Australian Institute of
Landscape Architects

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Chief Impact Officer
Green Building Council of Australia
Tower Two, International Towers
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By Email to: consultation@gbca.org.au

Attention: Jorge Chapa

Dear Jorge,

**AUSTRALIAN INSTITUTE OF LANDSCAPE ARCHITECTS (AILA) RESPONSE TO
THE GBCA NATURE ROADMAP FOR THE BUILT ENVIRONMENT DISCUSSION PAPER**

Thank you for the opportunity to provide a response to the Green Building Council of Australia's *Nature Roadmap for the Built environment, discussion paper*. AILA commends the GBCA for taking the initiative to develop a cohesive Road Map for how the built environment sector can protect and regenerate biodiversity. We also acknowledge the considerable amount of work that has gone into not just this discussion paper, but the earlier discussion papers and ongoing consultation and engagement.

The Australian Institute of Landscape Architects (AILA) welcomes the GBCA's planned nature roadmap for the Built Environment. We see nature and biodiversity as critical components of the built environment, and that Landscape Architects, with our unique external environment skill set, have a key role to play in delivering nature positive outcomes.

In recognition of the environmental threats that we are facing here in Australia and Globally, AILA in August 2019 declared a Climate and Biodiversity Loss Emergency as a critical action item for our 3200 members.

In 2022 AILA established a Biodiversity Positive Design Working Group that is working towards a specialised Biodiversity Positive guide for Landscape Architects. In February 2023 the working group released AILA's Biodiversity Positive Position Statement. This document outlines our position and the steps we are taking in preparing our biodiversity positive framework guide. The anticipated release of this document is 2025.

We have structured our comments using the sections and questions in the discussion paper, along with the addition of an overview section and noting that there were no questions related to section 03.

01- Overall Roadmap considerations. This looks at overall framework and broader issues for GBCA to consider.

02- Frameworks driving adoption. Commentary on gaps in the framework.

04- Implications for the Built Environment. As the road map acknowledges, there are some complex items to be addressed, particularly around measurement and restoration. We assume there will be ongoing engagement with specialists expertise required here.

05- Developing a nature Roadmap: We provide commentary on need for a guiding vision and assume that there will be ongoing engagement and development of this section, to provide the necessary level of practical guidance for the target audience.

06 – Additional resource material. Recommendations on reference material specific to nature outcomes.

07- About the Australian Institute of Landscape Architects. About us and what we do.

01 – OVERALL ROAD MAP CONSIDERATIONS.

The discussion paper sets the framework for a range of quite specific questions. Our comments here are aimed at bigger picture issues that are not covered by the questions in the discussion paper.

We understand that this discussion paper has been informed by previous papers, which we have reviewed, as well as consultation which you summarise in chapter 3.

Our high level commentary is as follows:

- *Disconnect between very high level policy and the level of detail required to deliver nature positive*: The discussion paper covers some very high level policies such as the Kunming-Montreal global biodiversity framework, but the reality is that nature positive outcomes for the built environment will require highly specific guidance. There is considerable and complex work required to set measurement criteria and baseline assessment.

- *Reference interdependencies with Climate Change*: There are significant interdependencies between addressing biodiversity decline and climate change, for example climate based seed provenance. As such it is critical that the Road Map reference work underway to address climate change and where the two issues overlap.

- *Adopt system change approach*: The built environment sector is a social-ecological system and biodiversity decline is a systems issue. Changing systems is challenging and benefits from systems thinking and analysis. A key challenge for the Road Map will be to determine what interventions should be prioritised to shift the current system towards a transition or transformation.

- *Clarity around target audience*: It is not entirely clear who the intended target audience is. For example is it aimed at policy makers, company CEO's or developers and designers who might have to implement the plan.

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Show the planned steps to deliver the Road Map in next versions of the roadmap.

In the next iterations of the roadmap development, we would like to see a clear and simple visual graphic timeline outlining the steps along the way that need to be addressed and solved to get to a point where we can drive nature positive outcomes in the built environment. This might include gap areas to be addressed including what needs to be done next and in what order example:

- Addressing gaps around the legislative framework.
- Establishing a biodiversity measurement tool metrics and guidelines.
- Establishing how to develop baselines.
- Development of design guidelines for connectivity and so forth.
- Resolve how ongoing management and care of nature will be funded.
- Development of environmental targets – e.g. what percentage is biodiversity positive?
- Develop and implement governance arrangements to drive delivery of the agreed Road Map priorities.
- Timeframes for implementation.
- Development of measurement and monitoring protocols to evaluate effectiveness of natural systems recovery.

02- FRAMEWORKS DRIVING ADOPTION

Kunming-Montreal

The Kunming-Montreal global biodiversity framework provides a strong basis for developing the plan. The reality is that if we take this as the guiding framework we should be setting aside 30% of all development sites for nature recovery and protection.

The Taskforce for Nature-related Financial Disclosures (TNFD)

Nature Based Disclosures offer a method for assisting medium to large scale organisations assess nature based risk in their value chain from a Governance level. Governance engagement is key to driving system transitions. However, there has been little conversation around what these voluntary reporting standards mean for different disciplines within the Built Environment sector. The Road Map should seek to provide this guidance.

Australia's regulatory framework

At an Australia-wide level we have an outdated regulatory framework not fit for nature positive outcomes and the EPBC Act is in urgent need of reform.

The Australian Government Nature positive plan was going to set high level biodiversity mapping through regional planning and strategic assessments. While this policy document had many flaws and lack of detail, this legislative change has now been stalled and seems unlikely to progress in the near future. The Institute submitted a 22-page submission to the Federal Government on this planned reform.

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Integration of Aboriginal and Torres Strait Islanders Principles

The Australian Institute of Landscape Architects has three main guiding values for our members. These include Connection to Country, Climate Positive Design and Gender Equity.

As Landscape Architects, we regularly work with Aboriginal and Torres Strait Islanders Aunties and Uncles and specialised Connection to Country consultants. We have a dedicated Connection to Country Committee as well as Aboriginal and Torres Strait Islander Cultural Ambassadors.

Many Landscape Architects already work with Aboriginal and Torres Strait Islanders peoples on projects and there is a shared understanding that they are currently overwhelmed with the workload demands from a cultural / professional perspective.

AILA supports the inclusion of Aboriginal and Torres Strait Islanders involvement, recognition and collaboration as outlined on pages 18 and 25. However, the discussion document appears not to address the role of key design professionals in the Built Environment, such as Landscape Architects and Ecologists, who work with and contribute to reduce the cultural load on Aboriginal and Torres Strait Islanders. This includes the specificity around the roles different disciplines play in supporting Traditional Knowledge Systems, such as the complex, time consuming task of mapping sites and surrounding the biodiversity values, as well as planning and designing sites to maximise biodiversity values, integrated into design briefs.

Built Environment disciplines, such as Developers, Planners, Ecologists, Architects, Urban Designers, ESD Consultants, Engineers (civil, traffic and water), Building and Landscape Construction and Maintenance, all play a different role in the development process. As such they have a vastly different sphere of control to improve biodiversity. In addition, the nature of private versus public projects shapes project objectives and the capacity to influence outcomes on the ground.

The NSW Government provides very good guidance documents and a framework for starting with Country and designing with Country.

Evolution of the mitigation hierarchy

The mitigation theory is good, but we would like the language to be more direct, i.e.: "avoid" rather than "refrain".

Then there is the vexed question of offsets. There have been significant questions raised in the Ken Henry review. Any restoration projects need to demonstrate additional benefits. As biodiversity is so hyper local, this begs questions of distance, and ownership of land that is restored/renewed. Offsetting should be a last resort only.

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Ecological value and biodiversity net gain

How we go about measuring ecological values and biodiversity net gain is the most critical part of the puzzle, and yet the roadmap has very little detail on this complex issue. See responses in Section 04. The United Kingdom has a biodiversity net gain methodology, but it also has a substantially simpler environment than Australia.

04- IMPLICATIONS FOR THE BUILT ENVIRONMENT.

Halting biodiversity Loss.

Determine priority interventions for the Built Environment sector

Systems based research around improving biodiversity and the Built Environment in urban areas in Australia has highlighted the following areas as key to driving change. These areas may become priority intervention areas that are addressed within the Road Map and could be validated through the systems consultation approach outlined previously.

1.   Business case: The Built Environment sector needs a clear and compelling business case around why investing in biodiversity is critical that can influence stakeholders who are unsure of why to invest in biodiversity, such as developers and Local Government Areas.

2.   Costing of Green Infrastructure (GI) and Biodiversity Infrastructure (BI): BI is perceived as costly with uncertain return. By costing GI and BI appropriate lifecycle investment can be determined and myths dispelled around the costs versus benefits of these investments.

3.   Nature connection: The connection of the community at large to nature needs to be fostered so they are more willing to support biodiversity initiatives. This requires partnerships with universities to segment communities by nature connection values, in order to understand community needs and to develop targeted interventions. The City of Melbourne has started to apply this approach.

4.   Planning systems: Federal, state and local planning systems in most states are currently grappling with the challenge of implementing GI, let alone BI. These planning systems must be shifted to include biodiversity design principles, targets and measures that are enforced.

      Officers that administer planning systems must be upskilled around the imperative for change and what biodiversity needs to thrive and have support for enforcement. As part of this planning system current legislation is not protecting nature. Significant reform is required for the EPBC Act and has been placed on hold by the Labor government.

5.   Evidence based targets must be agreed and embedded in policy instruments including legislation. A key stream of work under this Road Map must be consider best practice target setting at national, precinct and local scales. The Kunming Montreal Agreement identifies the need to protect 30% of nature. If we apply this principle, a starting point for site planning should be protection of 30% open space /nature. The City of Melbourne has targeted 20% and the City of Hamilton in the New Zealand and the UK have targeted 10%.

Measuring and restoring nature

Address biodiversity baseline data, analysis and measurement to meet targets

The Road Map consultation mentioned the potential to develop an industry wide biodiversity measurement tool. A range of evidence based tools are necessary to support this work in addition to a measurement tool. Tools of relevance to Landscape Architects are as follows. Other tools are likely to be relevant for Planners and Urban Designers:

- **Site Analysis Report:** Currently there is a lack of mapping data to set baselines and understand the larger ecological picture, such as connectivity. Mapping and planning beyond the site is essential to take an ecosystem approach. Enabling easy industry wide access to better ecological site analysis data at project inception can inform development of evidence based biodiversity goals and objectives. A tool that brings together available geo spatial datasets could be developed to support ready access to this data. This would include: tree and understory cover, endangered flora and fauna, pre 1750 vegetation communities and remnant communities, soil profiles, flooding, building and road barriers, structural and functional connectivity, among others.

- **Planting plan benchmarking tool** that enables Landscape Architects to test the potential impact of different planting plans, that can be integrated into Landscape workflows though CAD, Grasshopper and Rhino. Dr Casey Visintin (RMIT) has an initial prototype of a tool that could be used as a starting point.

- **Biodiversity net gain tool:** Urban environments are complex novel systems. Measuring biodiversity value is extremely complex. A tool to understand whether a biodiversity net gain as been delivered on a site consistent with biodiversity net gain approaches in the UK is required.

  One central issue to resolve in building this tool is: '**What baseline to measure Nature Positive against**'. The UK nature positive frameworks, sets the baseline measure as being "the existing habitat against its ecological optimum state". This will be challenging to evaluate in Australia as it would have to be inferred from site geology, aspect and similar nearby sites.

  In addition, this tool must ensure that a Nature Positive outcome **does not reward prior biodiversity and environmental damage.** For example, if there are two identically sized greenfield sites adjacent each other. One is largely intact woodland and riparian ecosystems with high biodiversity value. The adjacent site #2

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has been fully cleared with very low biodiversity value. That clearing might have been 100years ago, or it might have been 1 year ago.

Almost anything done to site #2 will increase its net biodiversity gain over existing, while any development on site #1 is going to have detrimental biodiversity impacts.

Unless it's completely cleared for development, site #1 will always have a better biodiversity outcome than site #2 due to its pre-existing condition. But if just biodiversity net gain is measured then the degraded site #2 could come out ahead, effectively rewarding past ecological damage.

Supply chain and resource depletion and restoration issues

Supply chain issues are critical, and we will provide more comment in a separate submission on your supply chain document.

Address native forest logging as part of supply chain impacts.

We fully support the exclusion of native forest logging for the supply of building timber. David Lindenmayer's recent book, "The Forest Wars" identifies that only about 4% of timber biomass felling in native forests makes it to high value construction products like lumber and furniture. So there is effectively 96% waste/destruction to get the 4%. This is unsustainable.

Supply chain management is critical, including chain of custody. Timber must be FSC certified, with native forest products excluded. There are major flaws in certification programs for native timber in Australia. In August 2023, Sustainable Timber Tasmania (STT) felled one of the largest remaining trees on earth. A 5m diameter, 85m tall eucalypt. And it continues to do so. This is completely unsustainable and yet it is independently certified by Responsible wood. STT have failed to achieve FSC certification repeatedly due to ongoing logging of native forests. Any project that uses timber sourced from native forest logging in Australia should be considered a failure in terms a nature positive outcome and excluded from green star certification regardless of other project credentials.

Aboriginal and Torres Strait Islanders recognition and collaboration

See previous discussion under section 02.

Impacts of changing expectations over time

One of the significant challenges we face in the built environment is having sufficient funding to look after nature. It is much easier to obtain capital funding over recurrent funding. In many Local Government Areas budgets are stretched so thin that there is very little maintenance. This needs to be addressed. Looking after

landscapes and Caring for Country should be seen as an employment opportunity – particularly for Aboriginal and Torres Strait Islanders people, and not seen as a cost burden.

The recurrent funding is the bigger cost over time. By way of example, "The Ponds" in Sydney is a new suburb for 10,000 people. At the heart of this is an 88Ha parkland development comprising retained bushland, and re-established habitat, and community parks. The capital works programme was approximately $40million. The landscape management is about $1M per annum. So say over a 100yr life cycle, the maintenance costs will be approximately $100M in today's dollars or 2.5x the capital cost.

As landscapes grow it takes time for biodiversity to return. A large number of Australian birds and fauna use tree hollows for nesting and shelter. Given it takes a tree to be around 160yrs old before tree hollows start forming, Biodiversity gain may be a very slow process.

As part of this it is important that there is ongoing monitoring and evaluation to assess if the biodiversity gain is being achieved.

05- DEVELOPING A NATURE ROADMAP:

Biodiversity is hyper local, but also connected to surrounding ecosystems, as well as interdependent on global issues like climate change.

While climate change impacts can be defined effectively by a single worldwide measure of green-house gas emissions, biodiversity impacts are often hyper local. Biodiversity values are highly dependent on location, site specific geology, water, aspect, microclimate and climate.

For example, the Blue Gum diatreme forest occurs nowhere else on earth than at Hornsby Quarry, due to highly specific geology and site specific soil types. Any nature positive outcomes need to address this complex issue. These hyper local issues make "offsetting" impossible.

Proposed principles

The current principles provide a starting framework, but need to be substantially expanded and nuanced. It could benefit from additional principles such as:

- Identify and map. This should include biodiversity values on the site and for a set distance away beyond the site. You can't protect what you haven't mapped or measured.
- Site wide big picture: How does it fit into a broader planned network of biodiversity, protection, and connectivity?
- It should also address fragmentation and vulnerability as well, and not just connectivity.
- The GBCA could consider closer alignment with the conservation hierarchy as there should be restoration on sites not just externally.

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Set a clear vision that considers a sector transition versus a transformation and positions nature as a beneficiary group in city design.

We would like to see the Road Map set out a vision for the transformation of the Built Environment sector. Defining what a sector transition versus a transformation looks like could inform the development of a meaningful vision for sector wide change.

A transition may mean:

- A change in community, sector and institutional norms, rules, beliefs, and practices around understanding and valuing biodiverse nature.
- Additional power and resources placed in areas that support ecosystem health.
- Biodiversity initiatives enacted through long term budgets, leadership key performance indicators, community governance and action.
- Greater networking / integration around biodiversity between Governments, the Built Environment sector, community, and research institutions to inform opportunities.

A transformation would mean nature's needs are considered alongside human needs, not subservient to, which may result in a greater propensity to compromise on trade-off's currently borne by nature. This transformation may for example see large scale conservation areas emerge with nature's protection and regeneration prioritised over urban sprawl. It might have infill housing prioritised over green field housing, with infill housing designed to create healthy spaces for people and biodiverse nature.

Central to either change trajectory is the built environment sector embracing 'urban nature' as a beneficiary group, and seeking to deliver outcomes that foster successful co-existence for urban nature and people. At project commencement the needs of nature should be assessed alongside human needs to determine where decisions could be made that benefit humanity and nature; to deliver win-wins. This approach would require human / nature trade-offs to be actively identified and discussed so their impact can be moderated and the sectors perspective on what constitutes a trade-off evolved. Known trade-offs include attachment to a 'neat aesthetic', conflict between CPTED principles and biodiverse plantings, the desire to use 'tried and tested' plants that preclude indigenous species and the challenge of sourcing indigenous species for commercial projects.

Goals

Further development of these is required and tools and guidelines developed to demonstrate required action. AILA would be interested in assisting ongoing development.

Roles and responsibilities

The one page list of roles and responsibilities is very high level and simplified and again could benefit from more detail and clarity.

Government role is critical in setting policy and legislation. The need for centralised nature based mapping and data sets begs questions about how it is done, who does it, what are the guidelines and principles for mapping and so forth.

Under designers there is the need for substantially more than the three items shown here. The design role is far more than just incorporating designing with Country principles. See also our commentary on Aboriginal and Torres Strait Islanders inclusion. There are a range of critical systems thinking and mapping required. It Includes, everything from large scale mapping, the design of city / nature systems (green blue grids etc). This might cover:

- Large scale biodiversity mapping.
- Large scale (catchment wide / city wide) design, planning and strategy for biodiversity improvements and connectivity. Smaller sites can't just sit in isolation and need a big picture framework to sit within.
- Site planning and mapping. Biodiversity mapping, connectivity mapping and strategies, consolidation planning, green infrastructure and landscape architecture.

AILA is happy to assist in developing roles.

Tailored for different stages

As development work is project based each of these disciplines tend to work to a project lifecycle that is applied across different project types. For example, Landscape Architecture projects move through: Proposal/initiation, Definition, Analysis, Concept design, Detailed design, Construction, Hand over and Use.

Biodiversity requirements must be embedded in each of these project stages by public and private actors. At inception / proposal stage clients and consultants should include meaningful biodiversity metrics into the project brief linked to an early assessment of the ecological state and future use of the site. At site analysis stage a deeper ecological analysis must be conducted to understand what species do and could use the site and enable evidence based biodiversity goals and metrics to be defined. At concept design and detailed design stages tools must be available to help test and benchmark designs, such as connectivity analysis and benchmarking planting designs.

It is important to understand sector specific opportunities and constraints across their project lifecycle and by project type, for example Greenfields vs. infrastructure, vs. public realm vs. infill. This understanding would enable shared interests and key trade-offs between disciplines to be determined.

Targeted consultation with each key industry body that is brought together into the overarching Road Map could support the development of industry specific 'streams' that roll up to inform the overarching Road Map. This exercise could also be enabled through the systems analysis approach outlined above.

06 – ADDITIONAL RESOURCE MATERIAL.

AILA is in the process of developing an industry wide Biodiversity Positive Design Guide for Landscape Architects. The Road Map should seek to link to industry led responses and positions such as the AILA Guide.

In addition, the following documents contain key information of relevance for the Australian context and should be referenced:

- Government Architect NSW Biodiversity in Place is an excellent resource.

- WEF Nature Positive Guidelines https://www.weforum.org/publications/nature-positive-cities-guidelines-for-rehabilitating-nature-in-the-urban-era/

- O'Dea, M and Moggeridge B et al. 2022. AILA Climate positive design action plan for Australian Landscape Architects. This provides clear place based guidelines for planning and designing for climate and biodiversity[i]. See in particular pages 34-35, 70-71 and 84-87.

- SERA National Standards for restoration : https://www.seraustralasia.com/standards/home.html

- ACT Biodiversity Sensitive Urban Design Guide

- University of Melbourne Urban Ecology Playbook

07- ABOUT THE AUSTRALIAN INSTITUTE OF LANDSCAPE ARCHITECTS

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.

This response has been drafted by the national AILA Biodiversity Positive Design Working Group in partnership with the Climate Positive Committee.

The role of Landscape Architects in improving biodiversity.

Landscape Architects are the primary shapers of the landscape in urban and peri urban areas. The decisions made by Landscape Architects are pivotal to improving biodiversity.

Landscape Architects deliver a broad range of projects; from private gardens to public city wide Green Infrastructure (GI) initiatives. Our members work in rural and urban settings in universities, global consultancies, Local Government Councils and small to medium sized business.

Urban and peri urban areas are critical to protecting and regenerating indigenous biodiversity.

1. *Protecting threatened species*: Urban areas in Australia play a key role in supporting threatened species. 30% of EPBC listed threatened species occur in cities, approximately 370 species[ii].

2. *Human health and wellbeing*: Emerging research suggests that biodiverse places (as opposed to any green space) plays a key role in human health and wellbeing.

3. *Enabling nature connection*: A connection to nature has been linked to a higher propensity to make pro-environmental decisions in some people. Less connection can mean less care for what can't be seen, experienced and tangibly valued; especially as we know urban areas are most people's dominant experience of nature.

Future engagement

AILA looks forward discussing these considerations with GBCA and working actively with GBCA to progress the Road Map.

Sincerely,

Ben Stockwin
AILA CEO

Working Committees assisting in preparation of this submission:

AILA Biodiversity Positive Design Working Group and the AILA Climate Positive Design Committee

References

[i] O'Dea M, Moggridge B, James Kate, Bond S, Kearney Abi, McEwen Madeleine, Pfeiffer, Amy, Hawken S, Burke B. (2022) Australian Institute of Landscape Architects: Climate positive design action plan for Australian landscape architects.

[ii] https://nespurban.edu.au/platforms/threatened-species-map/