



Hall Philips & Wilson, Project Architect, Ray Smith, Townsville Courts of Law, 1974. © Philip Smith Conwell, interior photographed by Richard Sringer.

## **“Our Cinderella North”<sup>1</sup>** **The Modern Diaspora’s long reach into** **Australia’s tropical zones**

BY ELIZABETH MUSGRAVE

Modernism in tropical in Australia is testimony to the tenacity and optimism of individuals and communities in the vast, “empty north” of the continent, but also reflects a young nation’s strategic and commercial need to develop and make viable this region in the years following WWII. As practitioners, academics and public servants, the Modern Diaspora, introduced and promoted Modernism as a climate responsive solution to building in the tropics. The result is work that is inventive, frequently of modest material means and expressive of its tropical circumstances.

Émigré architects from Continental Europe were not attracted to settle in the vast, and from a European settler perspective, “empty north” of Australia preferring instead the cosmopolitan cities of Sydney and Melbourne in the southern states.<sup>2</sup> Equally, the tropical north is not where the young nation chose to erect iconic works representative of its emerging identity. It is, however, where to find a Modern architecture often of very modest means, often original in its response to climate and materials scarcity, aesthetically and structurally inventive. It is through commissions from forward thinking individuals and communities and as conduits, advocating for and promoting modern ways of thinking and working that émigré and migrant architects, usually located in cities to the south of the Tropic of Capricorn, impacted architecture in the tropical north.

The first and most notable of these individuals was Karl Langer (1903-1969), the Viennese émigré who arrived in Brisbane, Queensland in 1939, and was pivotal in the development of tropical Modernism. Also important is Ukrainian, Roman Pavlyshyn (1922-2019), who arrived in 1949 and, as Director of the Queensland Department of Public Works, commissioned public works in north Queensland. Most influential is Harry Seidler (1923-2006) who was educated at Harvard by émigré architects from Continental Europe and who after travelling to Australia to design his parents’ house decided to stay. The list might also include a number of graduates of Australian programs who left to further their education overseas, and who fell into the orbit of the Modern Diaspora elsewhere. Into this category fits Balwant Singh Saini (1930-), who worked in the office of Le Corbusier in Chandigarh and after returning to Australia made influential contributions as an educator and researcher.

### **North of the Tropic of Capricorn**

Various referred to in government reports as the “Forgotten North”, the “Neglected North” and “Our Cinderella North”, tropical Australia comprises a vast area across several state jurisdictions including the northern portions of the states of Queensland and Western Australia and the Northern Territory, and is administered from cities located in the south; north Queensland from Brisbane, north Western Australia from Perth and the Northern Territory, which until 1978 when the powers of self-government were transferred, was administered by bureaucrats located in Canberra. Remoteness and the prioritizing of projects in more populous areas meant that government funding for projects in the north was limited.

The tropical region is not homogenous in climate or character.<sup>3</sup> In the post-war era, the socially and culturally segregated north was characterized by a higher proportion of Aboriginal and Torres Strait Islander peoples than southern states, with Pacific Islander workers in Queensland centers, the descendants of the Macassan traders in Darwin and Broome and established Chinese communities throughout.<sup>4</sup> Apart from the Top End of the Northern Territory (Darwin and Katherine) and the Queensland coastline east of the Great Dividing Range, most of tropical Australia is arid and sparsely populated, beset over the period of European colonization by problems of distance and isolation. The most densely settled coastline of Queensland is conditioned by hot humid and warm humid climates, whilst the Top End is a tropical savannah with marked Wet and Dry seasons. Narratives of Australian mid-century tropical architecture overlook the Top End and are illustrated with work located in the narrow strip of Queensland’s populated coastline; much is actually located in Brisbane, well south of the Tropic of Capricorn. Narratives also under-represent the

unusual circumstances of time and place that condition Modern architecture in the tropical zones of Australia.

This essay outlines the manner by which Modern Diaspora intersects with the nation's strategic and commercial activities in the north, albeit operating from centers far to the south of the tropics themselves, and influences the reception of Modernism.

### **Karl Langer & Roman Pavlyshyn in Brisbane: Modernism in Australia's hot humid tropics**

The most influential European émigré architect to settle in the city of Brisbane, was Karl Langer, PhD (Vienna), who arrived with his wife, Gertrude Langer (1908-1984), also PhD (Vienna), in 1939. Karl Langer quickly secured contractual appointments in design, town planning and landscape architecture at the University of Queensland. In 1942 Karl Langer's credentials were recognized through his appointment to a Queensland Government committee tasked to address issues of housing in the hot humid and arid tropics. The committee, comprising government department heads, academics and practitioners in the fields of physiology, medicine, engineering and architecture,<sup>5</sup> reflected the government's anxiety to increase the population of, and make economically viable, north Queensland but its 1943 "Report on Tropical Housing" was never tabled.<sup>6</sup> Instead in 1944, Karl Langer published *Sub-tropical Housing* in which he identified "the avoidance of fatigue and the elimination of glare" as being primary objectives of design.<sup>7</sup> Whilst the initial focus of research had been housing in northern Queensland, Karl Langer reframed the committee's findings to address sub-tropical housing more generally. The impact on Queensland architectural trajectory was profound.

*Sub-tropical Housing* contained a number of plates illustrating arrangements for slab-on ground, pavilion style houses and an entire town, the template for the unrealized Mackay Town Plan of 1945. At the end of WWII, resources were not available to implement visionary proposals, and of plans commissioned for Ingham, Toowoomba, Yeppoon, Kingaroy and Mt Isa, the Kingaroy Plan alone was only partially realized. Karl Langer, renowned for Lennon's Hotel, Broadbeach (1957, demolished), south of Brisbane, realized few buildings in north Queensland; the Sugar Institute and Director's residence in Mackay (1953) were built. In time he was commissioned by Bundaberg's progressive Lutheran congregation to design the impressive St John's Lutheran Church (1960). However, *Sub-tropical Housing* underpinned local debate about climate responsive architecture for decades and Karl Langer's influence is clearly evident in many climate responsive projects by graduates of his teaching, built not only in the tropical north, but also in sub-tropical regions in Queensland's south.

The post post-war period saw an increased migration of architects to Brisbane, many to work in the Queensland Department of Public Works, the bureaucratic entity charged with construction projects across the state. Migrant architects joining the Department in the 1950s included Heinz Jacobson from Poland, Peter Prystupa (1920-1989) from the Ukraine and John (AJ) Wheeler and John Hitch

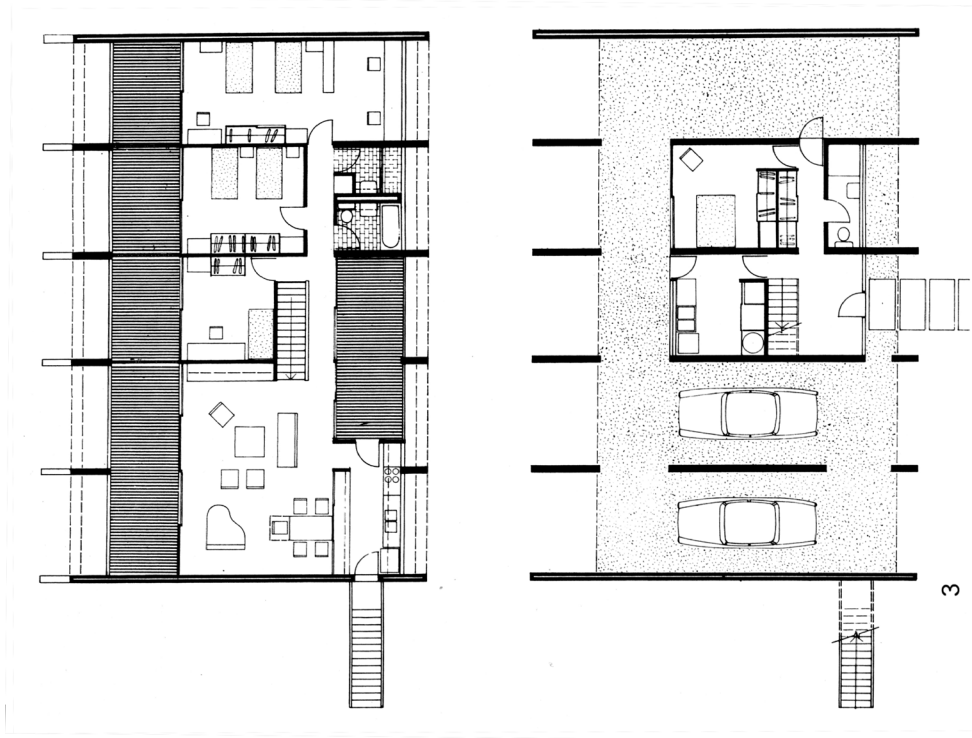
(1915-2010) from the UK. Also arriving from the UK in the 1950s was Maurice Hurst (1929-2003) and John Morton, both of whom joined the practice, Lund Hutton Newell Black & Paulsen, where they immediately impacted the work of this otherwise conservative firm.<sup>8</sup>

Possibly the émigré to Brisbane to have the most impact on architecture in the tropical north in the post-war era was the Ukrainian-born, Viennese educated, Roman Pavlyshyn, who arrived in 1948. After working with Karl Langer and the Commonwealth, he joined the Queensland Department of Public Works in 1958, where after completing two exceptional design proposals for unrealized projects in Brisbane he was appointed to the position of Chief Architect.<sup>9</sup> But it was in his subsequent role, as Director of Building, that he had a more profound impact, transforming the staid department but also changing the character of Queensland through his patronage of young architects. Projects completed by architects in north Queensland in association with the Department, including schools, institutes of advanced education and teachers training colleges were invariably modern and informed by climate design.<sup>10</sup>

The establishment in 1957 of University College, Townsville, a regional campus of the University of Queensland (since 1970, James Cook University) confirmed Townsville as the cultural and educational hub of North Queensland. In 1963 James Birrell (1928-2019) was commissioned in association with Gordon Stephenson (1908-1997) to provide a Master Plan.<sup>11</sup> James Birrell, a graduate the University of Melbourne who had travelled to North America on a scholarship to study the town planning schemes of Walter Burley Griffin, was also commissioned to design the residential colleges and the Library and Humanities buildings for the new campus. As Chief Architect in the Brisbane City Council Works and later as University of Queensland Architect he had already completed a number of significant buildings in sub-tropical Brisbane, expressive of tropicality, including Centenary Pool (1959), which clearly references the work of Breuer. The most remarkable of James Birrell's buildings in Townsville is the Library opened 1968, now known as the Eddie Koiki Mabo Library. The Library is a brutalist, three-storey off-form concrete building with an over-sailing steel framed roof inspired by Breuer's Whitney Museum of American Art in New York, but also by Le Corbusier's Legislative Assembly High Court in Chandigarh and closer to home, by Roy Ground's National Gallery in Melbourne.<sup>12</sup> Another project illustrative of the maturing of a Queensland tropical architecture is the Townsville Court of Law Edmund Sheppard Building by Hall Philips & Wilson in association with Queensland Department of Works.<sup>13</sup> Completed in 1975, it demonstrates the influence of Metabolism on its design architect, Ray Smith, after his visit to Osaka Expo in 1970.<sup>14</sup>

There are many more remarkable instances of tropical Modernism in North Queensland. However, such is the persuasiveness of the diaspora's influence that a climate-responsive architecture expressive of tropicality is found not only in north Queensland but throughout the state.





Sub-tropical Housing.

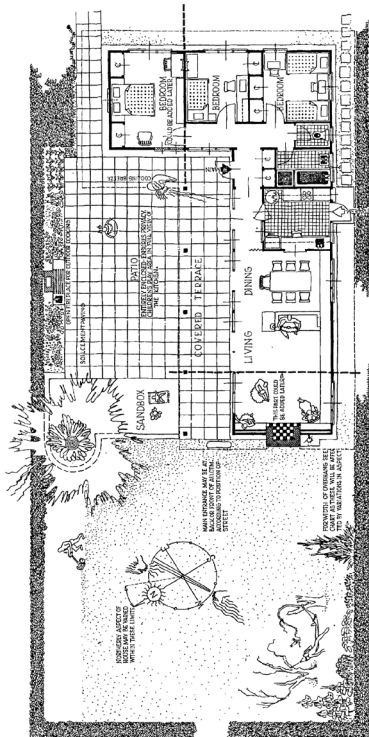


PLATE 5.

- 02 Karl Langer, Plate 5, Sub-Tropical Housing, Brisbane, University of Queensland, 1944. The Miesian style pavilion Karl Langer advocated as ideal for living in the sub-tropics.

Sub-tropical Housing.

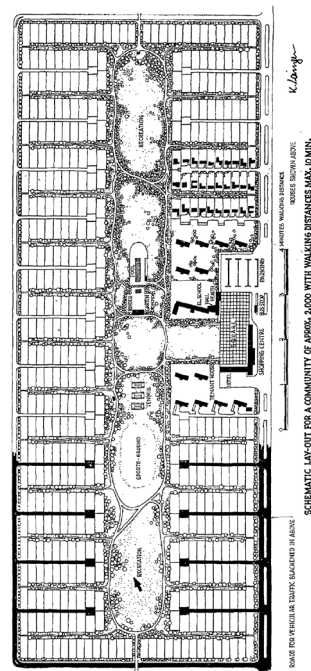


PLATE 8.

- 03 Karl Langer, Plate 8, Sub-Tropical Housing, Brisbane, University of Queensland, 1944. Demonstrates Karl Langer's design to prevent problems of fatigue from the scale of the house to the scale of the neighborhood.



### Harry Seidler in Darwin: Australia's wet-dry tropics

The means by which Australia's most famous émigré architect, Harry Seidler, was commissioned to design a bespoke house in Australia's remaining frontier town is revealing of life in the Top End. The Northern Territory was administered until 1978 by the Department of the Territories within the Commonwealth public service, with control divided between Darwin and Canberra, a 3,200 km flight away. Its administrative center, Darwin was dominated by public service and defense force personnel. Yet underneath the itinerant public service layer, was a unique character that reflected Aboriginal, Pacific, Islander and Asian influences.<sup>15</sup>

Much of Darwin was destroyed by bombing during WWII.<sup>16</sup>

For many years, an acute post-war housing shortage and lack of civic institutions was addressed through sheds and prefabricated constructions. Even the Supreme Court sat for a time in the post-war era in a Sidney Williams corrugated steel shed. From the 1950s the Commonwealth Department of Works tested a series of prefabricated house types, gradually modifying them over time to be more responsive to climate.<sup>17</sup> Contracts were awarded for a number of civic projects, adapting functional Modernism to Darwin's tropical conditions, including the Darwin Post Office (1959) and the Supreme Court Building (1965).<sup>18</sup> Congregations built places of worship worthy of a modern tropical city. Most notable is St Mary's Star of the Sea Cathedral (1957-1962) designed by Ian Ferrier (1928-2000) whilst at Donoghue & Fulton. Ferrier studied architecture at McGill University, Montreal designed numerous churches in Queensland's tropical north for the Roman Catholic Church.<sup>19</sup> St Mary's Star of the Sea Cathedral deploys a parabolic arch construction, as does the later St Mary's Cathedral (1969), in Port Moresby, Papua New Guinea.<sup>20</sup> Both share similarities with churches in Germany by Dominikus Böhm dating from the 1920s.<sup>21</sup>

Other institutions advertised their presence in Darwin

with modern new buildings. Noteworthy is the ES&A Bank in Palmerston, Darwin (1957) designed by company architect, Stuart McIntosh (1924-2007) and built in conjunction with a now-demolished house for its manager.<sup>22</sup> Both demonstrate Oscar Niemeyer's influence and both were listed in *The Australian Journal of Architecture and Arts House & Building of the Year Awards* for 1957.

However, as an egalitarian, public service town, the private commissioning of an architect for a project in Darwin was unheard of. Nicholas Paspaley, pioneer of the pearling industry, and his Sydney born wife, Vivienne, commissioned Harry Seidler in 1957, to design a house for a prominent site on Myilly point.<sup>23</sup> Sydney based Harry Seidler, a graduate of Harvard Graduate School, who had worked with Breuer in US and Oscar Niemeyer in Brazil, before arriving in Australia in 1948.<sup>24</sup>

The Paspaley House, completed in 1959 to Harry Seidler's uncompromising standards, was awarded an *Australian Journal of Architecture and Arts Award* of 1962.<sup>25</sup> It is considered an exceptional instance of Harry Seidler's work,<sup>26</sup> but is not typical of Harry Seidler's celebrated houses of the 1950s in Sydney. Its heavy construction, was designed specifically for the tropical conditions of Darwin with respect to sun shading, cross ventilation, insulation, and cyclone resistance. The house is ordered into five bays by regularly spaced concrete block pier fins shaped for wind resisting stability. Roof construction is double layered forming a deep, hollow, ventilated and insulated space. North and south elevations are shaded by large louvres which, together with infill walls, are of galvanized sheet steel sections, insulated and painted white for reflection.<sup>27</sup> The Paspaley House survived the devastating 1974 Cyclone Tracy intact, when many other lightweight post-war modern structures did not.

In 1982, Nicholas and Vivienne Paspaley's daughter Marilynne Paspaley and her husband Russel Hanigan, commissioned Harry Seidler & Associates to design a house for a nearby allotment. The house was nearing completion when the land was resumed by the Northern Territory government for a casino and the house, demolished.<sup>28</sup> Seidler's portfolio of work includes one other project in the tropical north; an unbuilt resort hotel scheme for Fitzroy Island off Cairns in Far North Queensland, from 1969.<sup>29</sup>

### Balwant Singh Saini and the arid tropics: Western and Central Australia

Balwant Singh Saini bolstered the notion of tropicality as a productive mind-set concerned not just with the humid sub-tropics but also the hot-arid zones, from 1961 in a series of papers and reports.<sup>30</sup> He was one of the first scholars to raise Aboriginal housing as a serious issue. Balwant Singh Saini, who had a Bachelor of Arts from the University of Punjab, graduated from architecture at the University of Melbourne in 1954. However, it was a period spent during his study in the office of Le Corbusier with Jane Drew, Maxwell Fry and Pierre Jeanneret (1896-1967) working on the High Court Buildings in Chandigarh that Balwant Singh Saini identifies as his most consequential experience.



05 Hall Philips & Wilson, Project Architect, Ray Smith, Townsville Courts of Law, 1974. © Philip Smith Conwell. Photographer, Richard Stringer.



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06 Harry Seidler, Paspaley House, Darwin, Australia, 1957-1959. © Photo Max Dupain 1959. Penelope Seidler.

On graduating Balwant Singh Saini worked for a while in India before accepting a position at the University of Melbourne. His early research work for the Commonwealth Government Department of Works, based in Papua New Guinea, prompted the establishment of a Graduate Program at the University of Melbourne in Tropical Architecture, a similar program to that established by Otto Königsberger at the AA in London a few years earlier. Later in 1974, as a Professor of Architecture at the University of Queensland, Balwant Singh Saini on the advice of Otto Königsberger, appointed another émigré, Hungarian Steven Szokolay (1927–) as Reader. Steven Szokolay had studied at the AA under Otto Königsberger and co-authored *Manual of Tropical Housing and Building* with Otto Königsberger, Alan Mayhew and T. G. Ingersoll.

Balwant Singh Saini's 1961 paper, "Housing in the Hot and Arid Tropics", coincided with the widespread exploration for minerals throughout northern Australia and initiation of the Ord River Project in north-west Western Australia, resulting in purpose-built mess and quarters for workers in remote places. His paper promotes a type of settlement pattern entirely opposed to the ill-conceived grid-iron layout adopted by mining companies, agricultural research stations and defense departments.<sup>31</sup>

For Balwant Singh Saini, establishing stable communities in fragile arid environments requires well-designed climate responsive housing supported by social and cultural infrastructure. He advocated the use of courtyards incorporating water and vegetation, compact planning and the manipulation of sections for shade, the use of cooling and heat sinks, sun-shading for walls and roofs and cites as exemplary Amiram Harlap's housing project in Negeb, and a project known as Western Baghdad Development by Doxiadis Associates of Athens.<sup>32</sup> His reports also addressed the efficacy of different modes of artificial climate control including air-circulating fans, underground tunnels, evaporative coolers, and solar air-conditions.

Balwant Singh Saini's advice was recognized as environmentally sound in subsequent reports on housing in the hot arid north, but his recommendations were not always adopted. A 1976 report by the Western Australian Government Housing Study Group for the Government of Western Australia notes that the "outdoor lifestyle" preferred by Australians "reinforces the Australian dream of a home on your own quarter acre (1,000 m<sup>2</sup>) block, space for a boat, a caravan, kids (sic) swimming pool and a barbeque with friends" and that this made "direct translation" of the forms advocated by Balwant Singh Saini "impracticable."<sup>33</sup> Rather in its long-winded explanations the Housing Study Group report is revelatory of a lack of political will and/or public funding to commit to exploring ways to make communities viable in the remotest parts of Australia.

### Conclusions

The diaspora impacted the reception of Modernism in Australia's tropical regions in two ways. Firstly, and most profoundly via their roles as academics in Universities and

Technical Institutes, primarily in Brisbane and Melbourne, through research and advice to government and through their public service roles they irrevocably altered the debate around architecture, bringing global perspectives to some of the remotest parts of Australia. Secondly, and less frequently, through commissions from enlightened clients and client bodies.

Sibyl Moholy-Nagy's (1903–1971) reflection on the diaspora in the US was that "the astonishing impact of a handful of refugee designers" was not evident in "the testimony of an essential evolution."<sup>34</sup> In comparison, the impact of an even smaller handful of "refugee designers" on the architecture of tropical Australia whilst undervalued, is sustained in a culture of climate responsive modern architecture. The diaspora's reach into the top end was rigorous, underpinned by empiricism and characterised by pragmatic and innovative responses. It established benchmarks that changed the trajectory of practice not only in the tropical north, but also in regions well south of the Tropic of Capricorn.

### Acknowledgement

The author would like to thank Polly Seidler for information and advice relating to the Paspaley House and work by Harry Seidler in the tropical north.

### Notes

- 1 Richard Gavin Gardiner Casey, the 16<sup>th</sup> Governor General of Australia and a distinguished army officer, long-serving cabinet minister, Ambassador to the USA, member of Churchill's War Cabinet, used the term "Our Cinderella North". The phrase confirms northern Australia's limited bearing on the national consciousness. Cited in "Land of Opportunity: Australia's post-war reconstruction National Archives of Australia". <http://guides.naa.gov.au/land-of-opportunity/chapter17/>.
- 2 Philip Goad and Julie Willis (eds.), *The Encyclopedia of Australian Architecture* contains more than thirty entries on individual émigré architects who settled mostly in Sydney and Melbourne but identifies only Karl Langer and John Hitch in Queensland and Beni Burnett who worked in Darwin for a short time after 1935. Refer Philip Goad's entry on "Modernism" in Philip Goad and Julie Willis (eds.), *The Encyclopedia of Australian Architecture*, Melbourne, Cambridge University Press, 2012, 466. David Beynon et al., do not discuss émigrés to the tropical north. David Beynon et al., "An issues paper: the roots/routes of Australian architecture: elements of an alternative architectural history", in *Translation: Proceedings of the Society of Architectural Historians Australia and New Zealand*, Unitec New Zealand, Auckland, New Zealand, 2014, 646. John Macarthur et al. discuss emigres to Queensland only. John Macarthur, Deborah Van der Plaats, Janina Gosseye, Andrew Wilson, *Hot Modernism: Queensland Architecture 1945–1975*, London, Artifice, 2015.
- 3 What constitutes the tropical north in is loosely defined in conventional accounts of Australian architecture and is most frequently illustrated using work located in Brisbane. Neither Karl Langer, *Sub-tropical Housing* (St Lucia, Qld., Faculty of Engineering, University of Queensland, 1944) nor *Buildings of Queensland* (Brisbane, Jacaranda, 1959) nor Balwant Singh Saini, *Architecture in Tropical Australia* (Carlton, Vic., Melbourne University Press, 1970) distinguish between the equatorial and hot humid zones North of Capricorn and sub-tropical zones to its south. In conventional accounts, the architecture of the arid tropics is ignored altogether.
- 4 Henry Reynolds, *Why Weren't we told?: A personal search for the truth about our history*, Maryborough, Vic., Penguin Random House, 1999, 28–29; Mickey Dewar, *Darwin: No place like home: Australia's northern capital in the 1950s through a social history of housing*, Darwin, NT, Charles Darwin University and the Historical Society of the Northern Territory, 2010, 4–5.
- 5 Committee appointed in 1942 by Frank Cooper, Director of the Bureau of Industry comprised: Douglas HK Lee, Professor of



- Physiology at the University of Queensland; Dr Raphael Cilento, Director General of Health in Queensland, Colin Clark Director of Bureau of Industry and Home Affairs; Edward James Archibald Weller, Queensland Chapter of the Royal Australian Institute of Architects; Robert Cummings of the Board of Architectural Studies at the University of Queensland; Leo O'Connor, Manager of State Advances Corporation, EJA Weller Representative of the Royal Australian Institute of Architects and Karl Langer. Research culminated in the 1943 "Report on Tropical Housing" but was never tabled. Deborah Van der Plaats, Andrew Wilson, Elizabeth Musgrave, "20<sup>th</sup> century (Sub) Tropical Housing: Framing Climate, Culture and Civilisation in Post-War Queensland", in John Macarthur, Deborah Van der Plaats, Janina Gosseye and Andrea Wilson, *Hot Modernism: Queensland Architecture 1945-1975*, London, Artifice, 2015, 77-78.
- 6 Ibid.
  - 7 Karl Langer, *Sub-tropical Housing*, St Lucia, Qld., Faculty of Engineering, University of Queensland, 1944, 2. See also Douglas Neale, "The 'Essentials' of the Sub-tropical House: an Exegesis of the 'Modernistic' Town Planning Principles", in *Limits: Proceedings from the 21<sup>st</sup> annual conference of the Society of Architectural Historians of Australia and New Zealand*, Vol. 2, Melbourne, the Society, 2004, 349.
  - 8 Silvia Micheli and Andrew Wilson, "International influences in Post-War Queensland: Protagonists, Destinations and Models", in Macarthur et al, 119-123.
  - 9 Don Watson, *Vale Roman Pavlyshyn, 1922-2019*, 20 January 2020. <https://architectureau.com/articles/vale-roman-pavlyshyn/>.
  - 10 Janina Gosseye and Donald Watson, "Architectural Practice in Post-War Queensland", in Macarthur et al, 176.
  - 11 Ibid.
  - 12 Ibid.
  - 13 Ibid., 181.
  - 14 <https://phillipssmithconwell.com.au/projects/townsville-courts-of-law-edmund-sheppard-building/>.
  - 15 Ibid.
  - 16 <http://guides.naa.gov.au/land-of-opportunity/chapter17/>. David Bridgman "Beni Burnett and the Verandah-Houses of the Australian Tropics", *Ume* 13, 2-7. <http://www.umemagazine.com/>. Also Goad et al., op cit., 505-506. Amongst buildings destroyed were a series of elegant colonial houses designed by government architect, Beni-Carr Glynn Burnett (1889-1955) between 1936 and 1941. These houses, based on the Anglo-Indian bungalow and built for the defence force and Commonwealth public service elite, conflated the verandah with the house core and pioneered the expression of asbestos-cement louvres and casement windows. They remain a touchstone for tropical design in the Top End.
  - 17 Dewar op cit., 130-131.
  - 18 <http://www.environment.gov.au/cgi-bin/ahdb/search.pl>; [http://www.ntlis.nt.gov.au/heritageregister/?p=103:301:::NO::P301\\_SPATIAL:N](http://www.ntlis.nt.gov.au/heritageregister/?p=103:301:::NO::P301_SPATIAL:N).
  - 19 Lisa-Marie Daunt, "Quoting Ian Ferrier (1928-2000) Contributing to Queensland's Post-war Modern Church Architecture", *What does history have in store for architecture today? Proceedings from the annual conference of the Society of Architectural Historians of Australia and New Zealand*, Canberra, the Society, 2017, 101-111. Ferrier Baudet practice files reveal that more than thirty churches were completed.
  - 20 Ibid., 102. Daunt citing Gardiner, Hampson, Interview with Ian Ferrier, St Lucia, 30 May 1999.
  - 21 Notable precedents by Dominikus Böhm include the Christkönig in Bischofsheim (1925) and St. Engelbert in Cologne (1928-1932). Also deploying a parabolic arch is St Pauls Church of England Proserpine (1959) designed by Cairns based architect Eddie Oribin. Oribin designed the vaulted Mareeba Shire Hall (1956), which it is claimed reference the laminated timber arched igloos build by American armed forces in north Queensland during WWII. Macarthur et al, 143.
  - 22 Igea Troiani, "Deserved Exposure: Stuart McIntosh's Architecture, 1953-63", in *Fabrications* 16, No. 2, 2016, 28-43, DOI: 10.1080/10331867.2016.10539586.
  - 23 Paspaley Pearls was established by the Paspalis family, "who migrated from Greece to Australia in 1919, and were among the few Europeans living in the area with Aboriginal inhabitants and Asian pearl fishermen." <http://www.paspaleypgroup.com/about>.
  - 24 Register of the National Estate (Non-statutory archive), Registered (26 October 1999), Place ID 16354, Place File No. 7/03/004/0063. Report Produced Thursday 2 April 2020 (21:11:18). <http://www.environment.gov.au/cgi-bin/ahdb/search>. Due to the COVID-19 lockdown of libraries, key documents were unable to be accessed including: Welke, AC, and Wilson, HJ, "Darwin Central Area Heritage Study, a report for the Conservation Commission NT", Darwin, 1993.
  - 25 *Arts and Architecture*, Vol. 79, No. 5, May 1962. "House by Harry Seidler, architect", 14-15.
  - 26 <http://www.environment.gov.au/cgi-bin/ahdb/search>. Entry statement on the Register of the National Estate notes: "In 1996 the house was recommended by the NT Heritage Advisory Council for declaration as a Heritage Place. However, this recommendation was refused by the NT Minister but explicitly not for heritage reasons. In January 1999 the NT Government released, for purchase and development, the land at Myilly Point surrounding the properties held by the Paspaley family. The Paspaley Pearls Group are the preferred developers for Site A (Lot 5180) that adjoins 26 Myilly Terrace."
  - 27 Ibid.
  - 28 Email correspondence with Polly Seidler, 1/05/2020.
  - 29 Kenneth Frampton, Philip Drew, *Harry Seidler: Four Decades of Architecture*, Thames & Hudson 1992, 412.
  - 30 George Chan, Balwant Singh Saini, "Strategy for eco-development of an island community: A case study of Nissan Island Bougainville, New Guinea", *Ekistics* 40, No. 239, October 1975, 232-240. Balwant Singh Saini Urban Housing in Papua-New Guinea and the Pacific Islands, *Royal Australian Planning Institute Journal* 4, No. 4, 1966, 140-146, DOI:10.1080/00049999.1966.11509904.
  - 31 Balwant Singh Saini, "Housing in the Hot and Arid Tropics", *Ekistics* 13, No. 77, March 1962, 172-176. Reprinted from *Design* 5, No. 8, August 1961, 18-24. The paper begins: "An Indian has provided a detailed analysis of housing for the arid areas of Australia."
  - 32 In his later publications *Architecture in Tropical Australia* (1970), Saini's list of international exemplars is extended to included low cost, high density housing in Casablanca, Morocco by Architect ATBAT and Candilis, Woods and Assoc. and are evocative of a way of living in harmony with a harsh environment.
  - 33 Western Australian Government Housing Study Group, *Northern Housing in Western Australia*, Report commissioned by Government of Western Australia, June 1976, 95.
  - 34 Sibyl Moholy-Nagy, "The Diaspora", *Journal of the Society of Architectural Historians* 24, No. 1, March 1965, 24-26. DOI: 10.2307/988275.

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