Australian Institute of Landscape Architects

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AUSTRALIAN INSTITUTE OF LANDSCAPE ARCHITECTS (AILA)

DRAFT NATURE POSITIVE ROADMAP SUBMISSION

Thank you for the opportunity to make a submission on the June 2025 Draft Nature Positive Roadmap for New Developments.

Introduction

The Australian Institute of Landscape Architects (AILA) is the peak national body for Landscape Architecture. AILA champions quality design for public open spaces, stronger communities, and greater environmental stewardship. We provide our members with training, recognition, and a community of practice to share knowledge, ideas, and action. With our members, we anticipate and develop a leading position on issues of concern in landscape architecture. Alongside government and allied professions, we work to improve the design and planning of the natural and built environment.

In operation since 1966, AILA represents over 3,200+ landscape architects and promotes excellence in planning, design and management for life outdoors. Committed to designing and creating better spaces in Australia, landscape architects have the skills and expertise to improve the nation's liveability through a unique approach to planning issues via innovative integrated solutions. In doing so, landscape architects contribute towards better environmental, social and economic outcomes for all Australians.

AILA leads a dynamic and respected profession, creating great places to support healthy communities and a sustainable planet. We work together to create healthy communities, connected urban green infrastructure, and liveable, sustainable cities and regions. Our members are driven by AILA's Strategic Plan core values of which Climate Positive Design is a key driver. We are also committed to creating ***'A greener, healthier, inclusive and climate resilient'*** which is further embedded in our approach.

Addressing the Draft Roadmap

The GBCA is to be commended for taking the initiative to develop its Nature Positive Roadmap for New Developments, which establishes the objective of a nature-positive built environment by 2050. The roadmap identifies five key challenges, in response to which it proposes five core principles, each with measurable targets. Much work has gone into the roadmap, and it offers a guideline for the building industry aspiring to contribute to biodiverse, resilient residential landscapes. The integration of global biodiversity frameworks and the emphasis on First Nations knowledge signal an important shift in values and priorities within the sector.

However, its shortcomings lie in the absence of a clear position on what is considered 'nature', 'biodiversity', 'nature positive' and 'urban biodiversity', the focus on high- and moderate-value biodiversity, a reliance on offsets, and a lack of tie-in to documents produced by other organisations/entities relating to green infrastructure, biodiversity and nature. There is also a missed

opportunity to articulate more clearly how green infrastructure and context-sensitive landscape architecture strategies can be measured and incentivised. The proposed roadmap would benefit from including metrics relevant to habitat complexity and microclimate regulation provided by landscape elements.

Definitions

'Nature' is defined on p. 8 of the document. The source of this reference is cited as UNCBD. The referencing style in this section differs from the rest of the document and the reference is not listed at the end. Presumably UNCBD is the acronym for United Nations Convention of Biological Diversity. What is odd about this definition is, it doesn't seem to allow for evolution. At the time of the earth's creation, the existing systems were quite different from now. Current nature has evolved over millennia, from that starting point. This definition of nature recalls the notion of Creationism, clearly not desirable.

The definition of biodiversity on p. 8 is also taken from the United Nations Convention of Biological Diversity. High-value and moderate-value biodiversity are both defined, and, in the document, attention is primarily paid to high- and moderate-value biodiversity. New residential developments will be greenfield or infill. Greenfield sites are generally agricultural land, often of low biodiversity value. Infill developments in urban areas are also likely to have low-value biodiversity. Nevertheless, this biodiversity should be managed effectively to minimise its loss. All biodiversity delivers some ecosystem services, including cultural ecosystem services, e.g. aesthetics, well-being, sense of place. Even degraded ecosystems can function as habitat and as corridors between areas of higher biodiversity, enhancing connectivity. The everyday landscape is important to people, even if it has low biodiversity value. It cannot be ignored and is of value. The roadmap should make this explicit, as should there be a definition of 'landscape', where all forms of 'nature' are included (i.e. 'first' or 'reserved' nature' (remnants of natural ecosystems)), 'designed' nature (designed and maintained green spaces including 'domestic' nature inprivate gardens), as well as 'fourth' or 'spontaneous' nature[1] (self-willed, uncultivated vegetation and associated wildlife that emerges in urban environments). Likewise, there is a need to include definitions around 'green' (and 'blue') infrastructure. The SA HB 214:2023 Handbook Urban Green Infrastructure — Planning and Decision Framework provides an agreed Australian definition.

These biodiversity definitions imply that the high- and moderate-value biodiversity is indigenous. In fact, the plant component of much urban biodiversity is often a hybrid of exotic, native and indigenous species. Urban biodiversity is defined by N. Müller, the founder of URBIO (Urban Biodiversity and Design International Network), as "the variety and richness of living organisms (including genetic variation) and habitat diversity found in and on the edge of human settlements. This encompasses the range of species, from the rural fringe to the urban core, including remnants of natural landscapes, agricultural areas, and urban-industrial landscapes"[2]. This mix has resulted from different preferences in plant selection over the decades. Some might argue that only indigenous plants should now be used. However, with shifting climate zones because of climate change, the indigenous plant communities

[1] Kowarik, I. Urban wilderness: Supply, demand and access. Urban For. Urban Green. **2018**, 29, 336–347. Ignatieva, M, Dushkova D., Martin, D., Mofrad F, Stewart, K, Hughes, M (2023) From One to Many Natures: Integrating Divergent Urban Nature Visions to Support Nature-Based Solutions in Australia and Europe. *Sustainability* **2023**, *15*(5), 4640; **https://doi.org/10.3390/su15054640**

[2] Müller, N., Kamada, M. URBIO: an introduction to the International Network in Urban Biodiversity and Design. Landscape Ecol Eng 7, 1–8 (2011). https://doi.org/10.1007/s11355-010-0139-7

present before white settlement in 1788 might no longer be able to survive, assuming they could survive in urban conditions previously. In addition, landscape design of residential subdivisions requires a considered selection of plants to fulfil different functions in different locations, e.g. deciduous trees for thermal comfort in summer and solar access in winter. Also, in terms of habitat provision, non-indigenous plants might be as effective as indigenous plants, when other selection criteria are considered. The roadmap should clarify what comprises biodiversity in an urban setting and suggest processes for appropriate plant selection.

The definition of 'nature positive' included is problematic. The 2020 baseline as a starting point is not nature positive - the condition of this 'nature' is very degraded. In fact, various State and National and State of Environment Reports dating back decades in Australia show that the condition of 'nature' in Australia is very poor and continues to decline. The 2005 Millennium Ecosystem Assessment Report (MEA 2005), which assessed the consequences of ecosystem change for human wellbeing in more than 100 countries including Australia, found that 60% of the 24 critical ecosystems are either degraded or being used unsustainably. MEA, and subsequent publications, should be used in the GBCA report to provide a better basis to determine the baseline, as well as the landscape functionality that drives the condition of 'nature', and ultimately biodiversity, beyond that of formally reserved nature, i.e. 'nature' on private and public land in cities and rural areas.

Scope of Roadmap

The 'built environment sector' appears to be very limited and restricted to buildings (p.11). This is seen further on p.12 where GBCA recognises that *nature positive outcomes are best achieved through the thoughtful design (including nature-based solutions), construction and operations of buildings, precincts and infrastructure*. From a cultural landscape perspective, the built environment includes all aspects of the landscape that have been influenced by human action. This includes many forms of 'nature' that are seen as 'wild' or 'pure'. There is a need to move beyond this to consider buildings and associated landscapes as one integrated entity that exists at various scales.

Regarding Q2 (p.12), 'For existing buildings, what are some of the key challenges that should be considered?", the biggest issue relating to the unsustainability of contemporary Australian houses in particular is their size. New Australian houses are three times the global average of new houses. Australian houses today are four times bigger than what they were in the 1950s and consume 3-4 times more energy and produce 3-4 times more waste now than in the 1950s. The GBCA roadmap is silent on the construction material requirements in that reducing new Australian house sizes to that of the global average would, at a broad level, mean that three future Australian houses could be built for what is now needed to build one.

Offsets

Biodiversity offsets underlie the core principle of "Prevent nature loss – Commit to no net loss and deliver net gain outcomes" (p.4). Offsets allow the destruction of areas of known biodiversity in exchange for protection of similar existing areas or rehabilitation or restoration of similar degraded areas. Offsets as a conservation mechanism are problematic. For example, in NSW, an audit of the state's Biodiversity Offsets Scheme identified risks that "biodiversity gains made through the Scheme will not be sufficient to offset losses resulting from development" (www.audit.nsw.gov.au). The Australian Conservation Foundation concluded that offset schemes should be "an option of last resort" (www.acf.org.au). The roadmap specifies that "Today: No net loss of high value biodiversity with mitigation through avoidance, minimisation, and offsetting" (p. 37), "No net loss of moderate to high

value biodiversity onsite" after 2040 and "No loss of moderate to high value biodiversity onsite" after 2050 (p. 37). The use of offsets at all, even until 2040, is undesirable. This strategy should be removed from the roadmap.

Integration with other efforts

GBCA is not alone in tackling the issue of nature positive developments. Related work is being undertaken by other professional organisations with an interest in residential development and academic institutions. AILA is working on a biodiversity positive design guide for its members. Standards Australia has published 'Urban Green Infrastructure – Planning and Decision Framework', directed at all working within the built environment, e.g. landscape architects, planners, engineers, etc. Researchers at RMIT University, Melbourne, have produced the Biodiversity Urban Sensitive Design Framework (www.icon-science.org). These all relate to the Nature Positive Roadmap. Nature positive and biodiversity positive, in regard to urban development, are equivalent terms. They can be considered strategies to adopt when implementing urban green infrastructure. To ensure optimal outcomes across the residential development sector, the GBCA should tie its work in with these other activities/publications.

Economics

Clarity is required on economic value of five ecosystem services- is $85 billion per year? (p.1)

The State of Nature

The implicit assumption in the roadmap is that the Australian population will continue to grow (p.16). The global population at the time of European arrival in Australia was approximately 1 billion people. Today it is 8.2 billion people and is projected to be around 11 billion people by 2100. Estimates in the mid-1990s were that a 90% reduction in resource use was required for the world to be sustainable (see p.18). Recent research by the University of Melbourne suggests that this figure is closer to 98% reduction. It is impossible to see how Australia can achieve a true 'nature positive' situation under the current scenario. A critical question is what is the 'right' size of human population according to the Australian landscape's ecological carrying capacity.

There is also little clarity in the GBCA roadmap on how 'nature' is managed on site of current and new building construction, nor of the true lifecycle costs of construction and operation both on site and in receiving environments such as waterways.

The role of biodiversity in Climate Mitigation

The roadmap acknowledges some interconnections between climate change and biodiversity loss but doesn't recognise the extent to which restoring biodiversity can help mitigate climate impacts. Biodiversity loss undermines the capacity of landscapes to buffer climate extremes. The relationships between biodiversity and climate need to be made more explicit and embedded across the roadmap's principles and implementation strategies. The roadmap should also advocate for nature-based carbon accounting in urban development.

Question 2: For existing buildings, what are some key challenges that should be considered?

Response: Challenges include the lack of baseline ecological data for older developments and limited space for nature-based retrofits.

Key Challenges

Intensifying urban development (p.22)

Further to the implicit assumption that there should be ongoing population growth is the notion that urban development should be intensified. EPA Victoria ecofootprint research from the early 21st century found that low-density living was 25% more sustainable than the medium- to high-density alternatives. Numerous pieces of research during and after COVID-19 highlighted the benefits of access to private 'domestic' nature such as backyards. Further, increased urban density has severe negative consequences on numerous ecosystem services including urban food production, urban stormwater generation and treatment, increased heat island effect, decreased biodiversity and decreased soil carbon sequestration. Recent emerging research from the University of Melbourne suggests that residents in new estates would prefer smaller houses and larger backyards.

Australia's low circularity rate (p.26)

There is scope to change the focus from the built environment 'dependence' on concrete, steel, aluminium and asphalt materials to one that utilises natural, largely unprocessed materials and regenerative techniques. Better integration of buildings with the associated landscape would assist with this and should be mentioned. Further the reference of circularity should have greater linkages to the EPA Waste Hierarchy, in particular the notion of avoidance as the first step.

Improving measurement, data and decision making (p.35)

We agree. As per previous comments, the notion of the built environment needs to be expanded to include the cultural landscape at all levels (i.e. lot/site, street/neighbourhood, urban area, region)

Recommendations

In summary, we draw attention to the following issues, which should be addressed within the Draft Nature Positive Roadmap:

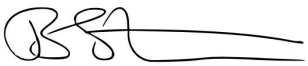
1. Clarify the definitions of 'biodiversity', 'nature', 'nature positive' and 'urban nature'.
2. Expand the notion of the built environment to include natural and cultural landscapes at all levels.
3. Address the challenge of the current unsustainability of Australian housing.
4. Remove reliance on offsets.
5. Ensure this roadmap is consistent with similar documents produced by other sectors working within the built environment.
6. Clarify economic value of ecosystem services.
7. State how nature is to be managed on building sites.
8. Consider lifecycle costs of construction and operation on site and in receiving environment.
9. Recognise importance of biodiversity to climate mitigation.

10. Acknowledge challenges of lack of baseline ecological data for older developments and limited space for nature-based retrofits.
11. Encourage building industry to promote smaller houses with larger backyards for new builds.
12. Shift to integration of buildings with landscape and use of natural building materials and regenerative techniques.
13. Link circularity with EPA Waste Hierarchy and highlight importance of avoidance as first step.

Conclusion

AILA welcomes the opportunity to comment on the GBCA Draft Nature Positive Roadmap. The roadmap will provide much-needed guidance to the building industry in its endeavours to establish a nature-positive built environment by 2050. Amendments are always to be expected when producing a draft document. We believe attention to the issues identified above will enhance the roadmap and its usefulness to the building industry.

Yours Faithfully



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