Modernity, Materials, Materiality

Exploring the history of materiality and architecture in Australia and New Zealand

A symposium jointly presented by AASA and Unitec School of Architecture
Hosted by Auckland University of Technology

3 October 2025, Auckland

Convened by
Christoph Schnoor
Isabel Rousset

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October 2025

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Schedule

8.30	***Sign in***	
9.00	***Mihi whakatau and welcome***	
9.15 - 10.30	**Session 1: Materials on the move** **Chair: Isabel Rousset**	
9.15	John Ting	Melbourne's N4 Singapore Cottage: interrogating pan-colonial networks
9.30	Tobias Danielmeier	From Christchurch to Dunedin: material displacements and the uprooting of architecture
9.45	Elizabeth Musgrave	Pre-cut construction systems: John Dalton's 'budget houses' in Queensland
10.00	Christoph Schnoor	A timber house on a journey
10.15	Q&A	
10.30 - 11.00	***Morning tea***	
11.00 - 12.45	**Sessions 2 & 3: Material experiments** **Chair: Christoph Schnoor**	
11.00	Renee Miller-Yeaman	Modelling the steel house: displays of industry and nation-building
11.15	Jasper Ludewig et al.	Lean and cream: a material history of Australia's first prefabricated plywood house
11.30	Luciano Cardellicchio	Thin skins, thick histories: plywood and post-war architectural transformation
11.45	Q&A	
12.00	Nathan Pauletto & Sally Farrah	Prefabrication: Ian McKay and Partner's Guardian House for Canberra's NCDC (1968-69)
12.15	Min Hall	Christchurch Modern: the earth version
12.30	Q&A	
12.45 - 1.30	***Lunch***	
1.30	Memories of materiality: Graeme McConchie	Concrete blockwork: a post-office design for Martinborough
1.45 - 2.30	**Session 4: Concrete expressions** **Chair: Antony Moulis**	
1.45	Ann Cleary	Spare parts – Commonwealth Motors, Braddon and its 'brise soleil' frontispiece
2.00	Megan Rule	Telesis: a living laboratory for the modern family in 1947
2.15	Q&A	
2.30 - 3.30	**Session 5: Aesthetic innovations** **Chair: Ann Cleary**	
2.30	Catherine Howell	'Rose and plum and brown': J.A.V. Nisbet and the evolution of modernist materiality
2.45	Gina Hochstein & Annabel Pretty	Textures of innovation: crushed glass terrazzo, and digital trace: Tibor Donner Studio
3.00	Isabel Rousset	Concrete meets onyx: the ARCA showroom, 1999–2000
3.15	Q&A	
3.30	***Afternoon tea***	
4.00 - 5.00	**Session 6: Organic and toxic materiality** **Chair: Deborah Barnstone**	
4.00	Silvia Micheli & Antony Moulis	Conceptualising organic and inert materials: Robin Gibson's Queensland Art Gallery
4.15	Jennifer Ferng	Friable histories of asbestos at the Reserve Bank of Australia
4.30	Deborah Barnstone	Toxic modernity: shattering the fibro romance
4.45	Q&A and wrap-up	

Modernity, Materials, Materiality

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Amongst the many narratives about the advent of modern architecture, Sigfried Giedion advanced the line that it had primarily developed through the discovery and application of new materials. His *Bauen in Frankreich: Bauen mit Eisen. Bauen mit Eisenbeton*, apparently prompted directly by Le Corbusier, argues that iron and reinforced concrete buildings, which gave modern architecture essential materiality, had been developed predominantly in the 19th century in France:

> The 'new' architecture had its origins at the moment of industrial formation around 1830, at the moment of the transformation from hand work to industrial production.[1]

But what was the situation in New Zealand and Australia, in the 'New World'? Or perhaps rather: the 'very old world', when we think about the inhabitation of the Australian continent for c. 60,000 years by its Indigenous population? Māori and Aboriginal and Torres Strait Islander peoples built with materials of the earth and with timber, in manifold variations. The settlers built with what was available – again, earth, timber, often corrugated iron.

This symposium solicited from contributors abstracts that started with a single material in a single building as case study, from which to expand outward to consider more broadly the relationship between materiality and architecture in New Zealand and Australia.

We asked: How has the specific use of materials advanced buildings and construction in New Zealand and Australia over the past century? Modern architecture in New Zealand and Australia may have, as we

1. Sigfried Giedion, *Building in France. Building in Iron. Building in Ferroconcrete*, intr. Sokratis Georgiadis, transl. Duncan Berry (Los Angeles: Getty, 1995), 86.

have previously discussed in the 2024 AASA Symposium, a particular relationship with place. For example, Christchurch-based architect Paul Pascoe wrote in 1947:

> The conditions in this young country are wholly favourable to modern design. Our indigenous materials are suitable. Our earthquake risk demands studied structural systems which confirm the cantilever principle, the simple forms and other features of modern design.[2]

Does this connection with place rely on the use of specific – local – materials? What are the conditions that have shaped the use of a specific material? How have individual architects, builders or engineers advanced the use of unusual materials over the last c. 100 years? And how is all this reflected in modern buildings in New Zealand and Australia?

The Modernism Collaborative (Deborah Ascher Barnstone, Ann Cleary, Julie Collins, Stuart King, Antony Moulis, Isabel Rousset, and Christoph Schnoor) selected the abstracts presented here, which cover diverse materials (from ubiquitous ones like cement and bricks to more unique uses of soil-cement and crushed glass terrazzo). In five sessions, presenters will explore how these materials, in turn, operate in equally diverse environmental, economic, aesthetic, constructional, and political contexts.

The Collaborative would particularly like to thank Martha Liew, Yusef Patel and Anna Bulkeley for their invaluable help with the event's organisation.

Christoph Schnoor and Isabel Rousset
for the AASA Modernism Collaborative

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2. Paul Pascoe and Humphrey Hall, "The Modern House", *Landfall*, vol. 1, no. 2 (1947), 123.

Table of Contents

John Ting

University of Canberra

The N4 Singapore Cottage at Easey Street, Collingwood, Victoria. Photo by John Ting.

John Ting teaches at the University of Canberra, Australia. He researches prefabricated timber buildings in nineteenth century colonial Southeast Asia and Australia, as well as Malaysia's architectural and construction history and examines the influence of vernacular and migrant labour, migration and colonisation on the production of architecture.

Melbourne's N4 Singapore Cottage: interrogating pan-colonial networks

'N4' is a mid-nineteenth century Singapore-manufactured prefabricated timber house in Easey Street, Collingwood, in Melbourne. It was one of tens of thousands imported to the rapidly developing colony, which had shortages of housing and skilled labour. Prefabrication represented modernity, with buildings like London's 1851 cast iron and glass Crystal Palace demonstrating modern technology, materials, processes and speed of erection, facilitated by pan-colonial economic and transport networks. These technologies and processes were also used to prefabricate cast iron and timber buildings in Britain for export in knocked-down form to the colonies. However, the economic advantages of offshore production soon saw prefabricated timber houses made in the colonies like Singapore anwd flat-packed for export to other colonies like Australia. British colonial firms took advantage of abundant Southeast Asian timber and cheap skilled labour to mass-produce 'Singapore Cottages'. In many ways, the architecture of the Cottages is European due to modern systems, plan arrangement, scale and form, and the triumph of colonial modernity over global distances. However, considering only these aspects masks the full picture of who was involved in their design, procurement and construction. Using the N4 Singapore Cottage as a case study, this paper explores the agents of its production, from inception to erection at its current resting place.

This paper examines the contributions of the entrepreneurs, designers, materials suppliers, tradesmen, builders, transporters, resellers and users, and the relationships between them, to get a better picture of the story of the Singapore Cottages in Australia.

Tobias Danielmeier

Otago Polytechnic

Wellington Woollen Manufacturing Company Building (Former), Christchurch. Image courtesy of Phil Clark (2023).

Associate Professor Tobias Danielmeier is Head of School at the School of Architecture at Otago Polytechnic. His architectural practice and research investigate the interface between industrial architecture and spaces of performativity.

From Christchurch to Dunedin: material displacements and the uprooting of architecture

This paper repositions the *Wellington Woollen Manufacturing Company Building* (1919, William Henry Gummer) by relocating it from its Christchurch site to Dunedin – a move that deliberately unsettles its nominal link to Wellington. This act of translation is not simply geographic play but a provocation: an inquiry into architecture's potential to be re-situated and re-read beyond place-bound certainties.

Foregrounding materiality, the paper examines how the building's rational reinforced-concrete frame, modular planning, and extensive glazing negotiated the demands of programme and matter – a performance in the Kahn–Sullivan sense, where spatial programming and material properties co-produce architectural form. By aligning Gummer's building with Albert Kahn's industrial prototypes, the paper situates early New Zealand modernism within a wider industrial modernist discourse, not as derivative but as parallel experimentation.

Yet, the building's imagined relocation from Christchurch to Dunedin amplifies its conceptual role. Here, the building becomes a manifesto for non-place specific architecture: materially grounded yet geographically unmoored. By unhinging the "Wellington" factory from its already paradoxical identity, the paper renews Marc Augé's theory of the non-place, shifting it from the transience of woolsheds and storehouses (airports and malls) toward architecture itself – as an entity both rooted in material precision and capable of radical uprooting.

In this light, the *Wellington Woollen Manufacturing Company Building* serves less as a static case study than as an active catalyst: rethinking modernism in Aotearoa as an architecture of displacement, renewal, and conceptual mobility.

Elizabeth Musgrave

Bond University

Interior. Strugnell House, Pullenvale, 1971, John Dalton Architect and Associates. Photo credit: Richard Stringer. Image courtesy Sue Dalton.

Dr Elizabeth Musgrave FRAIA is an Associate Professor, Abedian School of Architecture, Bond University and the 2023 Australian Institute of Architects Dunbar Fellow, established in memory of distinguished architect and historian Professor Jennifer Taylor. Elizabeth holds an honorary position at the University of Queensland and is an architect registered to practice in Queensland.

Pre-cut construction systems: John Dalton's 'budget houses' in Queensland

Commissioned by Reverand John and Maureen Strugnell to design their home in Pullenvale, Brisbane, John Dalton Architect elected to use the Lockwood system, a proprietary engineered building system by the New Zealand based Lockwood Group, utilizing Western Red Cedar imported from Canada. How did the Lockwood system, designed in 1953 by émigré Dutchman Johannes La Grouw for New Zealand conditions, became a viable option in sub-tropical Brisbane, Australia, a region with its own timber framing tradition derived ironically from a discontinued pre-cut house system?

This paper describes a set of market forces – freer trade settings between New Zealand and Australia harnessed by a timber industry forced to re-structure by an inflationary business climate – and their intersection with local debate around an authentic modernism. By selecting Western Red Cedar in the context of this debate Dalton knowingly aligned himself with the work of West Coast Regionalist architects and maybe Auckland based Group Architects. Shared is an expression of tongue and groove boards. Intrinsic to pre-cut timber house systems, tongue and groove boards result from the mechanization of log cabin construction, and it is that most humble of settler structures that becomes an aesthetic reference.

Discussion around Dalton's Strugnell House (1971), and the earlier Salter House (1970) for Lockwood Systems' Brisbane franchise owner Peter Salter, provides an opportunity to trace through timber supply networks in Australian and New Zealand to describe how a material sourced in Canada and incorporated into a proprietary system delivered 'authentic' and environmentally tuned modernist homes in Brisbane.

Christoph Schnoor

Unitec

Ernst Plischke, House for Walter Gamerith at Attersee, Austria, 1934. Academy of Fine Arts, Vienna.

Professor Christoph Schnoor teaches history & theory of architecture and design studio at Unitec School of Architecture in Auckland. He is a past SAHANZ President (2015–17); his research focuses on colonial and indigenous architecture in the South Pacific, and on modernist architecture in Europe and New Zealand. Recent book publications include *Le Corbusier's Practical Aesthetic of the City* (Routledge, 2020) and *Ernst Plischke: Architekt zwischen den Welten* (Park Books, 2020).

A timber house on a journey

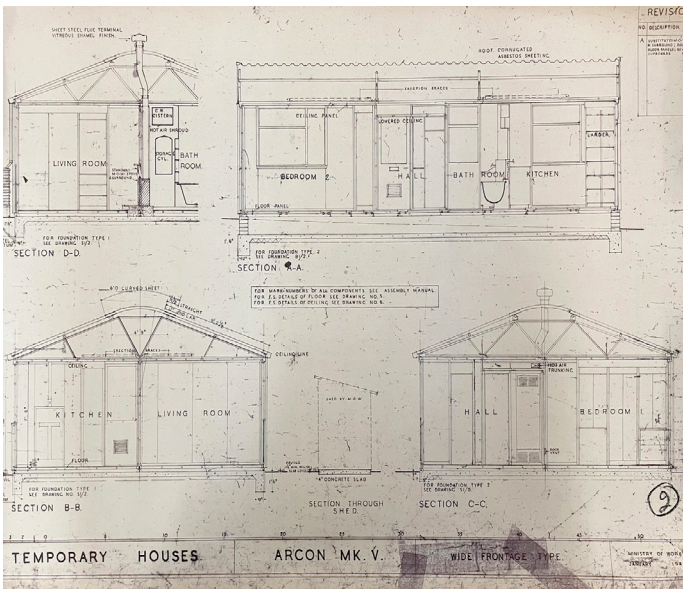
This paper is interested in transformation: how an idea of building was transported from one culture to another via a third culture. The vehicle of this transfer is the material, timber. And while this paper is about a building that was never built in New Zealand, it is nevertheless deeply connected with it.

In 1929, 26 year-old Ernst Plischke spent half a year in New York, working for well-known architect Ely-Jacques Kahn. Through Kahn, young Plischke acquired much knowledge on steel structures. At the same time, he curiously recorded the ubiquity of timber houses, something he was not used to from his home, Vienna. Interested in setting up a timber-building system, he discussed the idea with his father via letters. In the short run, nothing came of it. But in 1933, when Plischke received the commission for a studio and house by his friend, artist Walter Gamerith, he took up his ideas about timber construction and designed the Gamerith House above the lake Attersee in Austria as a timber structure. The studio/house was built in 1934 and received international awards. When Plischke had emigrated to New Zealand and was writing his book *Design and Living* (1947), he used the Attersee house as one suggestion for what a typical modern house in New Zealand might look like.

This paper follows the journey of a vague idea on timber houses via the realisation of – what might seem a case study – towards the proliferation of this idea as a standard for building in New Zealand, and thus asking about the core of an idea and its permutations.

Dr Renee Miller-Yeaman

University of Melbourne



The Arcon, Steel Framed House, 1945. Housing prototypes promoted by the British Ministry of Works and imported by the Australian Commonwealth Experimental Building Station for public exhibition in North Ryde, Sydney in 1946. The CEBS went on to make their own 'steel house' prototype in 1947, which would be on display in Centennial Park, Sydney. Image courtesy of The National Archives (UK), London.

Renee Miller-Yeaman's research looks at design histories of housing and institutions, examining the intersections between architecture, the nation-state and social histories. Renee completed her doctorate in architectural history and theory in 2023 and is currently the Melbourne Postdoctoral Fellow for the University of Melbourne's Faculty of Architecture, Building and Planning.

Modelling the steel house: displays of industry and nation-building

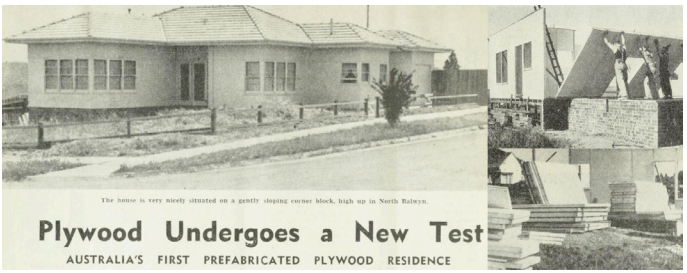
In 1946, four models of British prefabricated, detached houses arrived in Sydney – branded the Arcon, Airoh, Tarran, and Uni-Seco. Representing experiments in temporary factory housing promoted by the British Ministry of Works, these examples had been imported by the Australian Commonwealth Experimental Building Station (CEBS), which, in part, had shaped its objectives in line with its British counterpart. Each display house showcased a distinct material approach – steel, aluminium, concrete, and the Uni-Seco was timber-framed with asbestos cement sheeting.

The paper focuses on the Arcon, the steel-framed house, to examine the CEBS's involvement in trialing materials, promoting architectural science, and showcasing Australia's extraction industries aligned with national agendas undergirding postwar reconstruction. Companies such as Hawksley Constructions also imported prefabricated prototypes, which were subsequently purchased by the federal government for housing in Australia and its external territories.

Drawing on how scholars have discussed display home trajectories through the lens of gender and labour, the paper instead examines the display of steel's materiality to consider evolving export industries in the Australian post-war political context, increasingly influenced by the Cold War. The paper interrogates narratives of nation-building by exploring the CEBS's programme of research as it pertained to the construction capabilities of select materials and how it partnered with various industries. The steel industry's post-war expansion animated cultural representations of steel's use, and its materiality became a trope for visualising and marketing Commonwealth construction projects. The paper examines how this was leveraged and explored in proposals to address post-war housing shortages.

Maren Koehler, Jasper Ludewig & Anna Tweeddale

University of Sydney, University of Technology Sydney & University of Newcastle



Earl Robieson, "Plywood Undergoes a New Test: Australia's First Prefabricated Plywood Residence," *The Australian Home Beautiful: A Journal for the Home Builder* 24, no. 1 (1945): 18-21.

Maren Koehler is an Associate Lecturer in Architecture at the University of Sydney. Her research examines architecture in relation to historical processes of financialisation and the extraction of natural resources. She has held postdoctoral appointments at the Canadian Centre for Architecture in Montréal (CCA) and the Goethe University Frankfurt.

Jasper Ludewig is a historian of the built environment at UTS and Associate Editor at Architectural Theory Review. His research is concerned with how architecture participates in systems of colonial governance and ecological imperialism with an emphasis on Australasia and the Indo-Pacific.

Dr Anna Tweeddale is Senior Lecturer in Architecture at University of Newcastle. Her research examines the situated entanglements produced in materialising architecture through construction. She sees research-creation as inherently transdisciplinary and utilises a combination of traditional and praxis-based approaches. Dr Tweeddale sustains a multi-modal creative practice and is a registered architect (QLD).

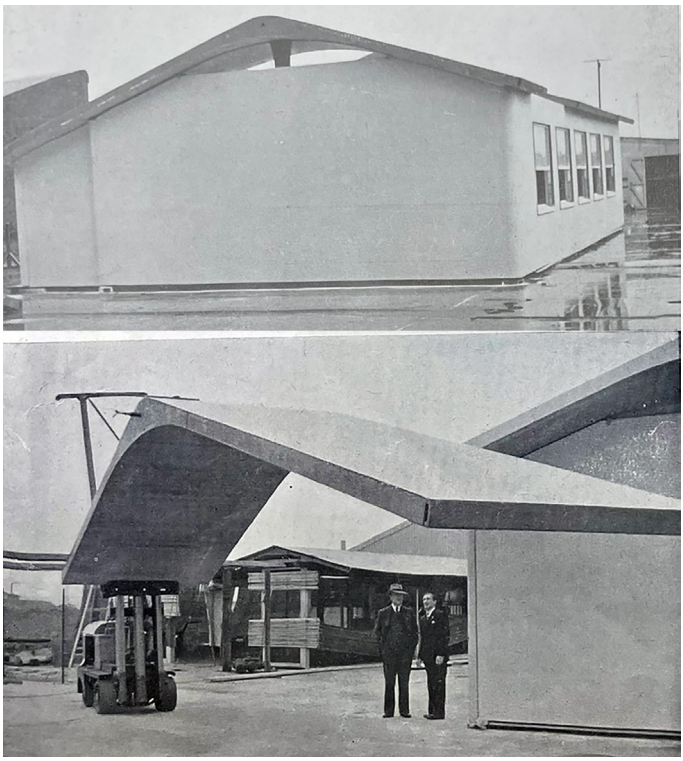
Lean and cream: a material history of Australia's first prefabricated plywood house

In 1944, over a period of just ten days, the residents of Naroo Street in the outer-Melbourne suburb of North Balwyn witnessed the assembly of Australia's first prefabricated plywood house. Manufactured by AV Jennings using plywood supplied by Römcke Pty. Ltd., the house was a market-led experiment in applying wartime technologies to the post-war housing shortage. All walls and floors employed a five-ply product bonded together using innovative glues derived from naval and aeronautical construction, rendering all external timber impervious to water. The prefabricated sections arrived on site complete with integrated studs, joists, conduits and pipes, and were locked together by hand using steel driving rods.

Compared with a weatherboard house of a similar size, plywood construction reduced material consumption by approximately 30 percent and labour cost by 1000 percent, in addition to dramatically condensed construction timeframes. Moreover, as *The Australian Home Beautiful* proclaimed in its editorial on the project, leaner and more efficient construction required no aesthetic compromise: "The first sight of [the] smooth, cream-painted walls and pleasant green-tiled roof dispels any idea that a pre-fabricated house must necessarily be dull to look at, limited in planning and lacking in any human quality."

The Australian plywood and forestry industries experienced transformative shifts in the decades prior to the commissioning, design, and construction of the Römcke house. This paper pursues a material history of the project, attending to the changing conditions of Australian plywood production and its architectural applications over the twentieth century as a way of linking modern construction methods with the forests upon which they depended.

Luciano Cardellicchio
University of New South Wales



Type R Demountable Classroom, NSW Government Architect's Office, c.1950. Source: NSW Department of Education Archives.

Dr Luciano Cardellicchio is a Senior Lecturer in Architecture at UNSW Sydney. His research focuses on construction innovation, material histories, and architectural heritage. He currently holds the 2025 Dr AM Hertzberg AO Fellowship at the State Library of NSW for his project on plywood and post-war Australian construction.

Thin skins, thick histories: plywood and post-war architectural transformation

This paper examines the trajectory of plywood as a transformative material in Australia's post-war architectural production landscape. Through a series of case studies, it explores how plywood – originally engineered for cabinetry and furniture – was reimagined to address the architectural and societal demands of a rapidly modernising nation, particularly through lightweight, prefabricated, and deployable buildings.

The development of plywood in Australia varied by state, reflecting the differing feasibility of local timbers. Queensland led early industrial adoption, importing the first veneer slicer and saw in 1907, while New South Wales emerged as the post-war centre of technical innovation. These case studies reveal a dual pathway of plywood application: on one hand, replacing traditional materials within conventional assemblies; on the other, enabling new structural and architectural systems – such as for the Type R demountable school classroom of 1950. The latter was significantly shaped by wartime technological advances, with innovations developed in the aeronautical sector transferred to the building industry and adapted for mass production.

Foregrounding key figures such as Ralph Symonds and institutions like the CSIRO, the paper investigates advances in bonding techniques, timber species selection, and scalable production tailored to Australian conditions. Drawing from trade journals, patents, and archival blueprints, it examines the intersection of material science, policy, and architectural pragmatism.

The paper ultimately argues that Australia once held a world-leading position in plywood innovation, yet also systematically documents a gradual erosion of national innovation capacity in manufacturing – raising critical questions about the long-term legacy and stewardship of industrial ingenuity in architectural production.

Nathan Pauletto & Sally Farrah

University of Canberra

Photo courtesy of ACT Heritage Library.

Nathan is a Sessional Academic and Research Assistant at the University of Canberra's (UC) School of Design and the Built Environment, teaching and working concurrently in practice for 8 years. He is assisting on the ACT Heritage Grant 'Canberra: a city by design', while working on education typologies and masterplans in practice at Hayball.

Sally is a Lecturer in Architecture at UC's School of Design and the Built Environment. She is currently leading the ACT Heritage Grant 'Canberra: a city by design' in collaboration with other Australian academics, researching the contributions of the NCDC from 1958-88, and working toward a book proposal.

Prefabrication: Ian McKay and Partner's Guardian House for Canberra's NCDC (1968-69)

Canberra as a planned city is often perceived as one with locally specific buildings: however, the conditions of efficiency, labour, and transport were central to erecting a capital under the direction of the National Capital Development Commission (NCDC). This paper reveals how innovations in timber construction from war experience, the NCDC's shared history with the Snowy Hydro Scheme (1949-74), and publications tracking the construction of the Sydney Opera House (1957-73), forged cultures and agents of timber and masonry prefabrication, in both housing and public buildings, in East Coast Australian post-war architecture.

National and local exchange is inscribed in Guardian House's materiality - sheathed, triangulated plywood prefabricated trusses sourced from Sydney resulted in the distinct floating canopy roof. Timber serves as both structure and skin, in contrast to surrounding development, with the plywood soffit wrapping from interior to exterior. This study reveals an alternative historiography to Australian architecture: highlighting transnational and national cultures of prefabrication; as well as post-war structural innovation outside of the Melbourne School. Guardian House is a rare example of highly awarded public building which received heritage listing after its demolition, which is analysed through re-drawing and modelling the project. Unearthing Guardian House reveals these conditions and networks of material cultures and agents involved in this building, and more broadly, the larger NCDC project's material innovation and locally responsive public architecture.

Min Hall

Unitec

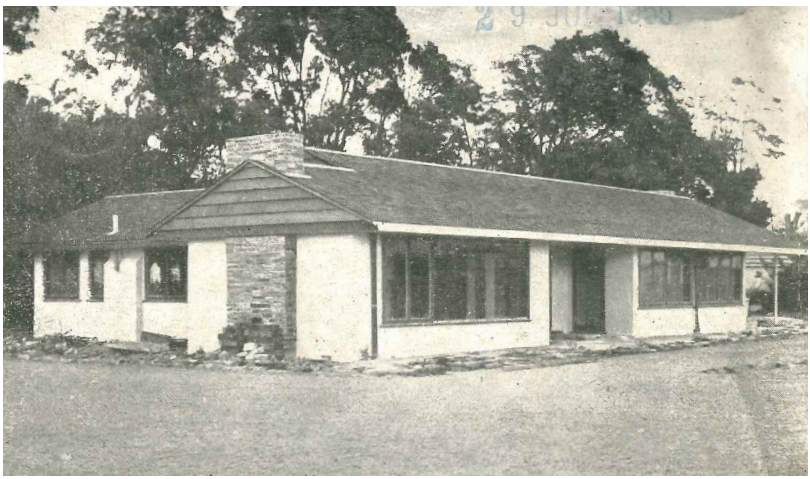


Photo by A. Anderson and published in NZ Forest and Bird, 1 February 1952 p.10. https://paperspast.natlib.govt.nz/periodicals/FORBI19520201.2.14.1.

Min Hall, registered architect and lecturer at Unitec School of Architecture, has had a lifelong interest in low carbon materials. Maybe it was the straw ceiling panels she slept under for her first five years or visits to Aunty Margot's 'mud hut' during the 1960s that account for this passion.

Christchurch Modern: the earth version

Earth-walled houses were commonplace in nineteenth-century Canterbury, but as technology developed, sawn timber became the predominant building material. During the first part of the twentieth century, indigenous forests were being cut down at an alarming rate to keep up with demand. Although exotic plantations of *pinus radiata* were maturing, their timber proved unsuitable for construction. Concerned about a looming environmental disaster, engineer P.J. (Pip) Alley, a lecturer at the Canterbury School of Engineering, began experimenting with soil-cement (earth with a pinch of cement), and presented his findings at the 1948 New Zealand Institute of Engineers' conference. Christchurch architect E.C.R. Anderson, who shared Alley's concern about the native forests, read the paper. Keen to try soil-cement for the construction of his own house, he contacted Alley: the result was the Anderson House, completed in 1948, and the first in Aotearoa to be built using soil-cement.

The Anderson House marked the beginning of a short-lived era in which earth building in Aotearoa seemed to be achieving mainstream status. Its potential was recognised by the government, who approved home loans and commissioned state rental houses built with earth. However, this stopped short when new timber treatments made *radiata* a viable structural material; the state supported the powerful timber industry, abandoning the fledgling earth building movement. Yet the Anderson House, and many other earthen houses of this period, have now been continuously occupied for over seventy years – living proof that earth is a viable material for the walls of modern houses in Aotearoa.

Graeme McConchie

Unitec

Graeme McConchie: Martinborough Post Office and Telephone Exchange
South Wairarapa, NZ, 1973. (GM photo 1980).

Graeme McConchie is an Auckland University School of Architecture graduate (1971). He undertook ten years in practice before commencing teaching in 1982 at Carrington Technical Institute, later renamed Unitec. Graeme was involved in the development of the BArch architecture degree, which commenced in 1994; and ten years later, with its transition to the current 3-year BAS, 2-year MArch (Prof) programmes. Graeme teaches across both programmes including MArch (Prof) student supervision.

Concrete blockwork: a post-office design for Martinborough

Having finished his BArch 1971 at Auckland University School of Architecture, Graeme McConchie took up work in NZ's Post-Office Architectural Department. There, he worked on a few generic Telephone Exchange and Line-Depot projects, but was also tasked to design post offices – in Hamilton, Dunedin, Queenstown; also Whitianga on the Coromandel peninsula, and Martinborough in southern Wairarapa.

Since McConchie resided in Wellington's Khandallah, he had first-hand experience of many houses that were designed by Ian Athfield and Roger Walker. Some of these were constructed from reinforced concrete blockwork. These projects became influential for McConchie's post office designs.

McConchie's Whitianga post office had a timbered structure, also making NZ vernacular formal and aesthetic references, as evident in many of Athfield and Walker's residential projects. The Martinborough Post Office and Telephone Exchange was designed using blockwork, with internally exposed timber roof structure, and south-faced glazing.

Ann Cleary
University of Canberra

Commonwealth Motors, Braddon 1965 Photographer Peter Ford : NAA: A1200,L50385.

Ann Cleary FRAIA is a Senior Lecturer in Architecture at the University of Canberra, with architectural practice background in local and international projects. Her teaching draws out an understanding of enduring value, explored in studio projects of urban cultural transformation, to bring forward propositions for the city's future thinking and creative dialogues.

Spare parts – Commonwealth Motors, Braddon and its 'brise soleil' frontispiece

Expressing the modernity and contemporary optimism of a designed city ideal, Canberra's rapidly growing Civic Centre of the 1960's was filled with exemplary modernist architecture. Commonwealth Motors, Braddon, by architect Robert G Warren, captured this progressive foresight in a bold inversion of the industrial workshop, integrating the unassuming humble Besser block, into an elevated cadence of breeze, elegance and openness.

Commonwealth Motors, was a unique exemplar of this projection of modernity, albeit even more intriguingly in its context behind the city centre – in the dirt service roads not yet set up with infrastructure, amidst the spare parts and repair trades of the light industrial back space. Commonly built with materials at hand in utilitarian construction efficiencies, the automotive workshop was usually more a collection of sheds down the rear service laneway. Instead, the concept realised for the Commonwealth Motors building, inverted the typology, lifting the workshop space to an upper level above the street accessed via a side ramp, up into an airy, spacious and light filled workspace where the mechanics could work in good natural light and ventilation, behind an enveloping 'brise soleil' screen of open breeze block. This elevated screen created a continuous and elegant measure of proportion and universal modernity, a free façade carefully calibrated in its basic breeze block tabulation on a grid of tapered concrete columns, to free up the ground plane for an open public new car sales space, a largo, that drew the prospective buyer in to the tempo of modernism.

Megan Rule

University of Auckland

Telesis front door entry view. Photo by Megan Rule, 2020.

Megan Rule is director of South Pacific Architecture, the Auckland-based practice she founded in 2000. Her work is published in *The Phaidon Atlas of 21st Century World Architecture* (Phaidon: 2008) and *Home: New Directions in World Architecture and Design* (HOW Books, 2006). Megan co-founded Architecture+Women New Zealand in 2011, to profile women in architecture. Her current PhD research at the University of Auckland is focused on early female architects emanating from Southland and Otago and the ways in which their work has adapted to the climate and the environment.

Telesis: a living laboratory for the modern family in 1947

Architect Monica Barham, with her husband architect Cecil Barham, designed and built their own first home Telesis, near Invercargill, in 1947. Telesis encapsulated their shared interest in planned progress and the tutelage at Taliesin of Frank Lloyd Wright. How did this little-known treasure, their own 'terraced residential studio', provide a living and material laboratory for modern family life?

This paper explores the materiality of the house. Limestone deposits near railways or ports such as Milburn in Otago proved ideal for concrete cement manufacture. By 1938, Firth concrete introduced mass production of economical moulded concrete blocks. The Barhams' modern house embraced design experimentation in concrete, with adaptation to the nature of the climate, economy and available resources.

In the absence of original or even later architectural drawings, the paper uses the material fabric to reconstruct the original floor plan assisted by family and public records. The investigation focuses on the architects' pragmatic approaches to incorporating concrete within economic constraints and developments.

The paper shows that the Barham's work has materially adjusted to the environment and to the climate through the deployment of modern era concrete, for example with its durability, seismic, thermal, fire or acoustic merits. How might it be relevant to the housing challenges we face today at a time when New Zealand demands faster delivery of a better and more affordable standard of housing?

Catherine Howell
University of South Australia

View of Nisbet House, Darling Point, Sydney (Russell Roberts, "A modern house makes most of site and sun", *The Home: An Australian Quarterly*, 3 January 1939, 58).

Dr Catherine Howell (SAHANZ, ICOMOS Assoc.) is a postgraduate student in Urban and Regional Planning at the University of South Australia, specialising in heritage and environmental planning. Her research interests include: émigré architectures, the history of interiors, and industrial design in South Australia.

‘Rose and plum and brown’: J.A.V. Nisbet and the evolution of modernist materiality

This presentation explores the rich interrelationships that led to the creation, in 1938, of a local variant of Coates and Pleydell-Bouverie’s Sunspan house design in the suburb of Darling Point, Sydney. The house’s architect was John Athelstan Victor Nisbet (B.Arch., FRAIA; 1901-1971), scion of a prominent Queensland family who enjoyed a long, moderately successful career in Sydney, including working in partnership with Kenneth McConnel, John Rains, and John Suttor.

Nisbet’s wartime Naval service, his social ease, and his education at the University of Sydney placed him at the centre of a circle whose members included Raymond McGrath, Heather Sutherland, and Malcolm Moir. From 1929-1933, Nisbet travelled and worked in Europe and England, and after his return, worked with Moir in Sydney and later, with Moir & Sutherland in Canberra. Nisbet had an interest in materials and, in his design work, pursued a pragmatic, workaday modernism that sought to balance design aspiration with practicality.

The Y-shaped plan of Nisbet’s interwar, functionalist home at Yarranabbe Road showcases robust, textured pink brick as a facing material, learning from Nisbet’s work with Moir & Sutherland. A contemporary press feature described the brick’s colour as revealing “soft hues of rose and plum and brown” (Roberts 1939, 58). Adapting the innovative plan and double-aspect glazing characteristic of Sunspan designs, Nisbet’s use of brick at Nisbet House, like his use of colour in its interiors, alters the white-walled aesthetic of Sunspan homes and adds a strongly Australian flavour, responding to its harbourside setting.

Gina Hochstein and Annabel Pretty

Unitec

Tibor Donner's personal studio, with cast in-situ crushed glass terrazzo under-floor and side panels. LiDAR image 25JUNE2025.

Gina Hochstein, lecturer at Unitec School of Architecture, is completing a PhD titled *Dwelling in Jewellery*. Her research explores women, jewellery, and modernist architecture. With a background in heritage conservation and sustainability education, her work expands architectural discourse through material culture and gender. She is a current member of the SAHANZ Committee.

Dr Annabel Pretty is Discipline Leader for the Master of Architecture Professional (MArch Prof.) and a Senior Lecturer at Unitec School of Architecture. Supervision of Master's theses includes topics in art, architecture, and social architecture. Research explores the intersections of architecture, photographic representation, and Generative AI, focusing on mediation, reproduction, and cultural reception.

Textures of innovation: crushed glass terrazzo, and digital trace: Tibor Donner Studio

This paper examines the intersection of materiality, site-specificity, and digital technology through a close study of Tibor Donner's personal studio, located on the grounds of the iconic modernist Donner House in Titirangi. Central to this investigation is the use of crushed glass terrazzo – sourced from the waste of the Crown Lynn ceramics factory – incorporated into the studio's floor plate and wall system. The material becomes a medium through which cultural and ecological narratives are embedded in the built environment, grounding the architectural work in both place and history.

By attending to the phenomenological dimension of architectural experience, this paper considers how the texture, reflectivity, and tactility of terrazzo enhance the sensory encounter with the space. These material qualities not only articulate an ethos of reuse and locality but also engage the body and senses in ways that cultivate a deeper atmospheric and emotional resonance with the studio. Here, architecture is understood not merely as form or function but as a lived experience, shaped by the interplay of light, material, and movement.

The paper also considers how emerging technologies, such as LiDAR, and structured-light 3D scanning, facilitate new methods of documenting and understanding unconventional building products and practices across the past century. In revealing how digital tools can enhance our understanding of craft, surface, and architectural heritage, it examines the spatial and textural qualities of a modernist-designed studio, offering insights into how non-traditional materials were demonstrated in response to resource constraints, environmental considerations, and local identity.

Isabel Rousset
University of Technology Sydney

Courtyard of ARCA Showroom. From Harry Seidler & Associates.

Isabel Rousset is an architectural historian and Research Fellow at the University of Technology Sydney. Her research addresses historical cross-sections between architecture and social politics and has been published in the *Journal of Architecture*, *Architectural Histories*, and *JSAH*. Her book *The Architecture of Social Reform* was published by Manchester University Press in 2022.

Concrete meets onyx: the ARCA showroom, 1999–2000

As recently demonstrated in the book *Italy/Australia: Postmodern Architecture in Translation*, Italy held a high status in Australian architectural culture throughout the 1970s and 80s. Yet, beyond the sphere of postmodern theory, the transferal of building expertise from Italy to Australia, particularly through migration, remains understudied. As large-scale importers of stone products in Australia, Italian migrants played a decisive role in giving expression to the new exuberance of the nation's cultural identity from the 1980s onwards.

The careers of Vincenzo and Angela La Cava stand out. Migrating from Italy to Perth in the 1950s, they established Interceramics in 1973, which served as one of the first outlets for Italian ceramic tiles in Western Australia. As the wealth of the state grew, the La Cavas exploited personal contacts to win major building contracts as material suppliers. Upon a handshake with Laurie Connell, in 1983 they won a contract to provide the stonework for the Burswood Casino, helping them establish ARCA, which specialized in the importation, fabrication, and installation of marble, granite, and limestone. Standing as an extravagant gem in the starkly industrial suburb of Osbourne Park and described by Angela as a "folly," the ARCA Showroom was finished in collaboration with Harry Seidler in 2000 to showcase stone manufactured at the ARCA factory. In this paper, I use the ARCA Showroom not just to highlight the transnational nature of material histories of Australia, but also to identify an imagined symbiosis between architect, material supplier, and client that encapsulates the history of late modernism in Australia.

Silvia Micheli and Antony Moulis

University of Queensland

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Silvia Micheli (BArch Politecnico di Milano; PhD, IUAV, Venice) is Senior Lecturer, School of Architecture, Design and Planning, at the University of Queensland and works across design and history of architecture. She is a published author in contemporary architectural studies and is co-curator of the forthcoming exhibition on the work of AIA gold medallist Enrico Taglietti, in partnership with the Canberra Museum and Gallery (CMAG).

Antony Moulis is Associate Professor, School of Architecture, Design and Planning at the University of Queensland. He is a designer and published author specializing in global knowledge transfer in modern architecture. Amongst his recent books are the co-authored *John Andrews: Architect of Uncommon Sense* (2023) and the sole-authored *Le Corbusier in the Antipodes: Art, Architecture and Urbanism* (2021).

Conceptualising organic and inert materials: Robin Gibson's Queensland Art Gallery

In 1971, the Queensland government appointed a Steering Committee to define requirements for a new Queensland Art Gallery – an act of cultural statecraft that set clear design and construction criteria. Rooted in modernist ideals, the report called for "a building of its time," using the best available materials and techniques within budget.

Architect Robin Gibson, appointed in 1972, selected concrete as the primary material, aligning the project with late modernist discourse and the broader brutalist debates. Yet the building's local character emerged through its material composition: the concrete mix incorporated white sand from Minjerribah (Stradbroke Island) and coarse aggregates from Warra (Pine River), grounding it in the landscape of southeast Queensland.

A defining innovation was the pairing of concrete with plant life – Gibson's distinctive response to Brisbane's subtropical environment. In collaboration with landscape architect Barbara van den Broek, a specialised planting scheme was developed, including an innovative concrete trough 'spillage planting' system. This integration of organic and inert materials marked a new direction in Australian architectural practice.

This paper explores the technical and conceptual dimensions of that material strategy, focusing on the collaborative work of architects, engineers, and landscape consultants. Situating the gallery within the environmental discourses of the late 1960s and early 1970s, it argues that the Queensland Art Gallery prefigured contemporary environmentally responsive architecture. It repositions the building as a significant regional example of late modern architecture engaged with then emerging ecological thinking.

Jennifer Ferng
University of Sydney

Detailed view of friable asbestos.

Jennifer Ferng is Senior Lecturer in Architecture and B.Des.Arch (Honours) M.Arch Program Director at the University of Sydney. Her research examines how environmental and humanitarian histories from the eighteenth century onwards have impacted contemporary issues related to the climate crisis and forced displacement of migrants.

Friable histories of asbestos at the Reserve Bank of Australia

Suffering from cracks and water leakage, Reserve Bank of Australia's head office in Martin Place, Sydney is undergoing a $1 billion dollar renovation (2024) to remove asbestos, which has been discovered throughout its structure. The RBA's level of asbestos, almost four to five times higher than in comparable buildings, complicates what is already an expensive operation to make the building safe and habitable again. Experts have shared that to remove the asbestos, the building will be stripped back to its original steel frame. Initially designed in 1959 by the Commonwealth Department of Works, the building was completed in 1964 with 20 floors, emphasising transparency throughout its fenestration, curtain wall, and foyer. But its "failing infrastructure" and "non-compliance" with safety standards mandated that RBA staff upgrade to new facilities or move out.

This paper takes the premise of the RBA's renovation as an invitation to explore how toxic histories of building materials such as asbestos, lead paint among others, propose a new type of "post-human" environment in Australia, one defined by hazards to human health and pollution of urban spaces. Asbestos, as this paper argues, represents a key historical actor prompting architects, planners, and policymakers to pay closer attention to how supply chains of materials operate and the lasting impact of materials on the health of residents. Such a post-human perspective encourages us to consider how toxic materials have been rationalised through economic efficiency, less so by environmental impact or social welfare.

Deborah Ascher Barnstone
University of Sydney

Robin Boyd, *House of Tomorrow*, at the 1949 Modern Home Exhibition in Melbourne – view to the interior through the plate glass façade or "window wall" as Boyd called it.

Deborah Ascher Barnstone is Professor and Head of Architecture at The University of Sydney. She holds a PhD in architectural history and theory from the Technical University, Delft; a M. Arch degree from Columbia University; and a B. A. degree cum laude with high honours from Barnard College. She is a licensed architect as well as an historian. Barnstone's primary research interests are in interrogating the origins of modernism and exploring the relationships between art, architecture, and culture more broadly. Her recent monograph *The Color of Modernism* was published in 2022.

Toxic modernity: shattering the fibro romance

The fibro cottage has a special place in the Australian imaginary conjuring the optimistic postwar housing boom and cozy beachside weekenders; yet the reality is dark. Although the asbestos' dangers were already known to the ancient Greeks, and the fatal disease asbestosis had been identified by 1924, Australia witnessed an unprecedented asbestos-fibre cement building boom after 1945. In NSW alone, over 97,000 fibro homes were constructed between 1945 and 1954.

Fibro was widely adopted for contractor specials alongside designs by noted architects, like Arthur Baldwinson, Robin Boyd, and Roy Grounds. As the country raced to provide homes for returning soldiers and a flood of new immigrants, a raft of schemes to fund housing construction like the War Service Homes and Project Homes, embraced fibro. Typically, a timber frame was clad in asbestos cement sheeting supplied by companies like Durasbestos. Designs were promoted for their modern aesthetics and functional planning combined with new materials. Low cost was the main selling point. Although, fibro was also associated with an improved quality of life since construction savings allowed homeowners to purchase expensive modern conveniences – like televisions, washing machines and refrigerators. Fibro was seen 'as modern as tomorrow' – the ideal material for contemporary houses.

Robin Boyd's 1949 *House of Tomorrow* epitomized the fibro dream. Designed for the Red Cross Modern Home Exhibition and constructed in only 10 days, it was hailed as "a gallery of everyday modern Australian design." There was good evidence that asbestos was carcinogenic by the 1950s yet it took decades for most countries to adopt proper regulation. On the one hand, the material helped provide desperately needed housing to tens of thousands of Australians; on the other hand, at what price? Today, it is hard to square the utopian associations fibro construction had in the 1940s and 1950s with its toxic properties and the devastating death toll former workers in the asbestos industry have suffered.


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