

Net Zero Certification for Urban Precincts



pathways
to net zero
precincts

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Summary

Net Zero is becoming the standard bearer for the next economy. This paper outlines:

1. Why net zero certification is happening,
2. How net zero precincts are becoming a focus for new urban development practices,
3. How historic certification practices have evolved to cope with net zero,
4. The diminishing role of offsets, and
5. Where net zero certification could evolve to address precinct-scale innovations that are accelerating change, even as many net zero technologies remain uncommercialized.

Central to this discussion is the recent mandatory climate-related disclosures and their requirement to report against net zero commitments and how professional practice can embrace these requirements, how transition scenarios can be integrated into net zero frameworks with integrity and the role of certification processes.

The Questions raised in each part of the paper are provided to be used in the virtual Forum on Net Zero Certification on 28 November 2024, to seek responses in a collaborative, co-design process. Readers are invited to begin responding to the questions which will be addressed by Speakers and are a focus for Panels.



About Pathways to Net Zero Precincts: Pathways to Net Zero Precincts is a three-year research project to develop and implement innovative strategies for transitioning urban precincts towards net zero emissions. A collaborative initiative between Curtin University, the RACE for 2030 Cooperative Research Centre and a consortium of leading industry and research partners, case studies from across Australia form the testing ground for real-world interventions.

<https://netzeroprecincts.au/>

Introduction

The Paris Agreement in 2016, signed by 197 nations, began to drive net zero targets, strategies and actions. In more recent years the number of organisations committing voluntarily to net zero emissions by 2050 has continued to rise ¹, accompanied by the adoption of sustainability and net zero certifications.

Following COP26 in Glasgow, there has been a rapid increase in mandatory climate and sustainability related disclosure policies globally, coupled with an increase in anti-greenwashing policies. Mandatory climate-related disclosures will be required in Australia for large organisations from 1 January 2025, with a phased-in approach for other organisations over the following three years. While the mandatory disclosures initially apply to larger organisations, they will increasingly involve small businesses as part of the requirements for large organisations to report greenhouse gas (GHG) emissions across their value chains. Importantly, these mandatory climate-related disclosures will require organisations to report against their net zero commitments and plans to the extent such a commitment has been made. However, the impact of these disclosures on net zero certification is still unclear, especially in urban development.

Voluntary certification still has a role to play in the emerging environment of mandatory disclosures. Certification helps to reduce the risk of greenwashing as it communicates the net zero status of the underlying item being certified with trust. Urban developers, planning bodies and certification providers in Australia have been at the forefront of the net zero agenda. They will now need to rapidly transition from the

historical voluntary certification environment to comply with mandatory disclosures. Some voluntary certifications in the built environment are likely to continue to play an important role in communicating the sustainability rating of a building or precinct, as well as meeting building standards where required.

A Certification Forum on 28 November 2024, run by Curtin University and RACE for 2030, will be an opportunity to explore the transition from voluntary certifications and commitments to the mandatory requirements facing built environment professionals in Australia. The Net Zero Precincts Project has four Pathways that are being researched on case studies across Australia: Certification, Community Energy Resources and Grid Integration, Governance Practices and Urban Design. After 12 months of research the Certification Pathway team has provided this paper as an overview of the status quo and possible trajectory. To help Australia reach net zero precincts by 2030 and beyond, the urban development sector needs to be prepared for the new mandatory disclosures era and the related policy requirements. Certification for net zero precincts will need to find practical solutions on-the-ground.

¹ Climate Action 100+, "Climate Action 100+ Net Zero Company Benchmark 2.0 2023 Results," 2023.

Why Certify as Net Zero?

The deterioration in global climate has become a larger and larger driver of the need to change and deliver the Paris Agreement's net zero agenda. The world is witnessing record-breaking temperatures and increases in the severity and frequency of climate-related disasters. Net zero enables us to progress towards global cooling as soon as possible. Governments are seeing that climate-based disclosures and net zero certification are major tools that can be used to help the economy transition to achieve climate stability.

The major political driver of the Australian net zero agenda is that mandatory climate-related disclosure is now required from 2025 for large organisations, and this will flow down to smaller ones as each part of the value chain will be included. Organisations captured by these disclosures will be required to report against their net zero commitments and plans to the extent such a commitment has been made. Certification of the net zero status of an organisation or project should make it easier to comply with these disclosure requirements as the certification process often requires regular reporting against net zero targets and plans.

The associated economic driver for net zero certification is the shift by the world of finance towards net zero outcomes². This is having consequences for business and government and is certainly impacting urban development.

For many organisations, the driver of net zero certification is social licence³. Net zero has been through a period where some organisations have sought to communicate net zero in their advertising but have not been doing it in a credible manner. In Australia this is being addressed by the Australian Competition and Consumer Commission (ACCC) and the Australian Securities and Investments Commission (ASIC). The ACCC released guidance for businesses in late 2023⁴ in relation to environmental and sustainability claims for all businesses in Australia. False or misleading environmental claims by an organisation will contravene Australian Consumer Law and the ACCC considers that "a business will be engaging in greenwashing where it makes a claim that represents a product, service or the business itself as better for or less harmful to the environment than it really is"⁵.

Over the past two months landmark penalties in relation to greenwashing cases brought by ASIC have been handed down by the Federal Court. In early August 2024 ASIC was successful in the Federal Court where Mercer Superannuation (Australia) Ltd agreed to pay a landmark \$11.3m penalty for making misleading statements about the sustainability-based claims on the nature and characteristics of some of its superannuation investment options⁶. In late September 2024, Vanguard Investments Australia was ordered to pay a \$12.9m penalty for making misleading claims about

² Kreibiehl et al., "Investment and Finance," in *Climate Change 2022: Mitigation of Climate Change*, 2022

³ André and Valenciano-Salazar, "Voluntary Carbon Neutral Programs," 381.; Birkenberg and Birner, "The World's First Carbon Neutral Coffee," 485.

⁴ Australian Competition and Consumer Commission, "Making Environmental Claims," 2023

⁵ Australian Competition and Consumer Commission, "Making Environmental Claims," 2023

environmental, social and governance exclusionary screens⁷. On 23 August 2024 ASIC released a report⁸ on their surveillance activities over the 15 months ending 30 June 2024 in relation to greenwashing misconduct. They have recommended that even if the mandatory climate-related disclosures do not apply, organisations should consider those disclosure requirements if they are voluntarily disclosing climate-related metrics and targets. In addition, they have found that there is inconsistent and interchangeable use of terms such as carbon neutral, net zero emissions and zero emissions. The United Nation's preferred term is net zero as set in the Paris Agreement and they have now suggested how non-state actors can create net zero commitments with integrity⁹.

Greenwashing risks can be minimised through the use of net zero certifications to demonstrate integrity of the net zero commitments of an organisation. Net zero commitments will demonstrate integrity where there is alignment of actions with commitments and plans that are based in credible science in accordance with a 1.5°C

pathway, and where there is transparency of actions and plans that hold an organisation accountable¹⁰. The rapid reduction in GHG emissions that is needed will grow as organisations show they wish to embrace these principles of integrity.

Net zero certification is not straightforward, but it is increasingly necessary to communicate the climate goals of an organisation. There is a plethora of net zero certifications globally and trying to determine which one best suits the underlying goals and purpose of the organisation, or project, seeking to be net zero takes time, knowledge and money. This is a barrier for many businesses. However, standardisation of net zero disclosures due to the mandatory climate-related disclosures, will hopefully make net zero certification more user-friendly.

Question 1: Are there any reasons why net zero certification in relation to the built environment will not grow? Please outline.

6 Australian Securities & Investments Commission, "ASIC's First Greenwashing Case Results in Landmark \$11.3 Million Penalty for Mercer," Media Release, August 2, 2024.

7 Australian Securities & Investments Commission, "ASIC's Vanguard Greenwashing Action Results in Record \$12.9 Million Penalty," Media Release, September 25, 2024.

8 Australian Securities & Investments Commission, "ASIC's Interventions on Greenwashing Misconduct: 2023-2024," 2024.

9 United Nations, "Integrity Matters: Net Zero Commitments," 2022.

10 United Nations, "Integrity Matters: Net Zero Commitments," 2022.

Why the precinct scale?

The RACE for 2030 Cooperative Research Centre has partnered with a consortium of research and industry partners on the Pathways to Net Zero Precincts (NZP) Project. Led by Curtin University, the aim of the project is to explore the net zero transition for urban precincts through the development and implementation of innovative strategies¹¹. The NZP Project contains four 'research pathways' as depicted in Figure 1 and includes a range of precinct case studies across Australia.

The precinct scale of urban development is "a unified area of urban land with a clearly defined geographic boundary, synonymous with a neighbourhood or district."¹² A typical precinct will contain private and public land with shared infrastructure¹³ and consists of many different stakeholders,

including residents, employees, visitors, along with the investors, developers and operators. It also consists of various building typologies and includes transportation and public spaces each of which, along with the stakeholders, are responsible for GHG emissions.

The rationale for focussing on precincts is that they provide a practical scale of urban development by which to decarbonise a city¹⁴. The new technologies of the net zero transition – solar, batteries, associated electrification of everything including vehicles – are found to be very effective if shared at the precinct scale¹⁵. The household scale, individual industry and business scale, and larger scale activity like whole sections of the power grid, are also proceeding to decarbonise, however, many

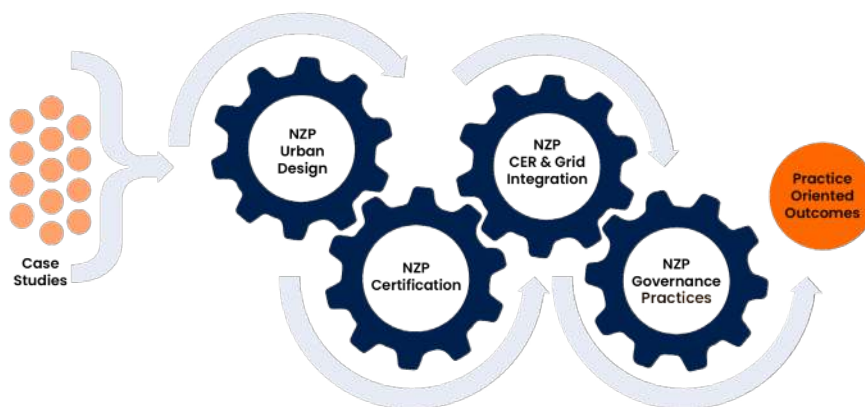


Figure 1 Pathways to Net Zero Precincts

11 RACE for 2030, "Pathways to Net Zero Precincts." 2023.

12 Thomson et al., "Guide to Low Carbon Precincts." 2018

13 Thomson et al., "Guide to Low Carbon Precincts." 2018

14 Loveday et al., "Identifying Knowledge and Process Gaps," 3057.

15 Newton et al., "Greening the Greyfields," 2022.

commentators and local governments see the precinct scale as being a major part of the next economy¹⁶.

The precinct scale is also widely regarded as the most effective for regenerating urban areas¹⁷, as it allows for easier replication across the broader city landscape and can integrate more of the new technology and infrastructure.

Question 2: Are there any new barriers to urban precincts becoming an increasing proportion of net zero certification? Please explain.

What role has certification played historically?

Australia's building sector is no stranger to sustainability certifications and a growing number of Australia's buildings have sustainability ratings. Globally, the commercial side of the building sector dominates sustainability certification in the built environment¹⁸ which should put the sector in good shape for what is coming with mandatory climate-related disclosures.

Certification adds credibility and demonstrates that the underlying item being certified meets the expectations of stakeholders¹⁹. It is often voluntary in the context of sustainability-related certifications, however, energy-related certification has been required for a long

time in the built environment in Australia. This could now incorporate net zero.

There are numerous benefits associated with sustainability certifications, including an improvement in the social license or "green image" of the organisation being certified²⁰, along with financial opportunities not available unless certified net zero, cost benefits such as energy efficiency, an increased willingness to pay by consumers for products that exhibit sustainability credentials²¹ as well as a higher value of buildings for those with higher NABERS or Green Star ratings²². However, certification also comes with a cost associated with the certification and verification processes,

16 Thomson et al., "Guide to Low Carbon Precincts." 2018

17 Thomson et al., "Guide to Low Carbon Precincts." 2018

18 Warren-Myers, "Valuing Sustainability Part 2," 351.

19 ISO, "Certification," n.d.

20 Andrè and Valenciano-Salazar, "Voluntary Carbon Neutral Programs," 381.

21 Birkenberg and Birner, "The World's First Carbon Neutral Coffee," 485.

22 Lee et al., "The Role of Mandatory Building Efficiency Disclosure," 297.

along with the cost of offsets if required for the purposes of certification²³. A lack of expertise, knowledge and resources to implement the certification process can all present as barriers to certification²⁴.

At the precinct-scale there are several sustainability certifications that exist globally as well as within Australia (see Appendix One for a summary of the certifications). These certifications are ordinarily undertaken on a ratings basis, that is a certain number of points are awarded for meeting the requirements of each category within the certification. Some reward energy efficiencies and the use of renewable energy, however, very few contain a requirement for net zero emissions. Of those that contain a requirement for net zero emissions one is Australian, being the Green Building Council of Australia (GBCA)'s Communities rating tool, of which an updated version is expected for release imminently. However, the current version does not require net

zero emissions. Whether a broad or narrow sustainability certification is chosen will depend upon the sustainability goals of the precinct, proponent and stakeholders.

There is only one certification that exists globally to certify a precinct as net zero. This is the Australian Government's Climate Active Carbon Neutral Standard for Precincts. The standard only applies to precincts within Australia, and it refers to a state of carbon neutrality rather than net zero, which is achieved through the purchase of carbon offsets. There have been some concerns raised with the use of offsets to achieve the carbon neutrality status that is certified by this program, most recently as part of the Australian Government's Senate Inquiry into Greenwashing²⁵. The Australian Government is currently undertaking a review of the Climate Active Program and an announcement on the direction of the program is expected later in 2024²⁶.

Question 3: Is it likely that urban development certification by simple ratings will become less or more important in an era of increased need for net zero? Why?

²³ André and Valenciano-Salazar, "Voluntary Carbon Neutral Programs," 381.; Birkenberg and Birner, "The World's First Carbon Neutral Coffee," 485.

²⁴ Acampora et al., "Towards Carbon Neutrality in the Agri-Food Sector," 106755.; André and Valenciano-Salazar, "Voluntary Carbon Neutral Programs," 381; Barbhuiya et al., "Decarbonising Cement and Concrete Production," 108861.

²⁵ Parliament of Australia, "Public Hearings." 2024.

²⁶ Department of Climate Change, Energy, the Environment and Water, "Climate Active Program Direction Consultation 2023." 2023

What about offsets?

Carbon offsets were one of the first actions encouraged by global climate processes and by the Australian Government. The overreliance on carbon offsets to achieve net zero GHG emissions is now seen as being fraught with danger. There have been numerous concerns raised as to the integrity and benefit of carbon offsets in the net zero transition. A study was released in early 2024 which analysed 182 projects under the Australian Carbon Credit Unit Scheme and found limited evidence of regeneration in credited areas²⁷. If offsets do not represent genuine, additional and permanent abatement, then they can in fact contribute to increased emissions by allowing the very emissions they are intended to offset to continue²⁸.

The application to net zero precincts is likely to highlight the need to resolve the offsets issue. Consumers, and those stakeholders visiting urban precincts, are likely to want to know the products or services they purchase, the residences they acquire, and that their workplaces are genuinely delivering on their stated claims and commitments. However, there is concern with the growing number of voluntary net zero commitments and the lack of regulation on what net zero really means. What is being done might not

live up to what is being communicated to consumers, for example, people buying or selling property are likely to be very keen to avoid accusations of net zero greenwashing. To mitigate these risks, anti-greenwashing policies are being introduced globally.

The issue of offsets is complicated by certifications requiring carbon neutrality or net zero through the use of offsets, such as the Climate Active Program. If everyone uses offsets to reach net zero rather than reducing their GHG emissions in the first instance, there simply will not be enough offsets available²⁹. There is only a finite amount of land available for trees to be planted, oceans to capture the blue carbon and considerable progress is needed to scale carbon removal technologies to the level required.

Question 4: Is there a way of ensuring carbon offsets have integrity? Will it be necessary to find a mechanism for certification of built environment projects without carbon offsets? How?

²⁷ Macintosh et al., "Australian Human-Induced Native Forest Regeneration," 149.

²⁸ Macintosh et al., "Australian Human-Induced Native Forest Regeneration," 149.

²⁹ University of Oxford, "Oxford Researchers Launch Updated Carbon Offsetting Principles," February 28, 2024.

What is the role of net zero certification in the future?

While carbon accounting has been standardised over the past 25 years commencing with the GHG Protocol's GHG accounting standards, there is no such similar standard for net zero GHG accounting. Net zero certifications have stepped into that void by providing methodologies within their certification frameworks on how to calculate those net zero states. While these are fragmented and contained within multiple standards and frameworks and administered by numerous certification bodies globally, there is nothing else that provides confirmation to consumers that something is net zero.

However, in recent years, the standardisation of sustainability reporting standards at the global level started with the announcement of the International Sustainability Standards Board (ISSB) at COP26 in 2021. In 2023 they released the first two standards, which includes IFRS S2 Climate-related Disclosures³⁰. Australia has swiftly adopted this approach and has recently passed legislation mandating climate related disclosures that largely follow IFRS S2 within AASB S2 Climate-related disclosures³¹. AASB S2 will apply

on a phased-in approach commencing with large organisations from 1 January 2025.

Australian organisations that are required to comply with AASB S2 will need to disclose any net zero commitments they have made, which includes a commitment made for a product or service, a building or precinct they own, or an organisation-wide commitment. The disclosure requirements include an explanation of how the net zero targets were determined, their plans to achieve the targets and which emissions they relate to, for example, Scope 1, 2 and 3 or just a subset of those. Regardless of what GHG emissions the net zero target relates to, or whether the organisation has made a net zero commitment, AASB S2 requires disclosure of Scope 1, Scope 2 and Scope 3 GHG emissions on an annual basis.

These mandatory climate-related disclosures only specify the types of information that must be reported. To commit to net zero, organisations and projects need to develop scenarios for net zero targets and create plans that can be justified in commercial and scientific ways in line with a 1.5°C pathway. In the transition to mandatory disclosures, there is going

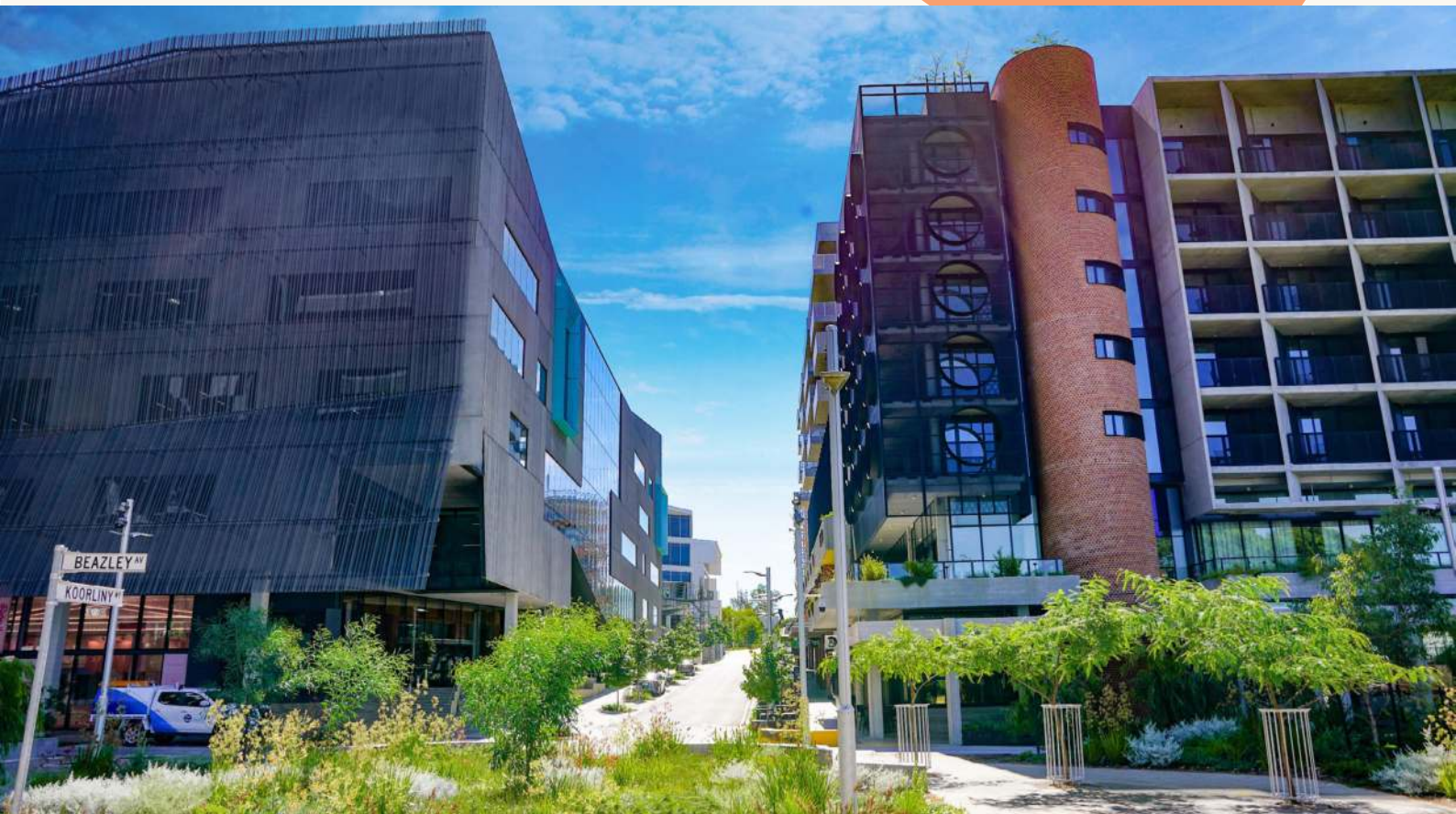
³⁰ IFRS, "IFRS S2 Climate-Related Disclosures," 2023.

³¹ Australian Accounting Standards Board, "Australian Sustainability Reporting Standards," 2023.

to be a need to address the commercial realities of this process. There are some technologies and processes that are easy and some that are hard as they are not yet commercial. These have become traditional approaches to the energy transition as used in strategies such as the McKinsey Waterfall Charts. Certification should be able to recognise that strategies can become more able to adopt net zero outcomes as they become commercially available. Otherwise, offsets will be the only way to achieve net zero and as shown above, these are simply not going to be available in enough quantities.

Transparent communication of the progress towards net zero targets and progress against net zero plans is required so that everyone can learn from each other, and we can move towards the “radical transparency” approach called for by the United Nations High-Level Expert Group in their 2022 Integrity Matters Report³².

Question 5: What are the most helpful processes to ensure net zero precinct certification can be enabled into the future? Is a staged approach of transition to net zero precincts, without the need for offsets, plausible? If so, how?



³² United Nations, “Integrity Matters: Net Zero Commitments,” 2022.

Conclusion

By the time of the Net Zero Precincts Certification Forum on 28 November 2024, there will be little more than a month before the commencement of the mandatory climate-related disclosures in Australia. Navigating a way through the multitude of terms used to describe net zero GHG emissions, choosing the right net zero pathway, compiling the net zero action plan and then communicating all of this to the market will require significant focus on enabling a good process. Organisations will still be left to navigate their way through the fragmented voluntary certification world should they wish a part or their whole organisation or projects to be certified as net zero.

There will be increasing pressure to develop net zero precincts but without proper processes for certification they could face anti-greenwashing litigation. Fear of falling foul of the anti-greenwashing guidelines will only prevent communication of net zero commitments and actions at a time when it is critical for a rapid reduction in GHG emissions to be taking place. Selecting the most appropriate certification needs to be in line with the most credible science to keep to the 1.5°C pathway, be transparent and ensure that actions are matching commitments. To understand the new processes and requirements of net zero that keep to these goals will need professionals to rapidly find practical ways to demonstrate solutions.

To aid in this process we invite attendees ahead of the coming Forum to consider the questions summarised on the next page. Speakers and attendees will be able to address these questions and others that are raised, as we all help to co-design the future of net zero certification.

Please see a link [here](#) to the information statement for the research project which we encourage you to read before providing your answers to these questions within an online survey [here](#). The survey is part of a PhD project and will take approximately 15 minutes to complete. Curtin University Human Research Ethics Committee (HREC) has approved this study (HRE2024-0506).

Questions to consider ahead of attending the Certification Forum

1. Are there any reasons why net zero certification in relation to the built environment will not grow? Please outline.
2. Are there any new barriers to urban precincts becoming an increasing proportion of net zero certification? Please explain.
3. Is there a mechanism for certification that can enable non-offset actions with clear stages to full net zero? Why?
4. Is there a way of ensuring carbon offsets have integrity? Will it be necessary to find a mechanism for certification of built environment projects without carbon offsets? How?
5. What are the most helpful processes to ensure net zero precinct certification can be enabled into the future? Is a staged approach of transition to net zero precincts, without the need for offsets, plausible? If so, how?

Appendix One

Name of certification	Organisation	Coverage	Sustainability targets	Net zero measure	Scope 3 emissions	Embodied emissions	Frequency	Accountability & Transparency	Verification
Climate Active Carbon Neutral Standard for Precincts ³³	Climate Active (Australian Government)	Australia	No	Carbon neutral operational emissions through use of offsets	Yes – material, relevant, can influence	No	Annual	Annual Public Disclosure Statement	Independent verification required
BREEAM Communities ³⁴	BRE Global Limited	UK (can be modified for global application)	Yes	Scoring system Maximum points for 100% reduction in CO ₂ emissions against baseline energy demand (carbon neutral), can use	Transport emissions are optional	No	In designing and planning stages only	N/A	Energy strategy written by an energy specialist Independent third-party auditor
DGNB System for Districts ³⁵	DGNB (German Sustainable Building Council)	Global	Yes	Carbon neutrality in accordance with “DGNB CO ₂ balancing rules”	Bonus points for transport and logistics related emissions	Only for new buildings	3 phases Industrial sites recertified every 5 years Non-industrial is unlimited	N/A	DGNB auditor
One Planet Living Leader ³⁶	Bioregional (endorsement, not a certification process)	Global	Yes	Zero carbon energy target (100% renewable energy)	Transport emissions	To be considered in construction	Annual	Encouraged to publish action plan and annual progress reports	Endorsed by Bioregional
Green Star Communities (Emerging) ³⁷	Green Building Council Australia	Australia	Yes	100% renewable energy Residual emissions offset with nature based solutions	Low emission transport	Upfront carbon emissions reduced and offset	Annual	Zero carbon action plan	GBCA

33 Climate Active, “Carbon Neutral Standard for Precincts.” 2022.

34 BRE Global Limited, “BREEAM Communities Technical Manual.” 2017.

35 DGNB System, “DGNB System Districts Criteria Set.” 2020.

36 Bioregional, “One Planet Living Goals and Guidance for Communities and Destinations.” 2019

37 Green Building Council Australia, “Positive Category: Green Star Communities v2 Draft Credits Consultation.” 2023

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