

BiodiverCity: The integration of biodiversity with medium-density housing

By Katie Jenkins

[Download full thesis](#)



As cities continued to expand, our connection to biodiversity is reduced and our ecological resilience is placed under increasing pressure. Housing developments are replacing native flora and fauna ecosystems, with no consideration given to where these species will relocate. The fragmentation of our natural environment disconnects us from the natural landscape, pushing species further away from our central cities.

An empty lot located behind the Basin Reserve in Wellington, the capital city of Aotearoa New Zealand, provided an ideal opportunity to rethink how we design housing. Acting as a stepping-stone habitat, the site identifies a gap in Wellington's town belt that could support the integration of green infrastructure. By attending to the diverse ecosystem and demands of the land, housing became the second priority and encouraged a coexistence of species.

In order to provide a refined habitat, six species were studied as keystone species, ensuring targeted planting and design solutions could be beneficially integrated into the landscape's design and function. Reshaping this design approach to the built environment placed the ideas of landscape architects at the forefront of design decisions, creating a co-existence of humans



Te Herenga Waka Victoria
University of Wellington
School of Architecture
Master of Landscape Architecture
2024

SUPERVISORS

[Associate Professor Bruno Marques](#)
[Professor Maibritt Pedersen Zari](#)

SCHOLARSHIP

[People, Cities, Nature](#)
Masters Scholarship for
[Aotearoa BiodiverCity, 2023](#)

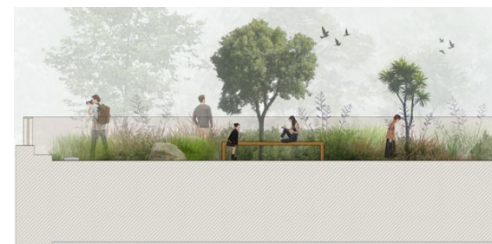
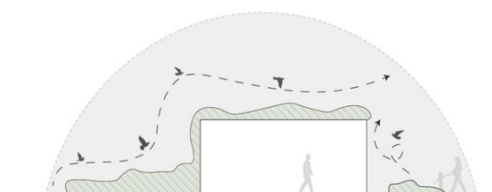
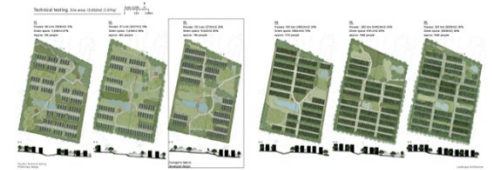
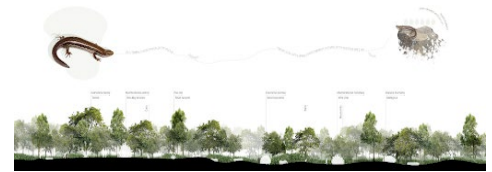


Aotearoa
BiodiverCity

and fauna within the urban framework.

The site was used to form a design-led research response to strengthen our relationship to the landscape and the significance of daily ecological connections that were ignored due to human pressure demands in Wellington.

The ambition behind this research was to test how housing could be formed as an addition to the landscape, adding to the green corridor between the Mt Victoria and Central Park sections of the town belt. This research attempted to think past the barriers that landscaping was an accessory but should be used to make homes more resilient while ensuring our native ecosystems could grow and adapt within the urban environment.



Key recommendations

- Prioritise landscape architecture as the primary driver of housing design, structuring development around ecological systems.
- Design medium-density housing as stepping-stone habitats to reconnect fragmented green networks.
- Integrate green infrastructure and site-specific strategies to support native biodiversity and keystone species.
- Strengthen human-nature relationships through everyday interaction with nature within housing developments.

