

Biodiversity Positive Design Position Statement



Australian Institute of
Landscape Architects

Introduction: the Biodiversity Crisis

Australia has a unique biodiversity that is essential for the health of human society and other life forms¹. Much of its flora and fauna is found nowhere else in the world and it is integral to the identity and economic sustainability of the country, its people, landscapes, and cities²⁻⁴. In August 2019, the Australian Institute of Landscape Architects (AILA) declared a Climate and Biodiversity Loss Emergency in recognition of the environmental threats that we are facing here in Australia and globally. In doing this AILA joins with professional institutes and organisations around the world to energetically, and actively, address the existential threats to our living planet.

In the last 200 years Australia has experienced the largest recorded decline in biodiversity of any continent⁵ due to driving forces such as habitat destruction, pollution, climate change, intensive resource use, land-use change and invasive species⁶. As much as 90% of the native vegetation in the eastern temperate and south-western temperate regions of Australia has been cleared for agriculture, transport, industry, cities, and suburbs making these biodiversity loss hotspots⁷. Half of Australia's nationally threatened animal species occur in areas planned for urban development, particularly greenfield development, which represents a serious threat to Australia's environmental health².

Landscape Architects interact with, enhance, and contribute to biodiversity through the landscapes they design, plan, and manage. As such, they are in a position to positively shape Australia's response to the biodiversity extinction crisis^{8,9}. Cities and settlements in Australia and globally are greening their urban fabric. However, in order to address the biodiversity extinction crisis, initiatives must explicitly target positive actions for biodiversity^{10,11}. Biodiversity Positive Design (BPD) is one such initiative.

Scope: Defining and Advocating for Biodiversity Positive Design

Biodiversity has been defined by the UN in its Convention on Biological Diversity as "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems"¹². Biodiversity occurs within sites, landscapes and regions of all scales and includes ecological communities, and ecological processes, whether naturally occurring or modified and managed by humans¹³. Recent studies suggest that the extinction crisis can be reversed through the careful creation, design, and long-term management of biodiverse cultural landscapes^{14,15}. Such an approach is essential as human modified landscapes dominate the planet^{16,17} and have been evolving for millennia^{18,19}.

Although there are calls for biodiversity sensitive design^{20,21} some scientists, designers and international organisations suggest a much more radical commitment through biodiversity positive design is needed to avert the biodiversity loss crisis²²⁻²⁵. Biodiversity positive design (BPD) involves a commitment to a net positive approach whereby landscapes and structures increase the total ecological space and carrying capacity for appropriate biodiverse habitats and ecosystems²². By developing biodiversity positive targets, measuring outcomes, and focusing explicitly on the more-than-human relationships of landscapes, society can address the present biodiversity loss emergency²⁶.

Urban areas present creative and innovative opportunities for biodiversity conservation and education, through increasing urban green space, implementing biophilic urban design, increasing the diversity of species, and establishing green corridors, networks, and linkages. Together these living



landscapes, which provide multiple ecosystem services to human communities and can serve as habitat for non-human communities, are known as green infrastructure²⁷⁻³².

Australia's green infrastructure is integral to tackling the major biodiversity threats facing Australia's cities, towns, and regional landscapes. Adopting green infrastructure frameworks for green spaces can help our cities better support ecosystem functions and improve functional urban biodiversity. Diverse, complex, imaginative, and connected green infrastructure character and structure are essential to stimulate and inspire human communities and their wellbeing, as well as support more-than-human life. Green infrastructure is more than parklands and conservation areas and includes our street trees and verges, vegetation corridors along rail lines and freeways, and extends into the private realm of our front gardens, backyards and even balconies and roofs³³⁻³⁶.

Framing: What can AILA, and Landscape Architects do?

AILA members, which include Registered Landscape Architects and allied professionals and trades, have the skills and knowledge to advise governments, the private sector, and communities how to implement green infrastructure to enhance our towns and cities and make them more biodiverse, healthier, more liveable, and productive. Such outcomes are the basis on which Australia's future ecological success and economic and societal health rests.

AILA and Landscape Architects are strategically placed to demonstrate leadership in bringing together global knowledge, local initiatives, and practical actions to embed and normalise biodiversity positive design in Australia's cities, settlements and landscapes^{37,38}.

This includes working with and developing links between Indigenous and non-indigenous knowledge systems and management practices which are essential for intelligently caring for vast tracts of Australia's landscapes and their biodiversity. Greater awareness and support of Country can help reconciliation and biodiversity³⁹.

AILA and Landscape Architects are also well placed to bring together the multitude of industries necessary to ensure that Green Infrastructure is successfully implemented and managed in perpetuity. These include the Nursery Industry, Ecologists, Landscape

Managers and Contractors, Educators and Government bodies.

Call to Action: AILA's position on Biodiversity

In light of the above statement AILA adopts the following eight positions to further biodiversity positive design across all aspects of its work.

1. AILA will **recognise** the importance of imaginative, diverse, spatially complex, and culturally significant biodiversity positive planting design in our landscapes. It will do this through its activities including competitions, awards, career development programs and other materials.
2. AILA will **advocate** for the design of biodiversity positive constructed environments that actively support and increase the populations of **endemic and culturally significant species**, especially endangered or threatened species.
3. AILA will develop biodiversity positive **principles** for landscape architecture, urban design, and planning with biodiversity positive outcomes as a key indicator of success for projects.
4. AILA will establish reporting **standards** and policies for best practice biodiversity positive projects. Such standards will support and aim to increase biodiversity across a range of rural and urban environments.
5. AILA will promote biodiversity positive design and assessment **tools** and measures for monitoring biodiversity in urban development.
6. AILA will assist business and local and state governments to establish **targets** for improving species abundance and diversity in developing strategic plans for rural, urban, and peri-urban development.
7. AILA will establish working institutional **relationships** with relevant national organisations such as the Ecological Society of Australia, as well as industry groups such as the Nursery and Garden Industry in order to better embed the latest knowledge on biodiversity in landscape architecture and urban design.
8. AILA will join with local, regional, national, and **global initiatives** in recognition that the biodiversity crisis is a shared challenge. AILA therefore recognises the Edinburgh Statement⁴⁰ and post 2020 global biodiversity framework^{41,42}.

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