

The Living Pā for a better tomorrow

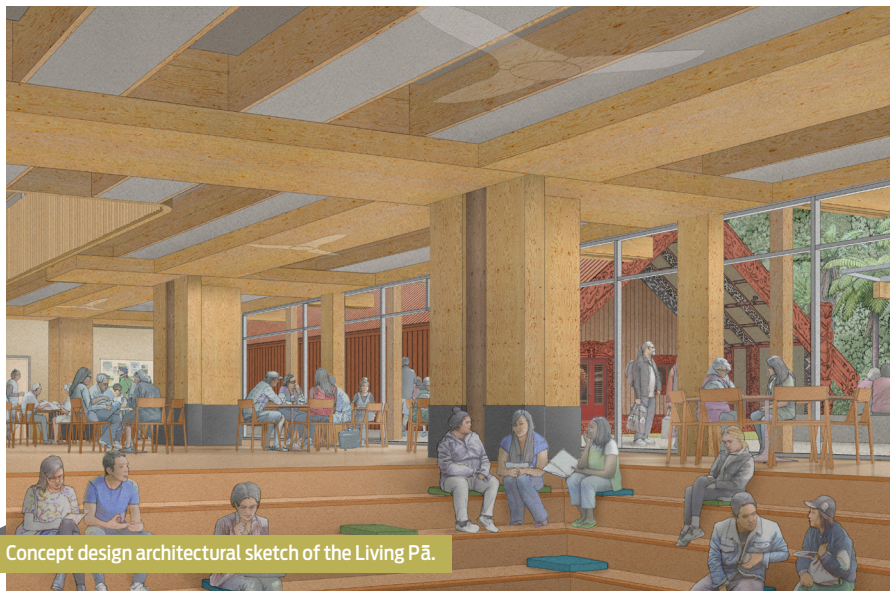
A world-leading project at Te Herenga Waka Victoria University of Wellington, the Living Pā, is the redevelopment of Te Herenga Waka Marae. Aligning mātauranga Māori and sustainability philosophies, the building takes on the Living Building Challenge.

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ESTABLISHING Te Herenga Waka Marae, and particularly the wharenui (meeting house) Te Tumu Herenga Waka, at Victoria University of Wellington was the vision of Sir Hirini Moko Mead (Ngāti Awa, Ngāti Tūwharetoa, Ngāi Tūhoe, Tūhourangi), Rangiahuta Ruka Broughton (Ngāti Ruanui, Ngā Rauru) and Dr Wiremu Parker (Ngāti Porou).

Connecting with our past to inform our future

They imagined a space that would be a symbol and extension of Māori values at the heart of a university campus. It is difficult to overstate how radical the wharenui's establishment was back in 1986. This original



Concept design architectural sketch of the Living Pā.

ILLUSTRATION – STANTIAL STUDIO



Concept design architectural sketch of the Living Pā, Kelburn Parade.

ILLUSTRATION – STANTIAL STUDIO

vision is as relevant today, and the University's current leadership, led by Professor Rawinia Higgins (Ngāi Tūhoe), is again conceiving another ambitious building – the Living Pā.

Realising our values through the way we build

Māori are facing massive challenges including the protection and nurturing of identity, language, values, culture and tikanga – the freedom to be Māori in our everyday lives is vital. At the same time, Māori learners, staff and wider community are becoming more diverse, as are the nature of the cultural and socio-economic factors impacting on their success and wellbeing.

Guided by Māori philosophies, we are a community actively testing ourselves on our true concern for what we are connected to – the land and the planet. Our young people are more conscious of social justice and environmental challenges and fearful

for their future and that of Papatūānuku (Mother Earth). The Living Pā represents our community's search for a future-focused building that talks to our values and tikanga, who we are and who we want to be.

Living buildings are talking buildings

The Living Future Institute's Living Building Challenge is a high-performance certification framework that is considered the built environment's most rigorous standard. Seeking to do good, as opposed to less harm, the framework asks the marketplace to reset its baselines. Premised on evolving evidence of what is possible for green buildings, it is underpinned by two principles:

- Projects must be holistic and address seven performance criteria, known as petals (see page 64).
- Project certification is based on actual rather than modelled or anticipated performance.

Ngāe whanonga hoahoa – our design principles

To address the Living Building Challenge criteria in an urban campus setting is no small feat. The framework demands a highly integrated bottom-up approach to all aspects of the project, including community engagement, the design's development, construction and operations. Through wānanga (the process of sharing) and other forums, we have co-created the following design principles for the Living Pā:

- Celebrating Te Tumu Herenga Waka – the wharenui is the University's iho (essence) and the space for hononga (relationships) to develop.
- Connecting people, the natural environment and the story of place.
- Being inspired by Māui – reminds us that, by extending the boundaries of knowledge, we can find solutions to support our environment and our communities. ➤



Te Tumu Herenga Waka (wharenui) at Te Herenga Waka Marae. The name of the marae is also the Māori name of the University and means the mooring place of canoes.

Building at the cutting edge

At 3,000 m² and 3 storeys, the building sets a human scale to the street and is ideally proportioned for innovation.

Structural engineers Dunning Thornton have designed a cross-laminated timber (CLT) structure featuring low-damage seismic technology that can be prefabricated off site and erected in a horizontal or vertical sequence. The project's timber will be sourced from iwi-owned sustainable forestry and manufactured entirely in New Zealand.

'The Living Pā will sequester more kgCO₂e - across modules A1-A5 - than its embodied carbon footprint,' says the project's architect, Ewan Brown of Tennent Brown Architects. 'This means that the building will capture and put into long-term storage more carbon than is emitted as CO₂ in the production of the materials used.'

'We believe we are attempting a first in New Zealand - the first commercial building, in an urban environment to be embodied carbon neutral in its own right.'

Designed by eCubed and Morphem environmental engineers, the three waters

system captures rainwater to meet 100% of potable water needs and greywater is recycled through planted filtration systems on the façade and streetscape planters, reused in vacuum flushing toilets and the surplus transferred to an adjacent building.

Stormwater is recycled on site, and natural overflow levels are restored to revitalise Kumutoto Stream via a rille that runs along

the entrance to the ātea (wharenui forecourt).

The entire building is a living lab, founded on passive design principles and utilising interactive technology. It will be an interactive environment that promotes translational, collaborative and multi-disciplinary research to complement the University's active research community and change building operational practices. ◀

Petals – performance criteria

- Place – telling the deep story of place and connecting with the unique characteristics of our community.
- Water – supplying 100% of our water needs, capturing and treating all water, especially wastewater, as a precious resource.
- Energy – meeting all our energy needs from our site.
- Health and happiness – creating a built environment that fosters human connectivity and provides all with easy access to nature.
- Materials – sequestering more CO₂ than our footprint and using only materials that are safe for all species.
- Equity – procuring goods and services to address inequity and foster socio-economic outcomes.
- Beauty – integrating features solely for the celebration of culture, spirit and place. ▶