by 2050.

As of October 2023, there are 170 signatories, including leading Australian property companies like Frasers Property, Stockland, The GPT Group, and Charter Hall.

### 6.3.2 GRESB

The GRESB Standards provide the basis for the systematic assessment of the management and performance of real asset companies and funds around the world. The Standards are owned by the GRESB Foundation, an independent, mission-based non-profit organization, which updates the content of the Assessments on an annual basis.

Changes to the Standards are thoroughly researched and reviewed by several Foundation advisory groups and are ultimately approved by the Foundation Board, which is composed of a GRESB Members and Partners from around the world. These updates are published online and made freely accessible to the market. For more information about the Foundation and future areas of development for the Standards, please review the 2024 Roadmap available here: <https://www.gresb.com/nl-en/gresb-foundation/>.

Each year, real asset companies and funds submit environmental, social and governance (ESG) data, reflecting both their management and performance to the GRESB Assessments. This data is validated, then scored and benchmarked against the asset or portfolio's peers. At scale, the results help drive investor-led market engagement and transformation, and ultimately competitive differentiation for sustainable assets.

As evidence of GRESB's significance on the real asset industry, the Assessments are increasingly being used as evidence of strong ESG-related performance. Through this mechanism, borrowers can incentivise improved sustainability performance, reduce costs and increase access to capital, while lenders can better manage risk and demonstrate sustainability-related commitments to regulators and investors.

### How does GRESB apply to Australian real estate?

In Australian real estate, GRESB has been a leading ESG benchmarking organisation for many years, with Australian funds often taking out the top spot of global performance. It has proven to be extremely useful for investors who are looking to compare funds over a set period of time.

In the past, GRESB scores have been used as eligibility criteria for sustainable finance (such as requiring that the borrower has a 'Top Quintile' or 'Top Quartile' score in GRESB).

However, taking this approach does present some risk to borrowers due to its lack of certainty. For example, if your emissions reduced by 5% in one year but your peers'

reduced by 10% in the same year, you would get a lower score than you would if your peers' emissions reduced by 3%.

On an annual basis the independent GRESB Foundation, composed of investors and managers from within the industry, may make updates to the ESG Standards that the benchmark is based upon, potentially resulting in scoring changes that could a fund's performance. These changes reflect the evolving materiality of the industry and the increasing emphasis investors place on sustainability performance compared to data collection. Care should be taken to put appropriate safeguards in place.



6.4 Frameworks and rating tools at a glance

Developed for Australia	Application	Scope	Organisation	Portfolio	Asset verification							
					Multi-family	Single dwelling	Offices	Other	New Buildings	Building operations	Precincts	Infrastructure
Climate Active Carbon Neutral Certification	Voluntary	Carbon		•	•	•	•	•	• <sup>a</sup>	•	•	
Green Star	Voluntary	Holistic		•	•	•	•	•	•	•	•	•
NABERS	Regulatory	Energy		•	• <sup>b</sup>		•	•	• <sup>c</sup>	•		
	Voluntary	Water, Waste, IE					•	•		•		
NatHERS	Regulatory	Energy			•	•						
Developed internationally												
Global Commitment for Net Zero Carbon Buildings	Voluntary	Carbon	•	•								
GRESB	Voluntary	Holistic	•	•								
Living Building Certification	Voluntary	Holistic			•	•	•	•	•			
Passivhaus / EnerPHit	Voluntary	Energy			•	•	•	•	•	•		
WELL	Voluntary	Health	•	•	•		•	•	•	•	•	• <sup>d</sup>

a. Through the Climate Active Carbon Neutral Standard for Products

b. NABERS Energy covers can apartment common areas, but excludes all other energy.

c. Through the NABERS Energy Commitment Agreement

d. WELL can be used in airport terminals and other transit terminals

## 6.5 Key Australian rating systems and tools in more detail

	Green Star	NABERS	Climate Active	NatHERS
<b>Building Stage</b>	Planning; Construction; Operational	Design & Operations	Operations	Planning & Construction
<b>Type of System</b>	Holistic, voluntary	Multi-issue, regulatory	Single-issue, voluntary	Single-issue
<b>Origin</b>	Australia	Australia	Australia	Australia
<b>Description</b>	Green Star is an internationally recognised holistic rating system that aims to create healthy, resilient and positive places for people and nature, with a strong focus on decarbonising the built environment.	NABERS is a national rating system that measures the operational performance of buildings and tenancies. Building developers may also verify energy efficiency performance at design stage with a NABERS Commitment Agreement.	Climate Active is a voluntary standard to manage greenhouse gas emissions and to achieve carbon neutrality. The Buildings standard defines the carbon boundary of a building and the scope of inclusion. It also defines the action that must be taken to be certified carbon neutral in Australia.	The Nationwide House Energy Rating Scheme (NatHERS) is a star rating system (out of ten) that rates the energy efficiency of a home, based on its design.
<b>Assessment process</b>	Documents are submitted to GBCA who appoint an independent assessment panel to review the evidence and assign a rating.	A NABERS Assessor is hired by the building owner. They assess the building and submit the information to NABERS, which verifies the information. Building design and target energy efficiency performance may be reviewed and verified by an independent panel.	Documentation is provided to NABERS or GBCA for assessment. NABERS and GBCA act as certifiers for the Australian Government Department of the Environment and Energy.	The NatHERS Assessor is hired by the owner, designer or builder. The Assessor models the dwelling using a specialised software tool that determines the thermal performance of a home's construction and issues a certificate.
<b>Governance</b>	Green Star is developed in consultation with industry & reviewed by expert technical and industry Advisory Groups. Oversight rests with Green Star Advisory Committee & GBCA Board. It is subject to ACCC certification trademark rules.	NABERS is overseen by a National Steering Committee of all State and Territory representatives, and the Federal Government. The Committee also has non-voting members from industry bodies.	Managed by the Australian Federal Government	NatHERS is overseen by a national Steering Committee of all State and Territory representatives and the Federal Government. They are advised by the NatHERS Software, Technical Advisory Committee and the Stakeholder Consultative Group.
<b>Sector</b>	Commercial	New, refurbishments, and operations	New, refurbishments and operations	Upfront carbon and operations
	Retail	New, refurbishments, and operations	New, refurbishments and operations	Upfront carbon and operations
	Education	New, refurbishments, and operations	Coming late 2023	Upfront carbon and operations
	Health	New, refurbishments, and operations	New, refurbishments and operations	Upfront carbon and operations
	Multi-unit	New, refurbishments, and operations	New, refurbishments and operations	Upfront carbon and operations
	Homes	New		Upfront carbon and operations
	Precints	New		Upfront carbon and operations
	Other	Social infrastructure, Railway stations, other	Data Centres, Hotels, Warehouses, Cold Stores, Aged Care	



		Green Star	NABERS	Climate Active	NatHERS
Coverage	Energy use reductions	•	• (offices, retail, apartment common areas, hospitals, hotels, data centres, warehouses, cold stores, aged care).	•	•
	Fossil fuel free	•	• (via the Renewable Energy Indicator)		
	Upfront carbon reductions	•	• (GBCA/NABERS will deliver a NABERS tool in 2023)		
	Carbon offsets	•	• (via the Climate Active pathway).	•	
	Products and materials	•			
	Climate change adaptation	•			
	Health & Wellbeing	•	• (available for offices).		• (Comfort)
	Waste	•	• (available for offices, public hospitals).		
	Water Use	•	• (offices, retail, apartment common areas, hospitals, hotels, aged care).		
	Transport & place	•			
	Biodiversity & nature	•			
	Social sustainability	•			
	Notes:		NABERS aims to expand to all major building types where the program is not yet available. NABERS has four distinct rating categories: NABERS Energy, NABERS IE, NABERS Waste, and NABERS Water.	The standard requires that offsets are purchased for any remaining carbon emissions once reductions and renewable purchases are considered.	NatHERS is being expanded to cover whole-of-home (appliances and on-site renewable energy/storage).
Rating Scale	High		6 stars	4-6 stars	9-10 stars
			4-5 stars	3 stars	7-8 stars
	Low		1-3 stars (operations only).	0-2 stars	0-6 stars
Managing entity	GBCA		NSW Department of Planning, Industry and Environment.	Australian Government Department of the Environment and Energy.	CSIRO
Quality assurance	ISO 9001 accreditation for the certification process.		100% of ratings go through a Level 1 audit compliance check. 5% of certified NABERS ratings undergo a Level 2 audit where an independent audit recreates the rating from scratch.	ISO 9001 (via Green Star certification through GBCA) and compliance with 2.6 of the Climate Active Carbon Neutral Standard for Buildings.	Where accredited, NatHERS assessors undergo mandatory training and are subject to a QA process administered by Assessor Accrediting Organisations (AAOs).
Website	<a href="http://new.gbca.org.au">new.gbca.org.au</a>		<a href="http://nabers.gov.au">nabers.gov.au</a>	<a href="http://climateactive.org.au">climateactive.org.au</a>	<a href="http://nathers.gov.au">nathers.gov.au</a>

6.6 Key International rating systems in more detail

	Living Building Challenge	Passivhaus	WELL
Building Stage	Construction.	Planning; Construction.	Planning; Construction; Operational.
Type of System	Multi-issue, voluntary.	Multi-issue, voluntary.	Multi-issue, voluntary.
Origin	United States	Germany	USA
Description	The Living Building Challenge (LBC) is the world’s most rigorous green building scheme. Living certification is awarded to buildings that comply with the entirety of the standard. ILFI also provide Zero Carbon Certification and Zero Energy Certification.	Passivhaus is a world-leading standard in energy efficient building design. The standard focuses on energy efficiency and health and comfort. It is based on decades of building science and research.	WELL is a third-party verified certification program to promote health, well-being and social equity through organizational and building performance. The WELL Standard contains over 100 evidence-based features organised within 10 concepts: air, water, nourishment, light, movement, thermal comfort, sound, materials, mind and community.
Assessment process	Mix of onsite and documentation verification is performed by an independent auditor licensed by ILFI. It is based on a minimum 12 months actual data of the project once occupied.	Testing and documentation completed during and after construction to rigorously check metrics such as insulation, air tightness, thermal bridging, mechanical system efficiency, the assessment is conducted by an independent Certifier.	Documentation review for projects pursuing WELL Certification is performed by the third-party WELL Reviewer. On site performance verification is performed by an approved performance testing agent. All WELL Certified projects must pass the on-site performance verification step to confirm that the space is performing as intended.
Governance	Written by the International Living Future Institute (ILFI) staff.	Developed by a rigorous scientific process, the certification process is continually improved by a team of researchers at the Passivhaus Institut in Germany.	The WELL Building Standard is developed and managed by the International WELL Building Institute. Its development involves input from advisors and the IWBI Governance Council.
Sector	Commercial	New and refurbishments.	New, refurbishments, and operations.
	Retail	New and refurbishments.	New, refurbishments, and operations.
	Education	New and refurbishments.	New, refurbishments, and operations.
	Commercial	New and refurbishments.	New, refurbishments, and operations.
	Health	New and refurbishments	New, refurbishments, and operations
	Multi-unit	New and refurbishments	New, refurbishments, and operations
	Homes	New and refurbishments	New
	Precincts	New	New
	Other		



Living Building Challenge		Passivhaus	WELL
Coverage	Energy use reductions		
	Fossil fuel free		
	Upfront carbon reductions		
	Carbon offsets		
	Products and materials		
	Climate change adaptation		
	Health & Wellbeing		
	Waste		
	Water Use		
	Transport & place		
	Biodiversity & nature		
	Social sustainability		
	Notes:		
	Rating Scale	High	
Low			
Managing entity			
Quality assurance			
Website			

e. Limited to addressing changing climate from temperature and moisture related events. It does not consider, nor require a complete climate change resilience assessment against floods, storms, or other weather related events

f. Limited to addressing ventilation, temperature, and air quality related issues. It does not consider material toxicity, ergonomics, connection to nature, lighting quality nor acoustic quality (other than noise from equipment and façade)

g. WELL addresses the quality of water supply to the building or precinct.

7. Use of Proceeds: Benchmarks for Australia for new, existing, and transition of commercial and residential buildings.

This section provides guidance on benchmarks that can be used to describe use of proceeds criteria in sustainable finance frameworks. The section assesses multiple green building ratings and schemes and outlines whether a rating is aligned or complies with Green Bond and Green Loan Principles, Social Bond and Social Loan Principles, Climate Bonds Standard, the EU Taxonomy, and CRREM.

**Model language for describing use of proceeds criteria:**

**Use of Proceeds**

Proceeds raised will be used to exclusively finance or refinance assets, projects or activities that meet the eligibility criteria set out below (eligible assets). These activities align with the relevant framework **e.g. Green Bond Principles** under the relevant category as noted below. The criteria have been selected based on assessment of the existing industry understanding of best practice and because they are in line with our organisations own sustainability objectives and material issues to our business.

**Eligible assets**

The new building, or building projects, or significant major refurbishments, will achieve certification with the following sustainability credentials once completed:

**Under <relevant principle, e.g. Green Buildings>**  
**<insert relevant recommended rating(s) e.g. Green Star>**

**Insert the following language:**  
Projects can qualify if during the duration of the bond or loan:

- The buildings have been registered for certification under the accreditations noted and there is a plan in place to achieve the relevant rating; or
- Are committed to achieving, or have achieved, key milestones for certification (such as Green Star Designed) during the term of the bond; or
- Are committed to achieving, or have achieved, the relevant certification (such as Green Star Certified)

Annual updates will be provided on progress, including any relevant achievements or milestones. Projects under the bond or loan will report on core indicators.

**e.g. For Green Buildings annual reporting will include estimated energy and carbon performance (from estimated operations and upfront), modelled water efficiency savings, actual waste management from construction activities and amount of area certified.**

**Impact indicators. Information on the types of relevant impact indicators can be found in 6.4**

1

2

3

4

The section provides information on:

- New buildings and major refurbishments
  - Building operations
  - Building upgrades
  - Building portfolio
- Residential buildings
    - For new buildings
    - For volume home builders
    - For affordable housing
  - For precincts

Recommended ratings	Green Bond and Green Loan Principles				
	Energy efficiency	Sustainable water and wastewater management	Waste Management and Resource Recovery	Climate Change Adaptation	Green Buildings
3	5 Star Green Star Buildings Rating or higher	.	.	.	.

The left hand side of each table outlines model language. The items highlighted in yellow should be replaced as follows:

- 1 The desired framework (e.g. green bond principles)
- 2 The specific principle within the framework (e.g. green buildings)
- 3 The relevant rating that is being selected (e.g. 5 Star Green Star)
- 4 The Impact indicators (found in section 6.4)

**Note about social issues:**

When addressing social issues with sustainable finance, the specific population impacted by the project often matters. This is especially the case within social bonds which have historically focused on vulnerable populations. Real estate development and management impacts multiple population scales:

- Employees: Real estate company employees and contractors working on the building
- End users: End users of the building including tenants and visitors
- Surrounding communities: The community surrounding an asset
- Supply chain and waste stream: Populations along the supply chain and waste stream

In the tables on the following pages impact at all four of the population scales listed is considered when indicating a rating system’s relevance to a specific topic.



7.1 Non-residential buildings

7.1.1 New buildings and major refurbishments

Model language for describing use of proceeds criteria:

Use of Proceeds

Proceeds raised will be used to exclusively finance or refinance assets, projects or activities that meet the eligibility criteria set out below (eligible assets). These activities align with the **relevant framework e.g. Green Bond Principles under the relevant category as noted below.** The criteria have been selected based on assessment of the existing industry understanding of best practice and because they are in line with our organisations own sustainability objectives and material issues to our business.

Eligible assets

The new building, or building projects, or significant major refurbishments, will achieve certification with the following sustainability credentials once completed:

Under <relevant principle, e.g. Green Buildings>

<insert relevant recommended rating(s) e.g. Green Star>

Insert the following language:

Projects can qualify if during the duration of the bond or loan:

- The buildings have been registered for certification under the accreditations noted and there is a plan in place to achieve the relevant rating; or
- Are committed to achieving, or have achieved, key milestones for certification (such as Green Star Designed) during the term of the bond; or
- Are committed to achieving, or have achieved, the relevant certification (such as Green Star Certified)

Annual updates will be provided on progress, including any relevant achievements or milestones. Projects under the bond or loan will report on core indicators.

e.g. For Green Buildings annual reporting will include estimated energy and carbon performance (from estimated operations and upfront), modelled water efficiency savings, actual waste management from construction activities and amount of area certified.

Impact indicators. Information on the types of relevant impact indicators can be found in 6.4.

A note on equivalency

Australia has a significant track record of achieving certified ratings for all multiple typologies. Bond frameworks should take care note that ‘equivalent to’ language may not yield the intended results.

The only way to confirm a project complies with a third-party verified sustainability standard or scheme is for it to be certified.

The Australian Government notes: Projects that claim to meet the requirements of a rating, such as Green Star, but are not certified are potentially in breach of trademark rules and may be accused of ‘greenwash’.

Recommended ratings	Green Bond and Green Loan Principles					Social Bond and Social Loan Principles					Climate Bonds Aligned	EU Taxonomy aligned						CRREM aligned
	Energy efficiency	Sustainable water and wastewater management	Waste Management and Resource Recovery	Climate Change Adaptation	Green Buildings	Affordable basic infrastructure	Access to essential services	Affordable housing	Employment generation	Socioeconomic advancement and empowerment		Climate mitigation	Circular economy	Climate adaptation	Water	Pollution	Biodiversity	
For office buildings																		
5 Star Green Star Buildings Rating or higher	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
5.5 Star NABERS Base Building Energy Rating	•												•				•	
5.5 Star NABERS Whole Building Energy Rating	•												•				•	
For shopping centres and public hospitals																		
4 Star Green Star Buildings Rating or higher	•	•	•	•	•	•	•	•	•	•	• - 5 Star	•	•	•	•	•	•	
5.5 Star NABERS Energy Rating	•	•		•	•							•					•	
For all other non-residential buildings																		
4 Star Green Star Buildings Rating or higher	•	•		•	•	•	•	•	•	•	• - 5 Star	•					•	
5 Star NABERS Energy Rating	•	•		•	•							•					•	
Other ratings that can be used in Australia																		
Living Building Challenge	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Passivhaus Certified	•			•	•	•	•	•	•	•	•	•		•		•	•	
WELL v2 Core Gold		•				•	•	•	•	•						•		
WELL v2 Gold		•				•	•	•	•	•						•		
WELL Equity						•	•	•	•	•								

Appendix A provides more detailed information on how each rating system complies with the relevant frameworks.

## 7.1.2 Building operations

### Model language for describing use of proceeds criteria:

#### Use of Proceeds

Proceeds raised will be used to exclusively finance or refinance assets, projects or activities that meet the eligibility criteria set out below (eligible assets). These activities align with the **relevant framework e.g. Green Bond Principles under the relevant category as noted below.** The criteria have been selected based on assessment of the existing industry understanding of best practice and because they are in line with our organisations own sustainability objectives and material issues to our business.

#### Eligible assets

Existing building operations will achieve certification with the following sustainability credentials during the duration of the bond or loan:

#### Under <relevant principle, e.g. Green Buildings>

<insert relevant recommended rating(s) e.g. Green Star>

#### Insert the following language:

Projects can qualify if during the duration of the bond or loan the buildings achieve and maintain the relevant certification (such as Green Star Certified)

Annual updates will be provided on progress, including any relevant achievements or milestones (such as improvements on ratings). Projects under the bond or loan will report on core indicators.

E.g. For Green Buildings annual reporting will include energy performance, carbon performance, water efficiency savings, waste management from operation activities and amount of area certified.

**Impact indicators.** Information on the types of relevant impact indicators can be found in 6.4.

Recommended ratings	Green Bond and Green Loan Principles					Social Bond and Social Loan Principles					Climate Bonds Aligned	EU Taxonomy aligned						CRREM aligned
	Energy efficiency	Sustainable water and wastewater management	Waste Management and Resource Recovery	Climate Change Adaptation	Green Buildings	Affordable basic infrastructure	Access to essential services	Affordable housing	Employment generation	Socioeconomic advancement and empowerment		Climate mitigation	Circular economy	Climate adaptation	Water	Pollution	Biodiversity	
For office buildings																		
4 Star Green Star Performance Rating	•	•	•	•	•	•	•	•	•	•	(P)	•	•	•	•	•	•	•
5.5 Star NABERS Base Building Energy Rating	•											•						•
5.5 Star NABERS Whole Building Energy Rating	•											•						•
For shopping centres and public hospitals																		
4 Star Green Star Performance Rating	•	•	•	•	•	•	•	•	•	•	(P)	•						•
5.5 Star NABERS Energy Rating	•	•		•	•							•						•
For all other non-residential buildings																		
4 Star Green Star Performance Rating	•	•	•	•	•	•	•	•	•	•	(P)	•						•
5 Star NABERS Energy Rating	•	•		•	•							•						•
Other ratings that can be used in Australia																		
4 Star NABERS IE Rating					•											•		
4 Star NABERS Water Rating		•			•										•			
4 Star NABERS Waste Rating			•		•													
Cleaning Accountability Framework (3 Star)									•	•								
ILFI's Zero Carbon Certification	•				•						•	•						•
EnerPHit Retrofit	•			•	•	•	•	•	•	•	•	•		•				•
WELL v2 Core Gold		•				•	•	•	•	•						•		
WELL v2 Gold		•				•	•	•	•	•						•		
WELL Health Safety Rating		•				•	•											
WELL Performance rating		•				•				•								
WELL Equity rating						•	•	•	•	•								

Appendix A provides more detailed information on how each rating system complies with the relevant frameworks.

P) Reflects potential compliance with the criteria. In the case of ClimateBonds, Green Star Performance can be used to show progress against their criteria but may not guarantee it in all cases.



### 7.1.3 Building upgrades

#### Model language for describing use of proceeds criteria:

##### Use of Proceeds

Proceeds raised will be used to exclusively finance or refinance assets, projects or activities that meet the eligibility criteria set out below (eligible assets). These activities align with the **relevant framework e.g. Green Bond Principles under the relevant category as noted below**. The criteria have been selected based on assessment of the existing industry understanding of best practice and because they are in line with our organisations own sustainability objectives and material issues to our business.

##### Eligible assets

Existing buildings will obtain certification and improve to the final rating with the following sustainability credentials during the duration of the bond or loan:

##### Under <relevant principle, e.g. Green Buildings>

<insert relevant recommended rating(s) e.g. Green Star>

##### Insert the following language:

Projects can qualify if during the duration of the bond or loan the buildings achieve and maintain the relevant certification (such as Green Star Certified)

Annual updates will be provided on progress, including any relevant achievements or milestones (such as improvements on ratings). Projects under the bond or loan will report on core indicators.

E.g. For Green Buildings annual reporting will include energy performance, carbon performance (from operations and upfront for any major construction works), water efficiency savings, waste management from construction activities and operations, and amount of area certified.

**Impact indicators. Information on the types of relevant impact indicators can be found in 6.4.**

#### A note on equivalency

Australia has a significant track record of achieving certified ratings for all building typologies. Bond frameworks and Second Party Opinion providers should take care as 'equivalent to' language may not yield the intended results sought by investors.

The only way to confirm a project complies with a third-party verified sustainability standard or scheme is for it to be certified.

The Australian Government notes: Projects that claim to meet the requirements of a rating, such as Green Star, but are not certified are potentially in breach of trademark rules and may be accused of 'greenwash'.

Recommended ratings			Green Bond and Green Loan Principles					Social Bond and Social Loan Principles					Climate Bonds Aligned*	EU Taxonomy aligned					CRREM aligned
			Energy efficiency	Sustainable water and wastewater management	Waste Management and Resource Recovery	Climate Change Adaptation	Green Buildings	Affordable basic infrastructure	Access to essential services	Affordable housing	Employment generation	Socioeconomic advancement and empowerment		Climate mitigation	Circular economy	Climate adaptation	Water	Pollution	
For all buildings	Initial rating	Final																	
Green Star Performance	0 Star to 2 Star	4 Star	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	3 Star	5 Star	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	4 Star	5 Star	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	5 Star	6 Star	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
NABERS Energy	0 Star to 2.5 Star	4 Star	•				•						(P)	•					•
	3 Star	4.5 Star	•				•						(P)	•					•
	3.5 Star	5 Star	•				•						(P)	•					•
	4 Star	5 Star	•				•						(P)	•					•
	4.5 Star	5.5 Star	•				•						(P)	•					•
	5 Star and above	6 Star	•				•						(P)	•					•
Other ratings that can be used in Australia																			
NABERS IE Rating	No rating	4 Star					•												•
NABERS Water Rating	No rating	4 Star		•			•										•		
NABERS Waste Rating	No rating	4 Star			•		•												
ILFI's Zero Carbon Certification	No rating	Certified	•										(P)	•					•
EnerPHit Retrofit	No rating	Certified	•			•		•	•		•	•	•	•		•			•
WELL v2 Core Gold	No rating	Gold		•				•	•	•	•	•						•	
WELL v2 Gold	No rating	Gold		•				•	•	•	•	•						•	
WELL Equity Rating	No rating	Certified						•	•	•	•	•							

Appendix A provides more detailed information on how each rating system complies with the relevant frameworks.

\*Compliance with Climate Bonds is via the building upgrades path in the Low Carbon Buildings Standard

7.1.4 Building portfolio

Model language for describing use of proceeds criteria:

Use of Proceeds

Proceeds raised will be used to exclusively finance or refinance improvement in assets in the portfolio that meet the eligibility criteria set out below (eligible portfolio). The proceeds are aimed at improving the area-weighted average of all buildings within it. An average metric is used to determine improvements in the portfolio to encourage transitioning lower performing assets into higher performing assets.

These activities align with the relevant framework e.g. Green Bond Principles under the relevant category as noted below. The criteria have been selected based on assessment of the existing industry understanding of best practice and because they are in line with our organisations own sustainability objectives and material issues to our business.

Eligible assets

The area-weighted average certification of all existing buildings in the portfolio will meet the following sustainability credentials during the duration of the bond or loan:

Under <relevant principle, e.g. Green Buildings>

<insert relevant recommended rating(s) e.g. Green Star>

Insert the following language:

Projects can qualify if, during the duration of the bond or loan, the portfolio continuously improves towards, or has achieved and maintained by, the end of the term, the relevant certification (such as Green Star Certified)

Annual updates will be provided on progress, including any relevant achievements or milestones (such as improvements on ratings). Projects under the bond or loan will report on core indicators.

E.g. For Green Buildings annual reporting will include energy performance, carbon performance, water efficiency savings, waste management from operations and amount of area certified.

Impact indicators. Information on the types of relevant impact indicators can be found in 6.4.

A note on equivalency

Australia has a significant track record of achieving certified ratings for all building typologies. Bond frameworks and Second Party Opinion providers should take care as ‘equivalent to’ language may not yield the intended results sought by investors.

The only way to confirm a project complies with a third-party verified sustainability standard or scheme is for it to be certified.

The Australian Government notes: Projects that claim to meet the requirements of a rating, such as Green Star, but are not certified are potentially in breach of trademark rules and may be accused of ‘greenwash’.

Recommended rating	Green Bond and Green Loan Principles					Social Bond and Social Loan Principles					Climate Bonds Aligned	EU Taxonomy aligned						CRREM aligned
	Energy efficiency	Sustainable water and wastewater management	Waste Management and Resource Recovery	Climate Change Adaptation	Green Buildings	Affordable basic infrastructure	Access to essential services	Affordable housing	Employment generation	Socioeconomic advancement and empowerment		Climate mitigation	Circular economy	Climate adaptation	Water	Pollution	Biodiversity	
For all buildings	Sector	Rating																
Green Star Performance Portfolio Assessment	All	4 Star	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
NABERS SPI	Offices	5.2 Star	•			•					(P)	•						•
	Shopping Centres	4.6 Star	•			•					(P)	•						•
Other ratings that can be used in Australia																		
WELL at scale	All	Min score of 40 points		•				•	•	•	•	•					•	
WELL v2 Core	All	Gold		•				•	•	•	•	•					•	

Appendix A provides more detailed information on how each rating system complies with the relevant frameworks.



A note on equivalency

Australia has a significant track record of achieving certified ratings for all multiple typologies. Bond frameworks should take care note that ‘equivalent to’ language may not yield the intended results.

The only way to confirm a project complies with a third-party verified sustainability standard or scheme is for it to be certified.

The Australian Government notes: Projects that claim to meet the requirements of a rating, such as Green Star, but are not certified are potentially in breach of trademark rules and may be accused of ‘greenwash’.

7.2 Residential buildings

7.2.1 For new buildings

Model language for describing use of proceeds criteria:

Use of Proceeds

Proceeds raised will be used to exclusively finance or refinance assets, projects or activities that meet the eligibility criteria set out below (eligible assets). These activities align with the relevant framework e.g. Green Bond Principles under the relevant category as noted below. The criteria have been selected based on assessment of the existing industry understanding of best practice and because they are in line with our organisations own sustainability objectives and material issues to our business.

Eligible assets

The new building, or building projects, or significant major refurbishments, will achieve certification with the following sustainability credentials once completed:

Under <relevant principle, e.g. Green Buildings>

<insert relevant recommended rating(s) e.g. Green Star>

Insert the following language:

Projects can qualify if during the duration of the bond or loan:

- The buildings have been registered for certification under the accreditations noted and there is a plan in place to achieve the relevant rating; or
- Are committed to achieving, or have achieved, key milestones for certification (such as Green Star Designed) during the term of the bond; or
- Are committed to achieving, or have achieved, the relevant certification (such as Green Star Certified)

Annual updates will be provided on progress, including any relevant achievements or milestones. Projects under the bond or loan will report on core indicators.

e.g. For Green Buildings annual reporting will include energy performance, carbon performance (from estimated operations and upfront), water efficiency savings, waste management from construction activities and amount of area certified.

Impact indicators. Information on the types of relevant impact indicators can be found in 6.4.

Recommended ratings	Green Bond and Green Loan Principles				Social Bond and Social Loan Principles					Climate Bonds Aligned	EU Taxonomy aligned						CRREM aligned
	Energy efficiency	Sustainable water and wastewater management	Climate Change Adaptation	Green Buildings	Affordable basic infrastructure	Access to essential services	Affordable housing	Employment generation	Socioeconomic advancement and empowerment		Climate mitigation	Circular economy	Climate adaptation	Water	Pollution	Biodiversity	
For single family dwellings																	
Green Star Homes rating	•	•	•	•	•		•			•	•		•	•	•		•
The home meets all the following criteria:	•				•		•			•	•						•
• Nationwide House Energy Rating Scheme (NatHERS) = 7 stars or greater																	
• Electrified through installation of a heat pump hot water system and no gas																	
• Solar PV equivalent to the below (Minimum requirement for solar size relative to size of the house)																	
• Up to 150m <sup>2</sup> = 5.5kWe																	
• 150 - 250m <sup>2</sup> = 7.5kWe																	
• 250m <sup>2</sup> + = 10kWe																	
For apartment buildings																	
4 Star Green Star Buildings Rating or higher	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Other ratings that can be used in Australia																	
Living Building Challenge	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Passivhaus Certified	•		•		•	•		•	•	•	•		•				•
WELL v2 Core Gold		•		•	•	•	•	•							•		
WELL v2 Gold		•		•	•	•	•	•							•		
WELL Equity Rating				•	•	•	•	•									

Appendix A provides more detailed information on how each rating system complies with the relevant frameworks.

A note on equivalency

Australia has a significant track record of achieving certified ratings for all multiple typologies. Bond frameworks should take care note that ‘equivalent to’ language may not yield the intended results.

The only way to confirm a project complies with a third-party verified sustainability standard or scheme is for it to be certified.

The Australian Government notes: Projects that claim to meet the requirements of a rating, such as Green Star, but are not certified are potentially in breach of trademark rules and may be accused of ‘greenwash’.

7.2.2 For volume home builders

Model language for describing use of proceeds criteria:

Use of Proceeds

Proceeds raised will be used to exclusively finance or refinance assets, projects or activities that meet the eligibility criteria set out below (eligible assets). These activities align with the relevant framework e.g. Green Bond Principles under the relevant category as noted below. The criteria have been selected based on assessment of the existing industry understanding of best practice and because they are in line with our organisations own sustainability objectives and material issues to our business.

Eligible assets

The new building, or building projects, or significant major refurbishments, will achieve certification with the following sustainability credentials once completed:

Under <relevant principle, e.g. Green Buildings>

<insert relevant recommended rating(s) e.g. Green Star>

Insert the following language:

Projects can qualify if during the duration of the bond or loan:

- The buildings have been registered for certification under the accreditations noted and there is a plan in place to achieve the relevant rating; or
- Are committed to achieving, or have achieved, key milestones for certification (such as Green Star Designed) during the term of the bond; or
- Are committed to achieving, or have achieved, the relevant certification (such as Green Star Certified)

Annual updates will be provided on progress, including any relevant achievements or milestones. Projects under the bond or loan will report on core indicators.

e.g. For Green Buildings annual reporting will include energy performance, carbon performance (from estimated operations and upfront), water efficiency savings, waste management from construction activities and amount of area certified.

Impact indicators. Information on the types of relevant impact indicators can be found in 6.4.

Recommended ratings	Green Bond and Green Loan Principles				Social Bond and Social Loan Principles				Climate Bonds Aligned	EU Taxonomy aligned						CRREM aligned	
	Energy efficiency	Sustainable water and wastewater management	Climate Change Adaptation	Green Buildings	Affordable basic infrastructure	Access to essential services	Affordable housing	Employment generation		Socioeconomic advancement and empowerment	Climate mitigation	Circular economy	Climate adaptation	Water	Pollution		Biodiversity

For single family dwellings

Green Star Homes rating	•	•	•	•	•		•			•	•		•	•	•		•
The home meets all the following criteria:	•				•		•			•	•						•
• Nationwide House Energy Rating Scheme (NatHERS) = 7 stars or greater																	
• Electrified through installation of a heat pump hot water system and no gas																	
• Solar PV equivalent to the below (Minimum requirement for solar size relative to size of the house)																	
• Up to 150m <sup>2</sup> = 5.5kWe																	
• 150 - 250m <sup>2</sup> = 7.5kWe																	
• 250m <sup>2</sup> + = 10kWe																	

Other ratings that can be used in Australia

Living Building Challenge	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Passivhaus Certified	•		•	•	•	•	•	•	•	•	•	•		•			•

Appendix A provides more detailed information on how each rating system complies with the relevant frameworks.



A note on equivalency

Australia has a significant track record of achieving certified ratings for all multiple typologies. Bond frameworks should take care note that ‘equivalent to’ language may not yield the intended results.

The only way to confirm a project complies with a third-party verified sustainability standard or scheme is for it to be certified.

The Australian Government notes: Projects that claim to meet the requirements of a rating, such as Green Star, but are not certified are potentially in breach of trademark rules and may be accused of ‘greenwash’.

7.2.3 For affordable housing

Model language for describing use of proceeds criteria:

Use of Proceeds

Proceeds raised will be used to exclusively finance or refinance assets, projects or activities that meet the eligibility criteria set out below (eligible assets). These activities align with the relevant framework e.g. Green Bond Principles under the relevant category as noted below. The criteria have been selected based on assessment of the existing industry understanding of best practice and because they are in line with our organisations own sustainability objectives and material issues to our business.

Eligible assets

The new building, or building projects, or significant major refurbishments, will achieve certification with the following sustainability credentials once completed:

Under <relevant principle, e.g. Green Buildings>

<insert relevant recommended rating(s) e.g. Green Star>

Insert the following language:

Projects can qualify if during the duration of the bond or loan:

- The buildings have been registered for certification under the accreditations noted and there is a plan in place to achieve the relevant rating; or
- Are committed to achieving, or have achieved, key milestones for certification (such as Green Star Designed) during the term of the bond; or
- Are committed to achieving, or have achieved, the relevant certification (such as Green Star Certified)

Annual updates will be provided on progress, including any relevant achievements or milestones. Projects under the bond or loan will report on core indicators.

e.g. For Green Buildings annual reporting will include energy performance, carbon performance (from estimated operations and upfront), water efficiency savings, waste management from construction activities and amount of area certified.

Impact indicators. Information on the types of relevant impact indicators can be found in 6.4.

Recommended ratings	Green Bond and Green Loan Principles				Social Bond and Social Loan Principles					Climate Bonds Aligned	EU Taxonomy aligned						CRREM aligned
	Energy efficiency	Sustainable water and wastewater management	Climate Change Adaptation	Green Buildings	Affordable basic infrastructure	Access to essential services	Affordable housing	Employment generation	Socioeconomic advancement and empowerment		Climate mitigation	Circular economy	Climate adaptation	Water	Pollution	Biodiversity	
For new construction																	
Green Star Homes rating	•	•	•			•			•	•		•	•	•		•	•
Green Star Buildings rating	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
The home meets all the following criteria:	•			•		•			•	•						•	•
• Nationwide House Energy Rating Scheme (NatHERS) = 7 stars or greater																	
• Electrified through installation of a heat pump hot water system and no gas																	
• Solar PV equivalent to the below (Minimum requirement for solar size relative to size of the house)																	
• Up to 150m² = 5.5kWe																	
• 150 - 250m² = 7.5kWe																	
• 250m²+ = 10kWe																	
For existing building operations																	
Green Star Performance rating	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	
Other ratings that can be used in Australia																	
Living Building Challenge (for new construction)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ILFI's Zero Carbon Standard	•			•						•	•						•
EnerPHit Retrofit	•		•	•	•	•	•	•	•	•	•	•		•			•
Passivhaus Certified (for new construction)	•		•	•	•	•	•	•	•	•	•	•		•	•		•

Appendix A provides more detailed information on how each rating system complies with the relevant frameworks.

A note on equivalency

Australia has a significant track record of achieving certified ratings for all multiple typologies. Bond frameworks should take care note that ‘equivalent to’ language may not yield the intended results.

The only way to confirm a project complies with a third-party verified sustainability standard or scheme is for it to be certified.

The Australian Government notes: Projects that claim to meet the requirements of a rating, such as Green Star, but are not certified are potentially in breach of trademark rules and may be accused of ‘greenwash’.

7.3 For precincts

Model language for describing use of proceeds criteria:

Use of Proceeds

Proceeds raised will be used to exclusively finance or refinance assets, projects or activities that meet the eligibility criteria set out below (eligible assets). These activities align with the relevant framework e.g. Green Bond Principles under the relevant category as noted below. The criteria have been selected based on assessment of the existing industry understanding of best practice and because they are in line with our organisations own sustainability objectives and material issues to our business.

Eligible assets

The new precinct development(s), or precinct redevelopments will achieve certification with the following sustainability credentials once completed:

Under <relevant principle, e.g. Green Buildings>

<insert relevant recommended rating(s) e.g. Green Star>

Insert the following language:

Projects can qualify if during the duration of the bond or loan:

- The buildings have been registered for certification under the accreditations noted and there is a plan in place to achieve the relevant rating; or
- Are committed to achieving, or have achieved, key milestones for certification (such as Green Star Designed) during the term of the bond; or
- Are committed to achieving, or have achieved, the relevant certification (such as Green Star Certified)

Annual updates will be provided on progress, including any relevant achievements or milestones. Projects under the bond or loan will report on core indicators.

e.g. For Green Buildings annual reporting will include energy performance, carbon performance (from estimated operations and upfront), water efficiency savings, waste management from construction activities and amount of area certified.

Impact indicators. Information on the types of relevant impact indicators can be found in 6.4.

Recommended ratings	Green Bond and Green Loan Principles				Social Bond and Social Loan Principles				Climate Bonds Aligned	EU Taxonomy aligned						CRREM aligned
	Energy efficiency	Sustainable water and wastewater management	Climate Change Adaptation	Green Buildings	Affordable basic infrastructure	Access to essential services	Affordable housing	Employment generation		Climate mitigation	Circular economy	Climate adaptation	Water	Pollution	Biodiversity	
Green Star Communities v2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Other ratings that can be used in Australia																
WELL Communities		•			•	•	•		•						•	

Appendix A provides more detailed information on how each rating system complies with the relevant frameworks.





7.4 Impact indicators

As noted in the model language for sustainable finance frameworks, there is a need to outline the impact indicators that will be measured to determine success. This table outlines the types of impact indicators, subcategories, and measures that you can use to demonstrate compliance with each.

7.4.1 Green bonds and loans impact indicators

GREEN BONDS AND LOANS IMPACT INDICATORS	Subcategory	Measure	Sector specific guidance										Framework indicators	
			Green Buildings	Energy efficiency	Renewable Energy	Sustainable Water and Wastewater Management	Waste Management and Resource-Efficiency	Clean Transportation	Biodiversity	Climate Change Adaptation	Circular Economy and/or Eco-Efficient Projects	Living Natural Resources and Land Use Projects	Green Star	NABERS
Green building certifications	Type of scheme and number of buildings.	# of buildings or Area certified per scheme.	Y	Y									Any Rating.	Any Rating
Energy Performance	Energy consumed per year (or expected for new assets) under control of building owner.	MW or kWh/m²/yr.	Y	Y									Energy Use.	NABERS energy rating
	% reduction of energy consumption against baseline (or expected for new assets).	% reduction.	Y	Y									Energy Use.	NABERS energy rating
	Energy source breakdown (renewable vs non-renewable.	% renewable vs non-renewable.	Y	Y	Y								Energy Source.	Renewable energy indicator
	(if tenanted) % of tenants on renewable vs. non-renewable energy.	% of tenants on renewable and non-renewable energy.	Y	y	Y								Tenant energy source.	Renewable energy indicator
	Renewable energy generated or new renewable energy plant(s) capacity generated.	MW or kWh/m²/yr.	Y		Y								Energy Source.	Renewable energy indicator
	Dispatchable or flexible power capacity.	Number of buildings with flexible power agreements or systems.	Y	Y	Y					Y			Grid resilience.	

GREEN BONDS AND LOANS IMPACT INDICATORS	Subcategory	Measure	Sector specific guidance										Framework indicators	
			Green Buildings	Energy efficiency	Renewable Energy	Sustainable Water and Wastewater Management	Waste Management and Resource-Efficiency	Clean Transportation	Biodiversity	Climate Change Adaptation	Circular Economy and/or Eco-Efficient Projects	Living Natural Resources and Land Use Projects	Green Star	NABERS
Carbon Performance	Operational carbon generated (or expected for new assets)	Tons or kgCO <sub>2</sub> e/m <sup>2</sup> /yr (location and market-based)	Y	Y									Energy Use and Energy Source	NABERS energy rating
	% operational carbon reduction against baseline (or expected for new assets)	% reduction	Y	Y									Energy Use and Energy Source	NABERS energy rating
	Upfront carbon generated	Tons of kgCO <sub>2</sub> e/m <sup>2</sup> /yr for GFA	Y				Y				Y		Upfront Carbon emissions	
	% upfront carbon reduction against baseline	% reduction	Y				Y				Y		Upfront Carbon emissions	
Water efficiency and savings	Annual absolute (gross) water use before and after the project	L/m <sup>2</sup> /year	Y			Y							Water Use	NABERS Water
	% reduction against baseline (or expected for new assets)	% reduction	Y			Y							Water Use	NABERS Water
	Amount of rainwater harvested and reused	m <sup>3</sup> /a or % of annual consumption	Y			Y								
Waste management	Amount p.a. of waste sent to landfill	kg/m <sup>2</sup> /year	Y				y				Y		Resource recovery	NABERS Waste
	Reduction against a baseline	% reduction	Y				y				Y		Resource recovery	NABERS Waste
	Waste recovery indicator (waste in operations)	% recovered	Y				y				Y		Resource recovery	NABERS Waste
	Recycling, re-use or composting of non-hazardous waste	% recycled	Y				Y				Y		Resource recovery	NABERS Waste
Wastewater and stormwater treatment	Wastewater treated, reused, or avoided	m <sup>3</sup>	Y			y	y						Waterway protection	



GREEN BONDS AND LOANS IMPACT INDICATORS	Subcategory	Measure	Sector specific guidance										Framework indicators	
			Green Buildings	Energy efficiency	Renewable Energy	Sustainable Water and Wastewater Management	Waste Management and Resource-Efficiency	Clean Transportation	Biodiversity	Climate Change Adaptation	Circular Economy and/or Eco-Efficient Projects	Living Natural Resources and Land Use Projects	Green Star	NABERS
Circular economy, materials, and products	Embodied energy (and carbon) over life-cycle ("cradle to grave")	Tons CO <sub>2</sub> e	Y								Y		Lifecycle impacts	
	% of embodied energy (and carbon) reduced over life-cycle ("cradle to grave"), vs local benchmark/baseline	% reduction	Y								Y		Lifecycle impacts	
	The increase in number of products and/or the share of production awarded an internationally recognised eco-label, or energy, eco-efficiency or other relevant environmental certification	% of products by cost certified compared to the building's cost	Y								Y		Responsible products credit(s)	
	Amount of building reused	% area reused	Y								Y		Responsible products credit(s)	
	Increase in the number of end-of-design life or redundant immovable assets that have been refurbished and/or repurposed and/or area in m <sup>2</sup>	Area of refurbished or repurposed assets	Y								Y			
Land Use and Biodiversity	land remediated/ decontaminated/ regenerated	m <sup>2</sup>	Y						Y				Impacts to nature	
	% of unadulterated Green spaces before and after the project	% land use change	Y						Y				Impacts to nature	
	Hectares compensated	ha or m <sup>2</sup> compensated	Y						Y				Nature stewardship	
	Wildlife crossings created	Number of wildlife crossings	Y						Y				Nature connectivity	
	Maintenance/safeguarding/increase of protected area/OECM/habitat in km <sup>2</sup> and in % for increase		Y						Y				Nature stewardship	
	Absolute number of indigenous species, flora or fauna (trees, shrubs and grasses...) restored through	% recycled	Y				Y				Y		Resource recovery	NABERS Waste
	Absolute number of indigenous species, flora or fauna (trees, shrubs and grasses...) restored through the project	% recycled	Y						Y				Biodiversity enhancement	

GREEN BONDS AND LOANS IMPACT INDICATORS	Subcategory	Measure	Sector specific guidance										Framework indicators	
			Green Buildings	Energy efficiency	Renewable Energy	Sustainable Water and Wastewater Management	Waste Management and Resource-Efficiency	Clean Transportation	Biodiversity	Climate Change Adaptation	Circular Economy and/or Eco-Efficient Projects	Living Natural Resources and Land Use Projects	Green Star	NABERS
Indoor Quality	Volume of volatile organic compounds (VOC) reduced	% of indoor low or non-toxic products	Y				Y						Indoor pollutants	NABERS IE
	Increased number of urban residents with access to thermally safe conditions in buildings/transport systems	Number of occupants	Y				Y						Green Star rating	NABERS IE
Transport connectivity and clean transportation infrastructure	Number of Electric vehicle charging stations as a % of total parking	% of parking spaces with charging stations	Y					Y					Movement and place	
	Number of bicycle parking spaces provides and end of trip facilities	# of spaces, lockers, showers as a proportion of current or expected occupancy	Y					Y					Movement and place	
	Kilometers of cycling lanes in the precinct	Km	Y					Y					Movement and place	
Climate Change Adaption	Number of risks minimised based on the climate assessment	Number of risks minimised	Y							Y			Climate change resilience	
	Expenditure on climate change adaption measures	\$ of expenditures	Y							Y			Climate change resilience	







7.4.2 Social bonds and loans impact indicators

A. Social bond principles and social loan principles

			UN Sustainable Development Goals									Framework indicators	
Subcategory	Measure		3. Good health and wellbeing	5. Gender equality	7. Affordable and clean energy	8. Decent work and economic growth	9. Industry and innovation	10. Reduced inequalities	11. Sustainable Cities and Communities	12. Responsible consumption and production	13. Climate action	Green Star (describes category or credit)	NABERS (describes concept or feature)
Health, equity, and social related building certification			Y	Y	Y	Y	Y	Y	Y	Y	Y	Any Rating.	Any Rating.
Access to essential services	Health.	• Improvement in quality of life.										Healthy category.	Any Rating.
Socioeconomic advancement & empowerment	Women empowerment.	• Number of women provided with decent work		Y				Y				Any Rating. (Inclusive Construction Practices, Minimum Expectation)	C9 New Mother Support, C10 Family Support, C12 Diversity and inclusion C18 Support for Victims of Domestic Violence
		• conditions (safety protocols (including personal											
		• protective equipment).											
		• Improved quality of life for women in the workforce.		Y				Y					
		• Reduced risk of injury or chronic health conditions		Y				Y					
		• for women in the workforce.											
		• % Reduction in accident rates, fatality rates, and/		Y				Y					
		• or occupational disease rates for females.											



			UN Sustainable Development Goals									Framework indicators	
			3. Good health and wellbeing	5. Gender equality	7. Affordable and clean energy	8. Decent work and economic growth	9. Industry and innovation	10.Reduced inequalities	11. Sustainable Cities and Communities	12. Responsible consumption and production	13. Climate action	Green Star (describes category or credit)	NABERS (describes concept or feature)
Socioeconomic advancement & empowerment	Social inclusion for the disadvantaged.	<ul style="list-style-type: none"> <li>• Number of vulnerable people benefitting from</li> <li>• measures to mitigate the consequences of</li> <li>• climate change such as natural disasters.</li> </ul>				Y		Y			Y	Any Rating. (Climate change resilience).	
		<ul style="list-style-type: none"> <li>• Strengthened resilience to climate change.</li> </ul>				Y		Y			Y	Any Rating. (Climate change resilience).	
		<ul style="list-style-type: none"> <li>• Improved opportunities for social participation</li> <li>• various vulnerable groups.</li> </ul>				Y		Y			Y	Design for inclusion.	C12 Diversity and Inclusion C13 Accessibility and universal design
Employment generation		<ul style="list-style-type: none"> <li>• Rate of employment of people with disabilities.</li> </ul>				Y						Design for inclusion.	C12 Diversity and Inclusion C13 Accessibility and universal design
Affordable basic infrastructure	Transport.	<ul style="list-style-type: none"> <li>• Improvement in sustainable/eco-friendly/low</li> <li>• carbon mobility.</li> </ul>	Y						Y		Y	Movement and place.	V04 Facilities for Active Participants
	Power.	<ul style="list-style-type: none"> <li>• Reduction in CO<sub>2</sub> emissions.</li> </ul>			Y						Y	Any Rating. (Energy Use, Energy Source).	C9 New Mother Support, C10 Family Support, C12 Diversity and inclusion C18 Support for Victims of Domestic Violence
		<ul style="list-style-type: none"> <li>• Improvement in air quality/reduction in respiratory</li> <li>• diseases.</li> </ul>			Y						Y	Healthy category.	Air concept
		<ul style="list-style-type: none"> <li>• Number of people provided access to clean</li> <li>• and affordable energy.</li> </ul>			Y						Y	Any Rating. (Energy Use, Energy Source).	
		<ul style="list-style-type: none"> <li>• Enhanced resilience of the power grid.</li> </ul>			Y						Y	Grid Resilience.	
Affordable housing		<ul style="list-style-type: none"> <li>• Reduction in number of people experiencing poor</li> <li>• housing and homelessness.</li> </ul>							Y			Any Rating.	Any Rating C16 Housing equity

## B. Property Council of Australia's Collective Social Impact Indicators

Topic	Outcomes	Target (base and stretch)	UN Sustainable Development Goals									Framework indicators	
			3. Good health and wellbeing	5. Gender equality	7. Affordable and clean energy	8. Decent work and economic growth	9. Industry and innovation	10. Reduced inequalities	11. Sustainable Cities and Communities	12. Responsible consumption and production	13. Climate action	Green Star (describes category or credit)	WELL (describes concept or feature)
Commitment to wellbeing	A healthier and more active local community.	<ul style="list-style-type: none"> <li>Investment in nearby local active lifestyles.</li> <li>Investment in partnerships to promote health.</li> </ul>	Y									Enjoyable places (Places category).	Movement Concept
	Better mental health support for employees and contractors.	<ul style="list-style-type: none"> <li>Investment in nearby mental health.</li> <li>Investment in partnerships to promote mental health.</li> </ul>	Y									Health promotion (Healthy category).	Mind Concept C01 Health and wellbeing promotion C06 Enhanced Health and Well-being promotion
	Better safety for occupants.	<ul style="list-style-type: none"> <li>Design features to maximise the safety of occupants.</li> </ul>	Y	Y				Y				Enjoyable Places (Places category).	C03 Emergency Preparedness
Collaboration on resilient places and climate action	A more climate resilient community.	<ul style="list-style-type: none"> <li>Local climate resilience and mitigation plan developed with community response and recovery.</li> <li>Emission targets.</li> </ul>			Y			Y	Y		Y	Resilient and Positive category.	
A more inclusive community	Commitment to advancing universal design outcomes.	<ul style="list-style-type: none"> <li>Universal design features applied.</li> <li>Dedicated specialist engaged.</li> </ul>						Y				Inclusive design (People category).	C12 Diversity and Inclusion C13 Accessibility and universal design
	Commitment to cohesive and inclusive communities, with a focus on vulnerable stakeholders.	<ul style="list-style-type: none"> <li>Investment in programs, initiatives, and partnerships to strengthen local social connection.</li> </ul>					Y	Y	Y			Community resilience (Resilient category).	C9 New Mother Support, C10 Family Support, C12 Diversity and inclusion C18 Support for Victims of Domestic Violence
	Collective support and progress on reconciliation.	<ul style="list-style-type: none"> <li>Contribution to RAP or indigenous inclusion plan.</li> <li>Consultation with indigenous communities.</li> <li>Percentage of staff completing indigenous cultural awareness.</li> </ul>	Y			Y						Indigenous inclusion (People category).	



Topic	Outcomes	Target (base and stretch)	UN Sustainable Development Goals									Framework indicators	
			3. Good health and wellbeing	5. Gender equality	7. Affordable and clean energy	8. Decent work and economic growth	9. Industry and innovation	10. Reduced inequalities	11. Sustainable Cities and Communities	12. Responsible consumption and production	13. Climate action	Green Star (describes category or credit)	WELL (describes concept or feature)
A fairer, more diverse value chain	Collective support for job creation and skills development.	<ul style="list-style-type: none"> <li>Investment in educational or employability initiatives</li> <li>Measure changes of employability in under-represented groups.</li> </ul>		Y		Y		Y				Procurement and Economic Inclusion (People category).	
		<ul style="list-style-type: none"> <li>Targets for procurement of goods and services for indigenous enterprises, social enterprises or disability enterprises?</li> </ul>				Y		Y		Y		Procurement and Economic Inclusion (People category).	
	Collective progress on modern slavery and ethical supply chain.	<ul style="list-style-type: none"> <li>Risk based approach to monitoring and responding to risks.</li> <li>Capacity building on the team and supply chain.</li> </ul>					Y			Y		Responsible procurement (Responsible category).	C17 Responsible labor practices
	Collaboration with industry, government, and civil society on affordable housing solutions.	<ul style="list-style-type: none"> <li>Deliver a minimum of 5% affordable and community housing.</li> </ul>	Y		Y				Y		Y	Leadership Challenge: Homes for Homes.	C16 Housing equity

# 8. General Purpose Instruments – recommended key performance indicators

Sustainability-linked Bonds and Sustainability-Linked Loans are instruments where the proceeds are linked to performance of the		borrower's sustainability strategy. While these will vary from entity to entity, these are recommended for real estate companies.	
	CONSTRUCTION	REAL ESTATE	EXAMPLE KPIS
ENVIRONMENT			
Climate change (GHG Emissions and Energy)		Y	<ul style="list-style-type: none"> <li>• Either, or a combination of, or all scope 1,2 &amp; 3 GHG emissions reductions (absolute or intensity).</li> <li>• High NABERS Energy or 4 Star Green Star Performance rating for portfolio.</li> </ul>
Energy efficiency	Y	Y	<ul style="list-style-type: none"> <li>• Energy consumed per sqm.</li> <li>• High NABERS Energy or 4 Star Green Star Performance rating for portfolio.</li> </ul>
Water	Y		<ul style="list-style-type: none"> <li>• Water consumption reductions.</li> <li>• High NABERS Water or 4 Star Green Star Performance rating for portfolio.</li> </ul>
Waste	Y	Y	<ul style="list-style-type: none"> <li>• Waste to landfill reductions.</li> <li>• High NABERS Waste or 4 Star Green Star Performance rating for portfolio.</li> </ul>
Raw material sourcing and recycling	Y	Y	<ul style="list-style-type: none"> <li>• Percentage of sustainable materials in buildings.</li> <li>• 4 Star Green Star ratings for new developments.</li> </ul>
Biodiversity	Y	Y	<ul style="list-style-type: none"> <li>• Biodiversity net gain on existing buildings.</li> <li>• 4 Star Green Star rating for new developments.</li> </ul>

	CONSTRUCTION	REAL ESTATE	EXAMPLE KPIS
SOCIAL			
Access and affordability	Y	Y	<ul style="list-style-type: none"> <li>• Number of affordable homes or customers or special groups that have access to affordable housing.</li> </ul>
Community & Human rights	Y		<ul style="list-style-type: none"> <li>• Accreditation with the Clean Accountability Framework.</li> <li>• Green Star Performance Portfolio ratings.</li> </ul>
Occupational Health & Safety	Y		<ul style="list-style-type: none"> <li>• Occupational health and safety rates.</li> <li>• WELL Portfolio ratings.</li> <li>• Green Star Performance Portfolio ratings.</li> </ul>
Diversity, equity, and inclusion	Y	Y	<ul style="list-style-type: none"> <li>• WELL Portfolio ratings.</li> <li>• Green Star Performance Portfolio ratings.</li> </ul>
Just transition	Y		<ul style="list-style-type: none"> <li>• Number of employees skilled in low carbon technologies.</li> <li>• Green Star Accredited Professionals.</li> </ul>
Working condition	Y	Y	
GOVERNANCE			
Improvement in overall performance	Y	Y	GRESB or Green Star Portfolio assessment scores.
Value chain	Y		Share of certified raw material purchased.
Business ethics	Y	Y	
Governance	Y		



# 9. Guidance for second party opinion providers

31. [Australia's green buildings performing as promised | Green Building Council of Australia \(gbca.org.au\)](#)

## 9.1 Why independent verification matters

Investors require confirmation and assurance that assets are performing as intended. Independent verification provides this.

Green Star, NABERS and the other certifications noted in this document all rely on quality control mechanisms which are repeatable and auditable. Alternatives to these have repeatedly been shown to not perform to expected outcomes. In addition, recent studies<sup>31</sup> show that independent verification yields results – with demonstrable performance that is equal or in excess of the intended targets.

The quality assurance processes these schemes undertake means that investors can trust the claims being made under these schemes. For example, Green Star includes a certification process that has achieved ISO 9001 accredited quality control. These types of schemes are also registered trademarks approved by the Australian Competition and Consumer Commission.

Projects that make claims of sustainability standards that are not independently verifiable or transparent have faced accusations

of greenwash and had to retract those claims. For example, claims that a project has 'Green Star equivalence' or has been 'designed/ built to a high NABERS rating', or is 'aligned with the IS Rating Scheme'. These claims are misleading. For example, if claims are made around targeting a specific NABERS rating, these claims must be verified to be true.

There is growing awareness about the misuse of so-called "equivalency". For example, the Australian Government's Sustainable Procurement Guide, A practical guide for Commonwealth entities states: Projects that claim to meet the requirements of Green Star but are not certified are potentially in breach of trademark rules and may be accused of 'greenwash'. Projects that claim to meet the requirements of NABERS but are not certified are in breach of trademark rules.

Second Party Opinion Auditors have the responsibility to show they are aware of these issues, and should encourage their clients to make sure the proceeds from sustainable finance instruments are directed to independently verified outcomes.

## 9.2 Legal requirements for buildings in Australia

A review of second party opinions showed a strong preference for using regulated schemes in Australia such as BASIX or NatHERS. These schemes have incredible value, and they are the basis for potential improvements to the built environment. However, the review also showed that many directed proceeds to the minimum legislated requirements. These requirements would not meet the intent of the relevant taxonomies, guidelines, or

finance frameworks.

The guidance in the tables in section 6 have been built to be well beyond legislated requirements in Australia. Use of proceeds activities should be aligned with these ratings to ensure investor funds are not being directed to the minimum compliance requirements as established in the National Construction Code.

Australia has a National Construction Code that is updated every three

32. In the case of NABERS, while the National Construction Code requires a 5.5 NABERS Energy rating, this rating would be in line with expectations for sustainable finance, as NABERS is a verified operational rating (unlike BASIX or NatHERS).

BASIX scores vary based on location and typology, so consideration should be given to ensure the targets are being exceeded

years, with major updates happening every six for non-residential (2019) and residential properties (2022). The sustainability objectives for commercial office buildings are known as Section J, and the Residential are known as Part H6.

Section J has requirements for non-residential buildings, including Deemed-To-Satisfy criteria and modelling criteria. Achieving these criteria would not be considered appropriate use of proceeds for sustainable finance purposes. Section J also includes alternative verification methods, recognising Green Star and NABERS. These two methods are recognised as they exceed the modelled or Deemed-to-satisfy requirements.<sup>32</sup> The use of Green Star and NABERS for use of proceeds

targets should be done in alignment with section 6 of this document.

Residential buildings rely on NatHERS (for most of the country) and BASIX (for NSW). The specific legally required targets for each is described in Part H6 of the National Construction Code. These have recently increased, but are not yet in operation as of September 2023, as there are transition periods in place for most of the country. The requirements include not just a star rating for NatHERS, but also heating and cooling load limits. BASIX has similar requirements.

For reference, as of 2023, these are current, and future code requirements for apartment buildings and homes in Australia.

TYPE OF BUILDING	NCC 2019	NCC 2022
Apartment dwellings (Class 2)	<ul style="list-style-type: none"><li>• collectively achieve an average energy rating of not less than 6 stars, including the separate heating and cooling load limits; and</li><li>• individually achieve an energy rating of not less than 5 stars, including the separate heating and cooling load limits.</li></ul>	<ul style="list-style-type: none"><li>• Collectively achieve an average energy rating of not less than 7 stars, including the separate heating and cooling load limits; and</li><li>• individually achieve an energy rating of not less than 6 stars, including the separate heating and cooling load limits; and</li><li>• other requirements related to thermal breaks, air tightness, etc.</li></ul>
Single Family dwellings (Class 1)	6 Stars as well as separate heating and cooling limits.	7 Stars as well as separate heating and cooling limits. For NSW BASIX requirements apply. These vary from place to place, so a review will be needed if BASIX is used as a proxy.





### 9.3 How the targets were chosen

For the development of this paper, the multiple real estate frameworks and target were compared against the international sustainable finance frameworks, against Australia's legislated priorities, and against targets set by the Australian property sector.

For example, when comparing against the EU Taxonomy's nearly net zero target for new buildings, consideration was given against Australia's legislated targets in the National Construction Code, as well as, research performed by ASBEC, GBCA's Climate Positive Roadmap, and Every Building Counts (developed with the Property Council).

In addition, Australia's Low-carbon buildings trajectory was also considered.

Consideration was also given to the maturity of the market. Historically, the commercial office sector has a longer history of measuring against benchmarks thanks to NABERS and the CBD legislation. As such, when considering the maturity of the sector, commercial office buildings have stricter requirements.

**Appendix A outlines more information on how each of the chosen frameworks and targets comply.**



## 10.1 European Taxonomy

### 10.1.1 Requirement for existing building renovations

		Green Star	NABERS	Living Building Challenge	Passivhaus	WELL
<b>Climate mitigation</b>	30% energy savings after refurbishment, or; Building sits in the top 15% of each national stock. For either, the performance must be verified through an Energy Performance Certificate.	A 4 Star Green Star Performance v2 rating requires assets to be rated at 5 Stars NABERS energy or higher, or a 15% higher than . This requirement increases to 30% by 2030, which must be achieved to maintain the rating.  Green Star Performance requires the use of NABERS Energy certificates where available. Where not available, it performs verification of on-site performance in a manner that it exceeds the process for a European Energy Certificate.	NABERS Sustainable Finance Criteria outlines what it means to achieve a 30% reduction in energy efficiency for Building upgrade. They show that for most low rated assets improving them to a 4 Star NABERS Energy rating (4.5 for offices) would result in a 30% improvement.  The guide also outlines the criteria for being in the top 15% of each sector using NABERS data.	NA to building operations.	Passivhaus energy requirements for whole building energy consumption would place them in the top15% of the market.	NA
<b>Climate adaptation</b>	Health The building must reduce all material physical climate risks.	Green Star Performance includes a minimum expectation for 4 star ratings to do a climate change resilience assessment. This assessment includes a requirement to identify and manage risks, and to then address them for a 4 star rating.	NA	NA to building operations.	NA	NA
<b>Circular economy</b>	70% of all construction must be recycled or recovered.	Green Star Performance includes the credit 'Resource Recovery' as well as 'Tenant Fitout Waste' which encourage the recycling of construction materials and works.	NA (NABERS waste covers operational waste only)	NA to building operations.	NA	NA
<b>Water</b>	Water appliances and fixtures are efficient.	Green Star Performance includes the 'Water Use' minimum expectation for 4 star ratings. The Minimum Expectation requires low water consumption for water appliances and fixtures.	NABERS Water of 4 stars delivers significant water reduction in appliances and fixtures.	NA to building operations.	NA	NA
<b>Pollution</b>	Building has no substances of high concern.	Green Star Performance includes an 'Indoor Pollutants' minimum expectation for 4 star ratings where a policy must be in place to install products (paints, carpets, sealants and adhesives) with low levels of toxins and to review for banned or highly toxic materials when undertaking refurbishment, maintenance or upgrade works.	<i>NABERS IE includes testing of indoor environment quality toxins.</i>	NA to building operations.	NA	WELL has requirements to remove all substances of high concern to achieve a rating.
	Noise, dust, and pollutant emissions are minimised.	NA		NA to building operations.	NA	
	Occupants are not exposed to toxic materials.	Green Star Performance includes an 'Indoor Pollutants' minimum expectation for 4 star ratings where a policy must be in place to install products (paints, carpets, sealants and adhesives) with low levels of toxins and to review for banned or highly toxic materials when undertaking refurbishment, maintenance or upgrade works.	<i>NABERS IE includes testing of indoor environment quality toxins.</i>	NA to building operations.	NA	WELL has requirements to remove all substances of high concern to achieve a rating.

### 10.1.2 Requirement for building acquisition

		Green Star	NABERS	Living Building Challenge	Passivhaus	WELL
<b>Climate mitigation</b>	<p>The performance of the building must be within the top 15% of the local existing stock.</p> <p>The performance must be verified through an Energy Performance Certificate.</p>	<p>A 4 Star Green Star Performance v2 rating requires assets to be rated at 5 Stars NABERS energy or higher, or a 15% higher than . This requirement increases to 30% by 2030, which must be achieved to maintain the rating.</p> <p>Green Star Performance requires the use of NABERS Energy certificates where available. Where not available, it performs verification of on-site performance in a manner that it exceeds the process for a European Energy Certificate.</p> <p>For Buildings less than 5 years old, a 4 Star Green Star rating (5 Star for offices) will place the asset in the top 15% of all assets in the country. This is based on the large number of assets that exist in Australia compared to the smaller number of Green Star rated assets, and the requirements for high energy performance.</p>	<p>NABERS Sustainable Finance Criteria outlines what it means to achieve a 30% reduction in energy efficiency for Building upgrade. They show that for most low rated assets improving them to a 4 Star NABERS Energy rating (4.5 for offices) would result in a 30% improvement.</p> <p>The guide also outlines the criteria for being in the top 15% of each sector using NABERS data.</p>	<p>Living Building Challenge requires a net zero energy outcome. That is, most of the energy consumed on-site must be generated on-site as well, with minor allowances for purchasing renewables. This requirement for on-site renewables results in buildings with low energy consumption, and would place them as top performers in their market.</p> <p>Living Building Challenge requires a net zero energy outcome. That is, most of the energy consumed on-site must be generated on-site as well, with minor allowances for purchasing renewables. This requirement for on-site renewables results in buildings with low energy consumption, and would place them as top performers in their market.</p>	<p>Passivhaus energy requirements for whole building energy consumption would place them in the top15% of the market.</p>	NA
<b>Climate adaptation</b>	<p>The building must reduce all material physical climate risks.</p>	<p>Green Star Performance includes a minimum expectation for 4 star ratings to do a climate change resilience assessment. This assessment includes a requirement to identify and manage risks, and to then address them for a 4 star rating.</p> <p>Green Star Buildings includes a Climate Change Resilience minimum expectation. Any Green Star rated building is required to meet this requirement. These requirements in both rating tools are found in the 'Climate Change Resilience' credit.</p>	NA	<p>While there is no explicit imperative requiring air tightness testing, several elements of Living Building Challenge would lead to a similar outcome. These include the Energy Performance requirement and the Healthy Interior Environment imperative.</p>	NA	NA



### 10.1.3 Requirement for new buildings

		Green Star	NABERS	Living Building Challenge	Passivhaus	WELL
Climate mitigation	The building's primary energy demand is at least 10% lower than the threshold set for the nearly zero-energy building requirements.	Green Star Buildings requires all rated assets to use 10% less energy than the national construction code in Australia. There are also requirements to ensure the building can only use renewable energy, that is, there are no fossil fuels for typical building use (emergency power excluded).  In the case of the NABERS pathway, the ratings are awarded where they exceed the legislated requirement by 10%.	NABERS Sustainable Finance Criteria outlines what it means to achieve a 30% reduction in energy efficiency for Building upgrade. They show that for most low rated assets improving them to a 4 Star NABERS Energy rating (4.5 for offices) would result in a 30% improvement.  The guide also outlines the criteria for being in the top 15% of each sector using NABERS data.	Living Building Challenge includes a stringent EUI requirements to achieve a rating. While the EUI requirement differs in how it is presented between the taxonomy and Living Building Challenge, the EUI stringency for Living Building Certification far exceeds the requirements in the taxonomy.	Passivhaus energy requirements for whole building energy consumption would place them in the top 15% of the market.	NA
	For buildings larger than 5000 m <sup>2</sup> ,  • they must be tested for air tightness or have a quality façade; and	All Green Star rated buildings must be tested for air tightness to achieve a rating.	NA	While there is no explicit imperative requiring air tightness testing, several elements of Living Building Challenge would lead to a similar outcome. These include the Energy Performance requirement and the Healthy Interior Environment imperative.	It is a requirement in Passivhaus to test for air tightness and ensure strict requirements are met. These requirements exceed the EU Taxonomy requirements.	NA
	• the carbon life cycle impacts are calculated and disclosed.	All Green Star rated buildings must show a 10% reduction in upfront carbon emissions, and are provided with a lifecycle report of their impacts.	NA	The Energy + Carbon Reduction imperatives require a 20% reduction in embodied carbon.	NA	NA
Climate adaptation	The building must reduce all material physical climate risks.	Green Star Buildings also includes a Climate Change Resilience minimum expectation. Any Green Star rated building is required to meet this requirement. These requirements in both rating tools are found in the 'Climate Change Resilience' credit.	NA	The Living Building Challenge doesn't include an assessment of material risks, but the elements in the standard are likely to address these issues. These include being mostly powered with on-site solar, water recovery systems, and requirements against building in floodplains.	NA	NA
Circular economy	• 70% of all construction must be recycled or recovered.	This is a minimum expectation under the 'Responsible Construction' minimum expectation.	NA	Living Building Challenge requires 80% recovery rate in the Responsible Materials imperative.	NA	NA
	• Construction and demolition waste must be reduced; and	This is a minimum expectation under the 'Responsible Construction' minimum expectation.	NA	As above.	NA	NA
	• Buildings must be built to be adaptable and efficient.	NA	NA	NA	NA	NA

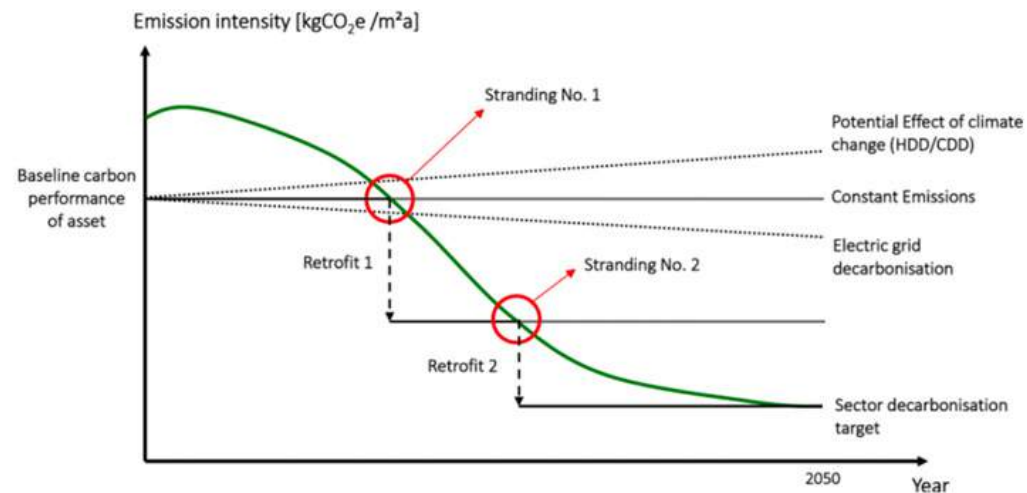
10.1.3 Requirement for new buildings (Cont.)

		Green Star	NABERS	Living Building Challenge	Passivhaus	WELL
Water	Water appliances and fixtures are efficient.	The 'Water Use' minimum expectations requires appliances and fixtures to be water efficient.	NA (NABERS Water does not have a commitment agreement).	Living Building Challenge includes within it a 'water positive' imperative, which requires significant reduction in water consumption from the buildings.	NA	NA
Pollution	Building has no substances of high concern.	Green Star Buildings also includes a Climate Change Resilience minimum expectation. Any Green Star rated building is required to meet this requirement. These requirements in both rating tools are found in the 'Climate Change Resilience' credit.	NA (NABERS IE does not have a commitment agreement).	The Healthy Indoor Environment, Responsible Materials, and Red-list imperatives ensure the building addresses the EU taxonomy requirements.	NA	WELL has requirements to remove all substances of high concern to achieve a rating.
Biodiversity	The building is not built on land of high ecological value, has endangered species, or prime agricultural land.	This is a minimum expectation for all Green Star Buildings ratings. It can be found under 'Impacts to Nature'.	NA	The Ecology of Place imperative complies with the requirements in the EU Taxonomy.	NA	NA



## 10.2 CRREM

**Figure 10**  
**CRREM: Asset level stranding risk diagram**



The 'stranding diagram' above summarises the fundamental principle of CRREM's stranding risk analysis approach for single properties.

- The black line represents a building's baseline and future carbon performance in terms of the so-called greenhouse gas (GHG) intensity, which is calculated as the amount of annual greenhouse gas emissions per building floor area. Emission figures include those directly generated by the on-site combustion of fossil fuels for heating and indirect emissions (caused by the use of district heating and/or electricity consumption).
- The green curve represents the target decarbonisation pathway of a specific building type in a specific country that aligns with a certain climate target (1.5°C/2°C).

For a property to be 'Paris Proof', emission intensity must stay below the target value of this curve. If it doesn't, 'stranding' occurs – which means the asset would have a carbon footprint above the fair share derived by downscaling the carbon budget to property level.

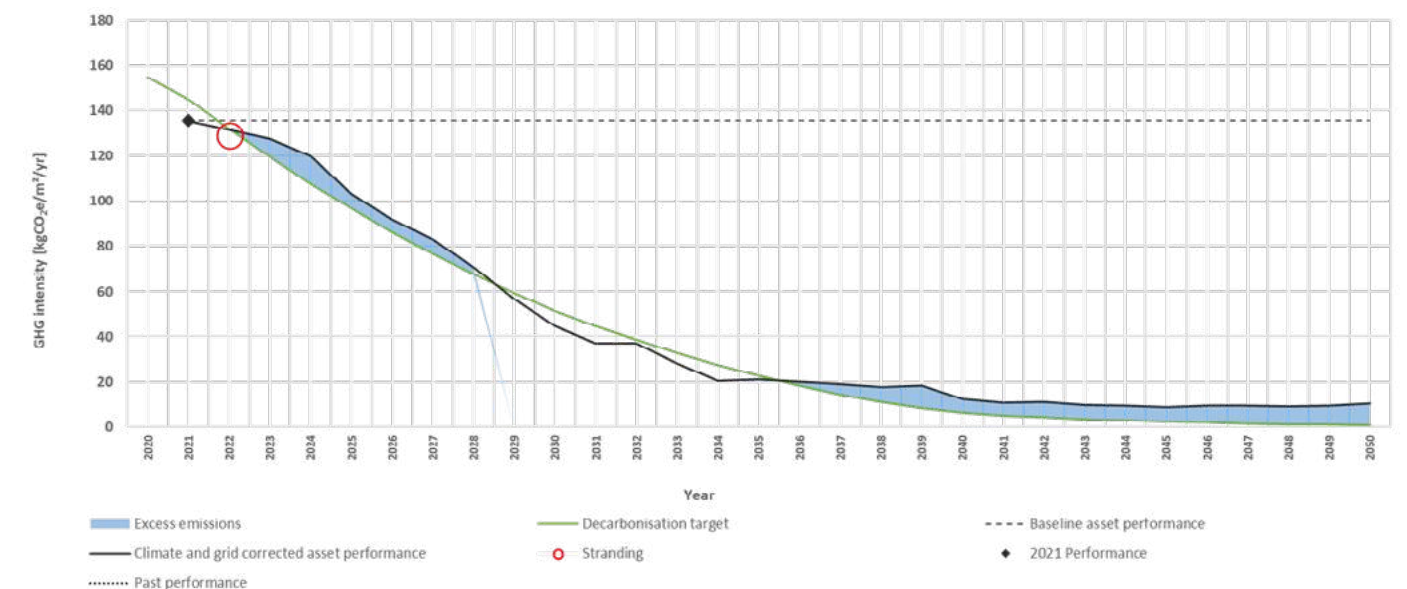
In the illustration above, the exemplary building fulfils the requirements only at the very beginning – facing stranding far before the end of the observation period (in 2050). In this case, only appropriate retrofit measures to reduce GHG emissions would enable the building to meet the future emission ceilings. Measures might include switching to renewable energy, decarbonisation of the electricity grid and/or simply reducing consumption due to lower demand or due to higher insulation.

33. Noting that CRREM over-emphasises location-based emissions, if the grid does not decarbonises as quickly as expected, buildings may fall out of alignment with the CRREM curves.

When considering buildings in Australia, and adjusting for the likely decarbonisation pathways being explored as part of the Australian Energy Market Operator modelling,<sup>33</sup> a 5 Star NABERS Energy rated building

would comply with CRREM provided they are all-electric from a carbon perspective. This should be the case regardless of the state it falls under.

**Figure 11**  
**A 5 Star NABERS rated building in Australia performance mapped against CRREM decarbonisation target line over time**



10.3 Climate Bonds Initiative

The Climate Bonds Initiative Low Carbon Buildings Criteria includes three options for compliance, with each having proxies as well. The three options are:

- Commercial buildings criteria
- Residential buildings criteria
- Upgrades criteria

The following shows how the benchmarks are aligned with each of the ratings recommended in the tables in chapter 6

SCHEME	RATING	CLIMATE BONDS PATHWAY	NOTES
Green Star Buildings	5 Star or above.	Commercial buildings criteria. Residential buildings criteria.	Climate Bonds Initiative has designated Green Star Buildings as a proxy for both commercial buildings and apartment buildings, provided the buildings complies with the Climate Positive Pathway in the rating tool. As of 2023, all projects registered with Green Star Buildings seeking a 5 Star rating or above are required to comply with the Pathway.
Green Star Homes	Certified.	Residential buildings criteria.	Climate Bonds Initiative has designated <u>Green Star Homes</u> as a proxy for single family dwellings.
Green Star Performance	4 stars or above.	Commercial buildings criteria Upgrades criteria.	Green Star Performance may be aligned with Climate Bonds Commercial buildings criteria. Green Star Performance v2, which begins operations in 2024, uses the same boundaries as Climate Bonds, with it reflecting the energy consumption of the building, and with an additional requirement to remove fossil fuels from the building over time. Green Star Performance requires ongoing improvements to building performance over time to maintain their rating. A building seeking a 4 Star Green Star Performance rating will need to be 40% more energy efficient against an average building between now and 2030 to maintain its rating. Therefore any building with a rating of 4 stars will need to be a high performer to keep this rating, with electrification requirements being introduced by 2035. Thus, for the Commercial criteria, Green Star Performance v2 can be used to show progress against the Climate Bonds low carbon pathway, and can be used to verify progress against it, but, the issuer may still need to ensure the emissions are above the hurdle rate established for the midpoint of the term of the bond. For the upgrades criteria, Green Star Performance is aligned based on the ongoing requirements for upgrades but note that Climate Bonds is reviewing its applicability as a proxy.
Living Building Challenge	Certified.	Commercial buildings criteria Residential buildings criteria. Upgrades criteria.	Climate Bonds Initiative has designated Living Building Challenge as a proxy for commercial buildings and residential buildings.
NABERS Energy	Varies.	Upgrades criteria.	NABERS Energy upgrades should be aligned with Climate Bonds upgrade criteria, based on the emission reductions improvements from initial rating to the final rating. A calculation of NABERS Energy ratings shows that moving a buildings from a 2 Star NABERS Energy rating to a 4 Star NABERS Energy rating would result in an approximate reduction of 40%.
NatHERS and additional criteria	7 Stars or greater.	Residential buildings criteria.	The criteria has been compared against the <u>Australian Buildings Criteria</u> for NatHERS which requires a rating of 6 stars and compliance with the National Construction Code. The criteria has also been compared against the rooftop solar proxy. The criteria proposed in this document is more than both requirements as it is more reflective of the current legal requirements in the code, and reflective of the need to remove gas from homes.
Passivhaus / EnerPHit	Certified.	Commercial buildings criteria. Residential buildings criteria	Climate Bonds Initiative has designated Passivhaus as a proxy for commercial and residential buildings.
Zero Energy / Zero Carbon Certification	Certified.	Commercial buildings criteria.	Climate Bonds Initiative has designated Net Zero Energy Certification as a proxy for commercial and residential buildings. The Zero Carbon Standard by LFIA shares similar aspects that make it compliant, but the issuer may wish to confirm this with them.



# 10.4 How Green Star ensures ongoing improvements over time

## 10.4.1 Requirement for new buildings

Green Star Performance includes within it a ‘Climate Positive Pathway’. This pathway, which is present in all rating tools, requires building owners to show continuous improvement over time to maintain a rating.

Green Star Performance v2 aims to drive all buildings to be net zero carbon in operations by considering

both operational and embodied carbon emissions. Its goal is to ensure Australia can deliver existing buildings to be net zero carbon in operations by 2040.

The approach to net zero carbon buildings in Green Star Performance v2 is known as the Climate Positive Pathway.



## Climate Positive Pathway

The Climate Positive Pathway describes the outcomes that Green Star seeks to deliver to fully decarbonise our built environment well in advance of 2050. This path aims to deliver buildings that are fossil fuel free, powered by renewables, highly efficient, built

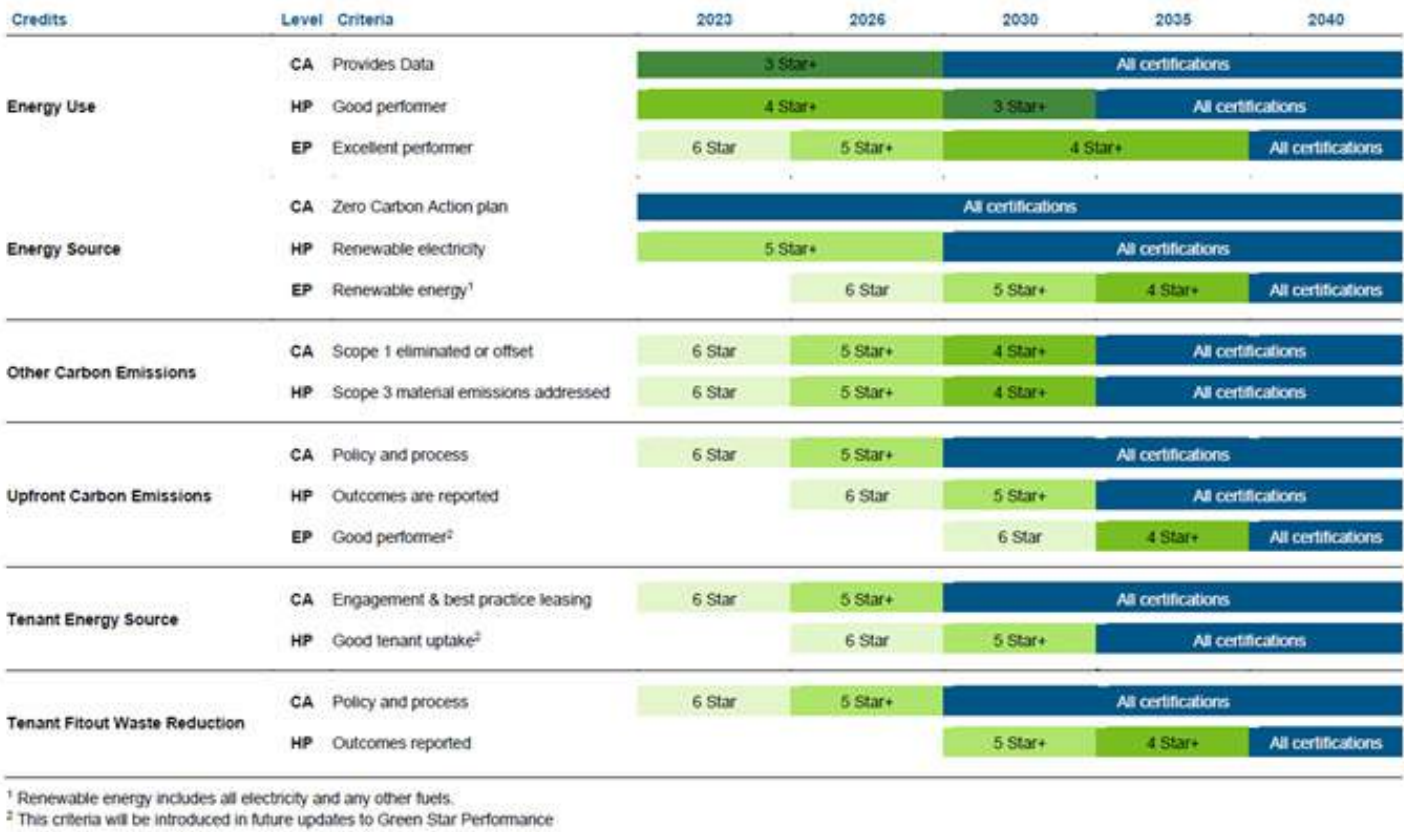
with lower carbon materials, offset with nature and that partner with tenants to eliminate their remaining emissions.

The Climate Positive Pathway principles, credits included, and outcomes are described in the table below:

Figure 12  
Green Star Performance: Climate Positive Pathway; principles, credits and outcomes

Principle	Credit	Outcome
 Highly efficient	Energy use	Reduces overall and peak energy load needed to operate the building.
 Fossil fuel-free	Energy Source	The building does not use fossil fuels for heating, cooling, cooking or power.
 Powered by renewables	Energy Source	The building is fully powered by on-site or off-site renewable energy
 Lower embodied emissions	Upfront carbon emissions	Uses lower carbon products and incentivizes change in the supply chain
 Offset with nature	Other carbon emissions	Uses the purchasing power to capture and store carbon through increasing biodiversity reserves for non-energy carbon emissions
 Partner for success	Tenant Fitout Waste Reduction	Assist tenants and occupants to decarbonize through transitioning to renewables and reducing fitout waste
	Tenant energy source	

Figure 13  
Green Star Performance: Climate Positive Pathway requirements over time



10.4.2 Green Star Buildings over time

Green Star Buildings was the first to include within it a ‘Climate Positive Pathway’. This pathway has specific criteria that kicks in over time.

Green Star Buildings aims to drive all buildings to be net zero carbon in operations by considering both

operational and embodied carbon emissions. Its goal is to ensure Australia can deliver all new buildings as fossil fuel free, highly efficient buildings, that can be powered by renewables and were built with low-upfront carbon.

The Pathway is similar to that of Green Star Performance, it is defined below:

This is our formula that every building should follow. These are the credits that will get you there

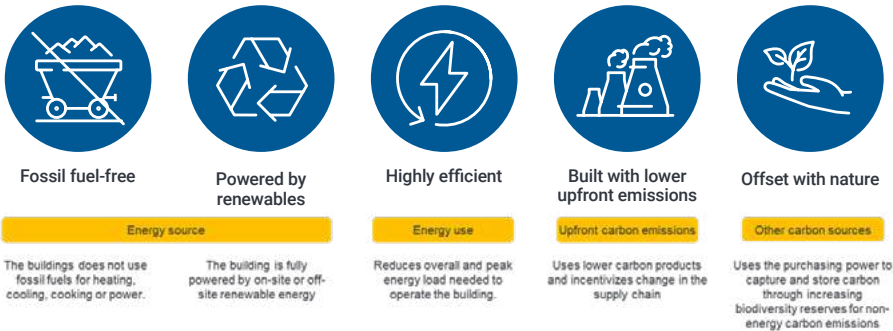
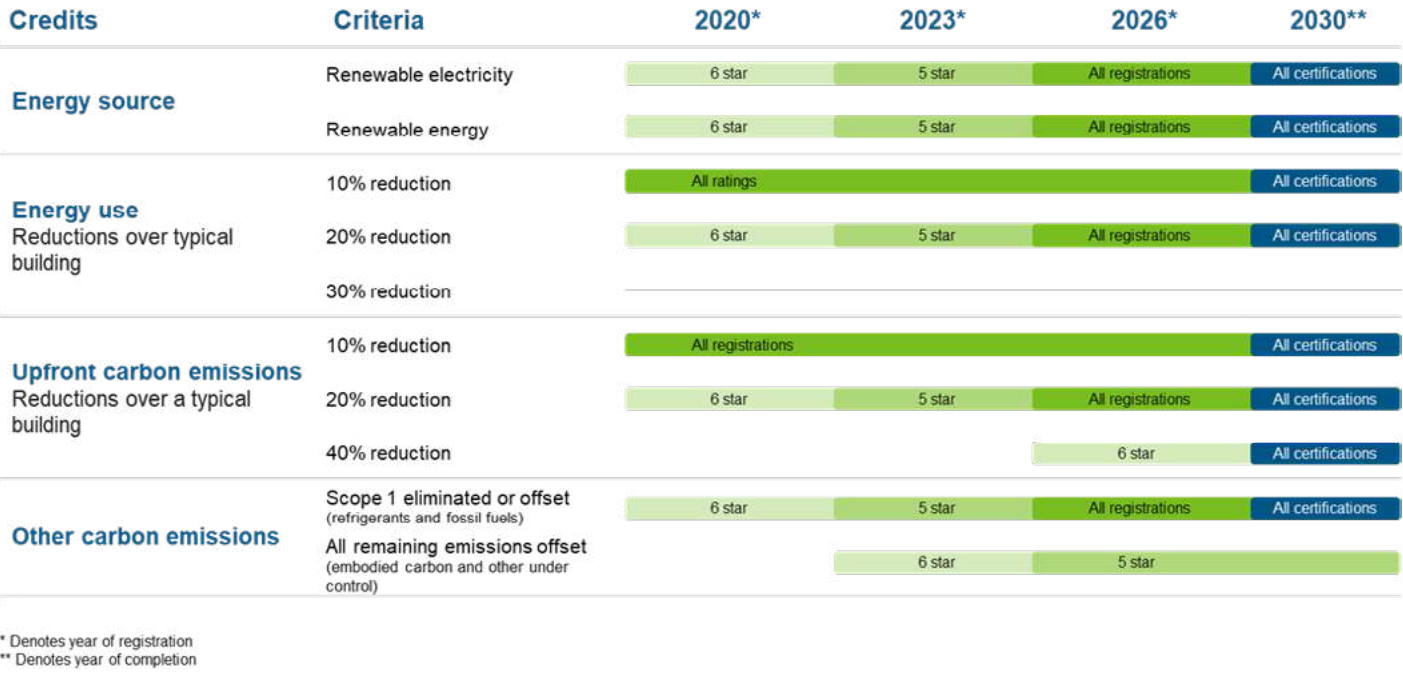


Figure 14  
Green Star Buildings: Climate Positive Pathway requirements over time

Our targets for new buildings in detail  
Green Star Buildings sets the targets to decarbonise all new buildings by 2030.



As with Green Star Performance, the requirements for each change over time. A key difference between Green Star Performance and Green Star Buildings though is that the Green Star Buildings ratings represent a ‘point in time’. Once a building has received a Green Star Buildings rating, that rating does not change, and while it represents a superior building compared to another without a rating, that building should still be asked to secure a Green Star Performance rating after 5 years of operation (at the latest, preferably sooner) to ensure it is being run well.





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