

**ARCHITECTURE OF RISK**  
How architects respond to global crises

**AMERICA'S TOP MODELS**  
Lessons from the US profession in community work and pro bono

**IN PROFILE**  
Organisations breaking new ground:  
EAA, AWF, Global Studio, Healthabitat

**INTERVIEW**  
Architect Luis Mansilla, Mansilla + Tuñón

# Border crossings

Expanding the reach and role of architects



## editorial

The limited reach of architects is a frustration shared by many in the profession. Intuitively, architects recognise that we could have a greater impact on society given the opportunity, yet seldom do we discuss how we might apply the skills that define us as architects to the wider community.

Architectural practice inhabits a space somewhere between professional aspiration and commercial reality. When fee and client allow it, architects are able to practice their skills to the best of their ability, affording their clients the full rewards that architecture can bring. However, traditional models of practice mean that architects typically provide their skills to paying clients: businesses, governments, and private individuals whose income affords it.

If you ask today's students or recent graduates, many would no doubt say they'd like to contribute to a better world. Climate change alone means they will be part of a transforming society that will need the best and most creative minds. To meet some of these environmental and social challenges, they will need knowledge across the disciplines, and will have to work with new communities in ways that redefine traditional architect-client relationships.

While some may argue in favour of exclusivity, others recognise that marginalisation of the profession comes at its own peril. Exclusivity limits the ability of architecture to influence the shape and quality of communities, cities and lives. The fewer people we serve, the more our fees are squeezed, further reducing our ability to pursue those higher aspirations that many, if not all, share.

As with most design challenges, creative opportunities lie within constraints. There are architects and not-for-profit organisations that have sidestepped the cycle altogether. Many are motivated by the belief that architects have an obligation to work for those who could not afford the service otherwise, and that we have something particular to offer. Inherent in the definition of a profession is the idea that professionals are accepted by the general public as having special knowledge and skills that they are prepared to exercise to help others.

These practitioners have actively sought alternative models of practice, and, in the process, have brought great benefit to the public through architecture. In addition to sharing architects' skills with the underserved to meet their immediate need for shelter, schools or hospitals, most of these organisations see architecture in the context of health, human rights, sustainability and community

development. In 2000, at the United Nations Millennium Summit, 189 world leaders agreed on eight measurable goals—the Millennium Development Goals (MDGs)—, to tackle extreme poverty by 2015. Architects can contribute to these goals by designing, building, sharing knowledge and consulting with communities for positive impacts beyond the immediate brief. For architects operating pro bono or in the social-ventures sphere, they are an added measure of our work's effectiveness.

This issue of *Architecture Bulletin* explores architectural work, and the education of architects, that expands practice by operating outside of conventional models. We suggest that the profession can seek to broaden its activities and expand practice in a number of ways: for example, through the development of new partnerships with local or international organisations (for instance, the HPUI initiative, see page 19) and with universities.

We suggest that universities can play a more significant role in developing the appropriate research and practice skills for expanded practice, and in the interpretation of such developments. We invite readers to question the traditional notions of practice and to what extent the way we currently practice limits how and whom the profession serves.

Profiled are the works of a number of New South Wales-based architects and organisations that have sought to break new ground and apply their skills in different ways. The frontiers they explore are unequivocally for the less privileged. The projects and experiences relayed are of communities devastated by natural disasters or impoverished through misfortune or social inequity. Explored are organisations such as Emergency Architects Australia; educational university-based initiatives such as Global Studio, which examines new forms of spatial agency; and alternative models of practice such as the not-for-profit Healthabitat.

Many architects in the community provide services pro bono (in the public good) but are reticent to discuss it. This is understandable, given the potential pitfalls, of this type of work, and of appearing too willing to work for free, when it is difficult enough to win paid commissions. That is not to suggest that the future of practice lies in forgoing a fee for professional architectural services. Other professions such as medicine and law have taught us that a healthy profession must be profitable enough to fund altruistic endeavours from surplus. Overseas experience also suggests that appropriate offerings of architectural

### United Nations Millennium Development Goals

1. Eradicate extreme hunger and poverty
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

services on a not-for-profit or pro bono basis may reap rewards that serve to expand client opportunities generally.

With that in mind, the aim of this issue of *Architecture Bulletin* is to promote a fresh public discussion—that includes not just those explored here, but the many other practitioners and educators working effectively in these areas—about who architecture reaches, and how. ■■

### Guest editorial committee



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*Paul Pholeros AM*  
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*Architecture Bulletin* is evolving. Over the past year we've moved more to themed editions, giving scope to discuss issues from various perspectives. To improve this content, we now recruit a guest editorial committee for each edition, along with a core group, to give both constancy and continued renewal to the Chapter journal, as well as giving more members the chance to contribute. We will soon develop an online space for AB, to deliver more content and receive reader comment, more immediately. Your ideas and feedback are welcome.  
*Peter Salhani, Editor & Joe Agius, Editorial Committee Chair*





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Organisation snapshot

**Size** In 2009–2010 national and international staff totalled 1,094, of whom only six were architects. Staff included a statistician, an IT specialist, a bookkeeper, trades teams, industrial designers, a medical doctor and environmental health professionals, trainers and 940 local community Indigenous people.

**Professionals** Architects, medical and environmental health specialists, a statistician, engineers and industrial designers.

**Clientele** Indigenous Australians living in urban, rural and remote communities; Nepalese villagers.

**Type of work** Assessing and improving existing housing, improving new house design, field research and advocacy on improving health through better housing.

**Funding model** An Australian private company with a director's agreement to trade as a social business distributing all profits to improve the Housing for Health methodology and tools, and provide seed funds for national applied research projects or to support overseas projects. All Healthhabitat staff, except directors, are paid on a project-by-project contract basis, and many staff informally donate additional time and resources to achieve better project results.

**Pro bono support** Kerry Bennett and Clayton Utz (legal)

**Website** www.healthhabitat.com

# Healthhabitat

## Improving health through housing repair

Healthhabitat focuses on improving Indigenous Australians' health by assessing and immediately fixing community housing and living environments. The rates of infectious diseases, typically caused by a poor living environment, in some Indigenous communities are as high as in many developing countries and, in the case of Indigenous children, many times higher than those of non-Indigenous Australian children. What is learnt from this process is used to improve new house design and specification.

Architect Paul Pholeros, public and environmental health expert Stephen Rainow, and specialist medical doctor Paul Torzillo have worked together since 1985, when they first worked on the Anangu Pitjantjatjara lands of north-west South Australia.

Healthhabitat became a partnership in 1994 and developed Housing for Health projects that improved the health of people, particularly children 0–5 years of age, by ensuring they had access to safe, functioning housing, and an improved living environment.

From 1999–2011, 184 national Housing for Health projects have improved over 7,300 houses and the health of over 40,000 people. The same principles have been used to expand the work overseas in New Zealand, Nepal and New York, US. The knowledge gained from each project is collected and made available in the *National Indigenous Housing Guide*, now endorsed by all Australian governments, based

on the original safety and health priorities developed in the mid-1980s.

The original *Housing for Health* book was launched in Parliament House and received the President's Award from the Australian Institute of Architects in 1994. In 2008, Healthhabitat was awarded the International Union of Architect's Vassilis Sgoutas Prize for the alleviation of poverty. In March 2011, Healthhabitat won the Leadership in Sustainability Prize from the Australian Institute of Architects for its improvement to Indigenous housing, extensive applied research and 'commitment to sustaining people'.

### Case study: Housing for Health

As part of an overall contract (from 2005–2009) awarded by the Australian Federal Government, Healthhabitat developed an innovative project to design, prototype, manufacture and test a 'clip-on' prefabricated shower, laundry and toilet unit for remote Indigenous communities that responds to the four highest-priority Healthy Living Practices of the nine principles identified by the *National Indigenous Housing Guide*.

Troppo Architects (Freemantle) was engaged and briefed by Healthhabitat to do the feasibility, design cost comparison, construction, installation and evaluation in situ, and present the results at various stages to Healthhabitat.

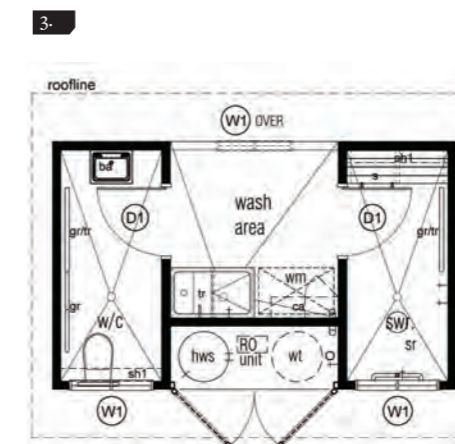
“Wet areas contain the highest concentration of health hardware fixtures and fittings that are vital to wash people and clothes, remove wastewater safely, and remove hazards that potentially cause sickness.”

The *National Indigenous Housing Guide's* Healthy Living Practices describe the functioning hardware in a house needed to allow access to healthy living. 'Health hardware', a term first used by eye doctor Fred Hollows, is the physical equipment needed to give people access to the health-giving services of housing. For example, to wash a young child the health hardware needed may include a water supply, pumps, tanks, pipes, valves, taps, hot water system, tub and drainage pipes.

Bathroom, shower and laundry or 'wet' areas contain the highest concentration of health hardware fixtures and fittings that are vital to wash people and clothes, remove wastewater safely, and reduce hazards that potentially cause sickness. In many existing houses that Healthhabitat inspect and test, the performance of these facilities is low, mostly due to poor design, specification, fabrication or installation, and the lack of routine maintenance. The problem is compounded by the fact that repairing bathroom facilities in remote areas is very expensive, the work may take weeks, and families are forced to live without these critical health facilities.

The test site for the prefab bathroom was in the Larapinta Valley Town Camp Community in Alice Springs, and with guidance from the Tangentyere Council's Housing office, a house was identified for improvement and monitoring. The trial bathroom block was attached to the side of a two-bedroom house (often home to more than 20 people) to replace an existing toilet, laundry and shower in the middle of the house that consistently failed. When the new unit was installed, the old wet area was demolished to make way for a larger living room, helping to alleviate overcrowding in the house. David Donald from Tangentyere Council's Housing office says: “[Most] critically [the test] has resulted in something almost unheard of among the houses we manage; an ablution area that has required virtually no maintenance in the three years since it was installed. The tenants are delighted, and Tangentyere has since installed a further three units, and will later this year order an additional four.”

The prefabricated modular wet area was seen to rapidly improve existing houses or become the core part of any new house design where the rest of the house is built using in-situ construction. The development of its design took into account a number of criteria, including documentation (robust material, waterproofing and plumbing fixtures resistant to poor water quality), fabrication (prefabricated construction systems and quality control), transport (remote locations and basic access considerations), installation (unit form and connection details), and ongoing monitoring (metering of appliance use).



1. Ablutions block on truck. 2. Shower rose in the ablutions block: functioning hardware is vital for access to health. 3. Plan of ablutions block showing HWS, wash area, laundry and toilet.

### Key features of Housing for Health projects

- Housing for Health methodology uses standard, repeatable tests to assess the safety and health function of housing; the continual monitoring, development and refining of the Healthy Living Practices over 25 years has reinforced the links between health, housing function and the broader living environment.
- Each project ensures immediate-fix work that improves houses from the first day of a project and builds community trust.
- Local community involvement in all aspects of Housing for Health projects—trades work, data collection, project management, community liaison and training—has meant significantly better results, better targeting of resources, and the real possibility of locally controlled ongoing housing maintenance and management.
- Proven improvement in house function, by consistent, detailed testing, is seen as the surrogate measure of 'health gain'. This is supported by over 150 years of public health literature.
- Health gains, independently measured by health professionals, have been dramatic. A 2010 report by the NSW Department of Health found that Housing for Health projects in over 2,230 houses over 10 years had led to a 40 per cent reduction in infectious illnesses requiring hospital attendance, compared to communities that received no similar projects. This result was achieved with a relatively small investment of an average of \$11,000 per house in fix work to the existing structure.
- The use of the detailed Housing for Health project data—assembled into a national database and set out in the National Indigenous Housing Guide, now in its third edition since 1999—has greatly influenced national Indigenous housing and health policy. This information can also be used for the design of new housing and major upgrade projects.
- The function data on over 250 items in each house tested has also framed over 50 significant, national applied research and development projects that have led to the involvement of a broad spectrum of industry professionals, academics and students.

Paul Pholeros  
Director, Healthhabitat / Paul Pholeros Architects



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