A CENTURY OF INNOVATION

THE AGE OF CONCRETE
A series of articles that traces innovative uses of concrete in NSW from Jack Arches to Bini Shells

WAS THERE A SYDNEY SCHOOL?
A discussion of regional modernism

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PRESIDENT’S MESSAGE

It’s a great honour to have been elected your President. I am energised but also humbled by this appointment. I recognise that Joe Agius has been extraordinarily effective in this role. He’s a hard act to follow – but I promise you I will give it my best shot.

My three big priorities during my term as President are:

Advocacy
My advocacy for you will be within the NSW Chapter & its committees, but also at National Council. I aim to use traditional and social media to communicate to the wider public, government & business groups the value of using an architect and investing in architecture.

Equity
I am passionate about supporting the profession to embrace equitable workplaces. I am proud that my first action as incoming President was to help launch the Institute’s NSW Champions for Change program with the Gender Equity Taskforce, Sex Discrimination Commissioner Elizabeth Broderick, Arup CEO Peter Bailey and Parlour’s Dr Naomi Stead and Justine Clark on 18 March.

Membership
Together we are stronger. With greater numbers we have greater power to effect change.

I want you to feel your membership is of great value to you, whether that is through a more cost-effective membership, better information through Chapter Council and its committees, or one of the service arms of the profession like Acumen.

It’s certainly my strong view that the greater the effort you put into the work of the Institute, the more you will get out of your membership.

Mentor Program
This is one of our most effective programs, providing the opportunity for career starters to benefit from the guidance of an experienced member of the profession. But there is a huge imbalance between the numbers of mentors and mentees (and the number keeps growing!). We would like more experienced members to offer their services as mentors for this program. You do not have to be a registered architect – check the Institute website for eligibility details.

Chapter Council on the road
The former NSW Government’s series of regional cabinet meetings was a good exercise in literally taking government to the people.

I want to do the same for the Institute. We will be holding a number of our Chapter Council meetings away from Tusculum during the next two years, commencing with a visit to Sydney’s inner west on 5 May.

NSW Government
Now that the election is behind us we need to get on with the job of lobbying and working with the new government on several fronts:

Public sector procurement
The procurement of building design and construction is inconsistent between agencies and unfairly loads the risk on to private consultants, including architects. The Institute is committed to fixing this problem in collaboration with the Association of Consulting Architects and Consult Australia.

Planning system
There are many elements of the failed draft legislation that could be introduced into the current system, particularly community involvement in strategic planning at the local level. The Institute will continue to advocate for design as a fundamental part of the planning process.

SEPP 65
We are determined to work constructively with the Department of Planning & Environment to make sure the new SEPP and the accompanying Apartment Design Guide are the effective tools they need to be to improve the design quality of our built environment.

Greater Sydney Commission
It was good to see the Labor Party committed to setting up this organisation during the election campaign. Now it has bi-partisan support the new government needs to get on with the job of establishing the Commission. The Institute provided advice last year on how the Commission should operate and is keen to help make it a reality.

Farewell to Roslyn Irons
The quality of the Chapter Manager is crucial to the effectiveness of the President, the Chapter Council, the committees and to the many and varied activities organised by Chapter staff. We have been fortunate that Roslyn Irons has been exemplary in the way she has developed outreach opportunities for the Chapter and has re-organised the office structure to enable it to carry out its work in partnership with members.

After seven and a half years with the NSW Chapter Roslyn has been given the opportunity to return to the health services industry as State Manager of the NSW & ACT faculty of the Royal Australian College of General Practitioners. We are very sorry she is leaving us, but grateful for all she has achieved for the Institute in her time with us – and we wish her well in her new role.

Shaun Carter
NSW President
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Patrons news

PTW Architects’ Sydney office is pleased to announce the appointment of Mark Abrams (ex HOK Vice President) as a Director. Mark’s international experience spans 12 countries and includes projects such as the Hamad International Airport Project, London Hilton Metropole, elements of the Dubai Pearl and a variety of large scale convention centre, hotel, mixed use, commercial and residential towers around the world. In addition, Mark has presented as guest critic at the Architectural Association in London, and the Universities of Westminster, Liverpool, Toronto and Queensland. Mark joins fellow Directors Simon Parsons, (Practice Leader), Troy Uleman, Neil Hill, Dario Spralja, Siobhan McInerney, Rido Pin, Alex Lin, Diane Jones and Tony Rossi at an exciting time of change and growth.

Hassell has won the design competition for 60 Martin Place, one of the most significant development sites in Sydney. Hassell won with a design that reaffirms Martin Place as the civic and business heart of Sydney and maximises views of the Sydney Opera House, Botanic Gardens and the harbour, while respecting the neighbouring heritage listed St Stephen’s Uniting Church. The planned re-development by Investa Office and Gwynvill Group, which recently received approval for its planning proposal from the City of Sydney, will appeal to the most progressive tenants, with the ability to commission flexible, interconnected workspace and roof gardens in what will become one of Sydney’s most sought-after business addresses. The building will bring new life to the eastern end of Sydney’s pre-eminent civic space, reactivating it during and beyond usual business trading hours.

Featuring just over 40,000 square metres of lettable area, the building’s prominent corner location will provide up to three anchor tenants the opportunity to each secure the most prestigious business addresses in Sydney, via Martin Place, Macquarie Street or Phillip Street. The existing 1970s building would be demolished to make way for the premium, environmentally sound office tower, designed to achieve 6 Star Green Star Office and a minimum 5 Star NABERS Energy ratings. Construction completion is anticipated early 2019.

Allen Jack+Cottier’s design focussed agenda continues to deliver results under the leadership of Principals Michael Heenan and Peter Ireland. The practice has a range of newly completed projects including a leading-edge library at University of Western Sydney, Kingswood Campus - architecture & interiors, two new student accommodation projects in Western Australia, and a number of significant transformational urban renewal projects in Sydney and interstate that will be transformational to their locations over the next twenty years.

Bates Smart have won a City of Sydney design excellence competition for a new residential development in Erskineville for client, Fridcorp. The project, soon to be marketed as ‘Wonder’ will offer a mix of one and two bed apartments in a seven storey apartment building as well as 17 residential terraces. The design concept draws on the local character of the Erskineville neighbourhood and the industrial heritage of the site. Curved forms and metalwork reference the distinctive art deco styling of moulded metallic forms once manufactured on the site by iconic Australian kitchen appliance company Metters.
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**CHAPTER NEWS**

**DARCH**

In 2014 DARCH initiated a series of informal building tours aimed at giving young and emerging architects behind-the-scenes access to recently completed projects. Led by the architects who designed and delivered the buildings, the tours proved hugely successful. DARCH hosted the first tours for 2015 in March.

Matthew Pullinger kindly, and bravely, opened his recently completed house in Alexandria early one Saturday morning. DARCH took advantage of the outdoor BBQ to cook breakfast for everyone and visitors spread out with sandwiches while Matthew described the transformation from small workers cottage to generous family home. The focus of the house is the ground floor communal spaces, where almost every wall slides away and the views out to the street and surrounding eucalypts make it feel much bigger than its modest footprint.

The second tour was an afternoon trip across the bridge to see SJB’s adaptive reuse of the Willoughby Incinerator and a new house by Bijl Architecture. Charles Peters of SJB took the tour group through the painstaking process of stripping back the unsympathetic additions and to uncover the original building fabric beneath. Following coffee at the Incinerator Cafe the tour met Melonie Bayl Smith at Naremburn House, the new family home her practice designed a short walk away. [The house is a play between robust exterior form and material palette and light and delicate internal spaces.]

To keep informed about future tours and other events please join the DARCH mailing list or find us on Facebook.

**NSW Country Division**

Country Division is planning a student / graduate placement scheme. This program aims to link regional practices with students and recent graduates for an initial period of work experience with a view to longer term employment. The number of placements will be dependent on the available funds, but we hope this will encourage recent graduates to look to the regions for employment opportunities.

The second round of Special Projects funding has been awarded. Congratulations to the winners Brent Dunn and Cameron Anderson. Both project proposals impressed the Special Projects Committee with their innovative approach to advocacy and promotion of architecture to the broader community.

The next round of applications for Special Projects funding for 2016 opens in September.

The Country Division conference ‘We’ve come so far, so far’ will be held in Bathurst on 22-25 September. The program of speakers, technical talks and tours investigates how architecture has played a pivotal role in defining the character and culture of our regional towns and looks at what the future holds as we embrace the changes of the next century.

Country Division awards open in May with entries for the first time being submitted via a dedicated website http://www.countryarchitectureawards.com.au. Entries for submission will open soon. Results will be announced at the awards night during the annual conference.

**Newcastle Division**

The event calendar has seen a busy few months for Newcastle with the Design Lecture Series, CPD Talks and product demonstrations with our trade supporters continually being booked out, and the announcement of the Newcastle Architecture Awards at Merewether on 12 March.

The Design Lecture Series featuring Paul Minifie, Greg Grabasch, and Gerard Reinmuth has been a great success again this year with over 60 attendees at each session. Held in conjunction with the University of Newcastle has seen great involvement and interest from both students and members alike. We would like to thank our wonderful presenters for their engaging and thought provoking topics and look forward to hosting this series again next year.

CPD Talks are proving popular for members to attend during the lunch time period and by hosting it in the Regional NSW Office gets members involved in our Regional space. These sessions will continue being held every even month and provide 1 formal CPD point for every session. The most recent talk held in conjunction with the EmAGN crew and hosted by Dulux saw participants painting and demonstrating the use of certain paint types. This was a great back to basics session and one that we hope to repeat in the future.

Eleven awards winners and four commendations were announced at the 2015 Newcastle Architecture Awards held at Merewether Surfhouse overlooking the ocean with Shreiber Hamilton taking out the top gong and awarded the Award for Excellence overall for their Sister Marie Centre project at Adamstown.
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In 2014 DARCH initiated a series of informal building tours aimed at giving young and emerging architects behind-the-scenes access to recently completed projects. Led by the architects who designed and delivered the buildings, the tours proved hugely successful. DARCH hosted the first tours for 2015 in March.

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The second tour was an afternoon trip across the bridge to see SJB’s adaptive reuse of Walter Burley Griffin’s Willoughby Incinerator and a new house by Bijl Architecture. Charles Peters of SJB discussed the restoration of the 1934 heritage building which included the repair of the triangular decorative concrete render which was Griffin’s signature motif. The Incinerator restoration was completed by SJB in 2011 and currently functions as a café and art space. ‘Intersections: The Art of Architects’ is currently showing at the Incinerator Art Space. Exhibiting artists Sarah Fitzgerald and Simon Grimes were present and discussed their works which investigate the liminal boundaries of art and architecture.

Following coffee at the Incinerator the tour met Melonie Bayl Smith at Naremburn House, the new family home her practice designed on the edge of a conservation area. The dwelling comprises a series of overlapping volumes and surfaces that encapsulate the clients’ desire for a family home with ‘no boring square rooms’. With natural finishes and durability in focus, materials and colours were selected for their capacity to reflect light and capture movement. The house is a play between robust exterior form and material palette and light and delicate internal spaces.

To keep informed about future tours and other events please join the DARCH mailing list or find us on Facebook.
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The Australian Institute of Architects announced the winners of its 2015 Newcastle Architecture Awards on Thursday 12 March, at Merewether Surfhouse. Thank you this year’s jury members: Caine King (Architect, CKDS), Ramsey Awad (Senior Lecturer, School of Architecture and Built Environment, UON), Robert Donaldson (Trustee, The Architecture Foundation), David Holm (Jury Chair, Architect, Cox Richardson Architects), and EmAGN graduate Prudence Bowe.

**Commercial Architecture**
Riverside Park Office Tower, West Gosford
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**Public Architecture**
Ettalong Cafe, Ettalong (CKDS Architecture)

**Educational Architecture**
Sister Marie Centre St Pius X High School, Adamstown
Schreiber Hamilton Architecture

**Residential Architecture - Houses (NEW)**

**Joint Winner:** Hunter Valley Farmhouse, Fullerton Cove
Schreiber Hamilton Architecture

**Commendation**
Raymond Terrace GP Super Clinic/ HealthOne, Raymond Terrace
Kemp Consulting + Schreiber Hamilton Architecture

**Commercial Architecture**
Riverside Park Office Tower, West Gosford
dwp | suters

**Public Architecture**
Ettalong Cafe, Ettalong (CKDS Architecture)

**Educational Architecture**
Sister Marie Centre St Pius X High School, Adamstown
Schreiber Hamilton Architecture

**Residential Architecture - Houses (NEW)**

**Joint Winner:** Ned’s House, Shelly Beach
EDH Group - Architects

**Commendation**
Coane Residence, Merewether
CKDS Architecture

**Commendation**
35 Carrington, New Lambton
Chris McBriarty, Architect
Residential Architecture - Houses (Alterations & Additions)
Hamilton Alterations & Additions, Hamilton
*Husk architecture | interiors*

Commendation
Caves Beach Residence, Caves Beach
*Mark Lawler Architects*

Small Project Architecture
EN House, Islington
*Derive Architecture & Design*

Sustainable Architecture
35 Carrington
*Chris McBriarty*

Colorbond Steel Award for Architecture
Hunter Valley Farmhouse
*Schreiber Hamilton Architecture*

Overall Award for Excellence
Sister Marie Centre (St Pius X High School)
*Schreiber Hamilton Architecture*
Tarsha Finney: Annie, you were the Global Diversity and Inclusion Manager at Lend Lease based in New York from 2008 – 2010, as well as having been the president of the National Association of Women in Construction here in Sydney (2006-2007) as part of that position you made a case to Lend Lease for the pursuit of equity. What was that?

Annie Tennant: There is a business case for diversity and it has been around for a while. The top 50 companies for gender diversity in the Fortune 500 outperformed the NASDAQ by 28.2% and the Dow Jones Industrial Average by 22.4% over a 10 year period. In addition, almost 90% of Fortune 500 companies have women on their board of directors (2006). Fortune 500 companies with the highest representation of women achieved higher financial performance than those companies with the lowest. There is evidence that Boards with at least three women have an even better financial performance with Return on Equity at 16.7% (average 11.5%) and Return on Invested Capital at 10% (average 6.2%).

Having a visibly diverse Board and Executive level communicates externally and internally, that the company takes Diversity seriously and that difference of opinions and thought are accommodated at all levels of the organisation. Many Boards search for additional women for their Boards and claim an inability to find suitably qualified candidates. This is often because there is a belief that a successful Board member needs to have a particular career history and be at CEO level already. Essentially, board members are being drawn from an already exclusive club, of which very few women are members. With all Board members having a similar experience, there is a reinforcement of the “boys’ club” networks that perpetuate the belief that there are no appropriate women for the job.

We also argued that more diverse senior leadership is positive and can lead to more constructive open debate and diligence within the company as well as more creative and effective business leadership. Surveys of Fortune 1000 companies indicated that diversity initiatives had a positive impact on their business in the following ways: Decrease in interpersonal conflict between employees; enabling the organisation to move into emerging markets; improving of corporate culture, employee morale, productivity, bottom line; increasing of creativity.

In addition to this, there are reports that conclude that diversity programs reduce discrimination claims and thereby reducing costly discrimination lawsuits.

In terms of our customers and clients at Lend lease, the argument was made that our clients and customers are increasingly more diverse. For example, 40% of privately held US companies are women-owned.

The diversity program then was an opportunity to better understand the diverse needs of our customers and clients – in order to retain them through serving their needs. It also gave us an opportunity to develop new and more innovative business practices and opportunities to address the needs of our customers and clients.

TF: So if we translate some of these ideas into architectural practice, particularly the idea that “having a visibly diverse Board and Executive level communicates externally and internally, that the company takes Diversity seriously and that difference of opinions and thought are accommodated at all levels of the organisation.” What in your experience is the most significant impediment to women’s participation in Senior Management in architectural practice?

AT: The high turnover of staff takes a lot off the bottom line of a company. We estimate that it takes six months for a new recruit to gain ownership over a position and roughley $60,000 per employee during that transition.
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So retention of high value female employees is a key objective for us. The issues of women’s participation in architectural practice are to do with the retention and participation of women at a senior level and they are quite specific. They are to do with the twin issues of the development of flexible work practices that can accommodate carer responsibilities for both men and women and the presence or absence of visible role models.

Mechanisms for aiding retention that we’ve seen used include longer than typical paid parental leave for the primary care giver (this means mother OR father), return to work bonuses for those on maternity leave, negotiated flexible work practice that allows some late morning starts and/or early departures to accommodate family responsibilities. In addition to this it is worth considering women in leadership targets and gender participation targets in leadership programs for high potential individuals. An understanding that your clients are working flexibly and that they are more often women should be a big message to our architectural partners that it’s time to get real about supporting and promoting women. It is also important to accept that different career paths or experience in the broader industry i.e. not your typical architectural career path, is a benefit for your practice – it can enrich the output of the office, the office culture and communicate to staff that broader and diversity of thought and experience is valued.

FOOTNOTES
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Reinforced concrete is a base material of our art. We architects are up to our knees in concrete most of the time, whether laying it out new, or thinking about some concrete structure that has come into our hands. In this Bulletin we look closer at the way concrete came into our art not very long ago. Expert accounts show something of the threads of its way into our environment on the merits its various great properties.

Sean Johnson and Ian Stapleton Jack Arch Construction – Its origins and use in NSW charts the hybrid construction of mass concrete on curved iron vaults from its British innovation for fire protection of industrial structures, to its adoption in the hands of Australian Public architects as useful practically and architecturally. They raise the surprising structural results of their research during conservation works.

With Noni Boyd in The Age of Concrete we walk the streets of Sydney in the ten years 1906–1916 to find the innovations of reinforced and mass concrete as a wonder material in the towns of our state. It is like a family history for the material, the who and where and why. In her account is something of the air of architects trying something innovative.

Structural Reinforced Concrete was introduced to New South Wales for engineering structures, firstly in the Johnston’s Creek Sewer Aqueduct of 1897. After the Second World War, when the engineering of structure became a principle obsession of architects, we see the use of reinforced concrete as a structural system. The internationally representative Bini domes of the office of the NSW Government Architect are described by Rebecca Hawcroft in “Binishells in New South Wales Schools”. She recounts the impressive efforts of the office in the creation of their school architecture.

Which brings us to the conservation of Concrete Architecture. Scott Robertson’s account of Expansion and Conflict The Docomomo international conference, Seoul, September 2014 tells us that this, the material of modernism, whose persistent theme is of change from outside of a culture, is nevertheless the concern of conservation.

It is merely the case that places which are conserved for heritage values are attractive and lively.

The current project for this issue is about heritage as well. Light in Broken Hill City Living Museum is described by its authors as a proper appreciation of the city’s centre. The writers of this month’s bulletin are all involved in the heritage promotion of the Chapter, principally through its heritage committee. Thank you each and all.
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A ‘school’ is defined as an organisation of scholars – in this case, architects – whose interests and ideas coalesce around particular philosophies. The formal etymology of the term ‘Sydney School’ begins in 1961 when the late Bruce Robertson organised a travelling exhibition, “15 Houses by Sydney Architects”, at the Bixlaxl Gallery housed in Farmer’s department store, which was then moved to the Museum of Modern Art of Australia (MoMAA), Melbourne as Modern Sydney Domestic Architecture.

The photographic exhibition included the architects and firms John Allen and Russell Jack, Ross Thorne, John James, Bill and Ruth Lucas, Ian McKay, Ancher Mortlock and Murray and Peter Muller. Others included in the exhibition were Bruce Rickard, Harry Seidler, Andrew Young, Max Collard and Guy Clarke, Neville Gruzman, Bruce Robertson (curator), Peter Kollar and James Kell.

A review by architect Neil Clerehan appeared in the Royal Victorian Institute of Architect’s Small Homes Service section of The Age. “The first thing to strike anybody with more than a passing interest in houses is their unfamiliarity,” Clerehan wrote. “They could not be local [Victorian] houses.

“Sydney has always offered better sites, bigger trees, steeper slopes and full circle views. […] Everyday Sydney houses are very different from the Melbourne equivalents.” Clerehan then turned to regional differences observing, “Now there seems to have developed in New South Wales a distinct style. The houses on display will appear foreign to most visitors to this exhibition. […] Whereas Melbourne houses by comparison preserve tight trim shapes and sit immaculately on their pancake-flat blocks, the Sydney houses ramble everywhere between the eucalypts and poke windows at views or walled courts. They use heavily beamed frames, rough brickwork, varying roof levels, screens and huge stone fireplaces.”

Clerehan identified a “distinct style” responding to the Sydney basin’s topography and established the premise of a Sydney School, which was quickly adopted by Milo Dunphy in a 1962 essay using the term ‘Sydney School’ and nominating members including most of Robertson’s earlier picks such as Ancher, Mortlock and Murray, Muller, the Lucases, Rickard and Gruzman. Dunphy asserts there is “…a unity of sentiment and aim among these architects that “has now rejected self-conscious nationalism.”

By 1965, the Sydney School ruminations had entered architectural consciousness and Robin Boyd’s 1965 book The Puzzle of Architecture includes Sydney School passages suggesting a close reading of Clerehan’s original review of the Melbourne exhibition. Boyd and Clerehan were Victorian associates and key figures in the RVIA/The Age Small Homes Service. Boyd writes “a strong regional branch developed […] in Sydney where there was a sufficient number of younger architects with enough in common to constitute a school”.

Former University of Sydney professor Jennifer Taylor (now adjunct professor at Queensland University of Technology) firmly planted the flag for the Sydney School in her 1972 publication An Australian Identity: Houses for Sydney 1953–63. Despite considerable criticism among scholars, Taylor’s publications continued to be the key documents in electing Sydney School practitioners.

Professor Winsome Callister, Monash University, suggested the Sydney School was a new offering from the shop-worn Sydney/Melbourne merchandise counter.

The Sydney School was also inspected by Professor Stanislaus Fung of the University of New South Wales architecture faculty (now at the Chinese University of Hong Kong). Fung regarded the Sydney School as no more than a notion, arguing, “…the confidence in the existence of the Sydney School is disproportionate to the amount of serious study given to the subject”. Is the Sydney School a certain group of architects united by principles;
is there a series of buildings that could be said to represent the expression of these principles; and finally, Fung asks, is there a Sydney School style illustrating consistent architectural qualities?

Not every architect tagged as one of Robertson's Sydney School wished to be a member. Peter Muller observed in a 2014 interview:

"Academics, scholars and journalists very much need to classify everything, [and] labelled those Sydney architects who use natural materials such as wood and stone, like myself, [as] organic architects and members of the Sydney School as if we were a coherent group. We were site specific to a certain extent but certainly not organic in the sense I've [...] described."

Muller is dissatisfied with being identified as a practitioner, arguing that after spending several days studying the site, "[...] the design process followed after negotiations with the client because I had to know their limitations and their requirements. And then the design project was left to emerge intuitively." That is, this takes place without regard to formal principles one might associate with a school.

Ken Woolley is also anxious to avoid membership. "A number of times I've said it didn't exist," he emphatically stated in a 1986 interview. "In the sense of a group of people getting together to form a school or even to recognize that there is one [...] it didn't exist."

John James reveals how membership in the group was arranged. James and Sydney Ancher had been key figures in the Melbourne tour. James writes, "I was part of the Sydney Timber-and-Bush School along with Peter Muller, Russell Jack and others. I suggested to Jennifer Taylor that we all meet and see if we could discover what inspired us. This we did at her house in the summer of 1981 [sic.]."

He continues: "It was an extraordinary meeting. We all noted that though we knew of each other, we seldom met; neither socially, nor for business, nor did we spend much time running around looking at each other's houses. Yet together we created a common style, now called the Sydney School. The only things we had in common, and that we all agreed stimulated our creativity, was sandstone rocks and angophoras."

Following the patterns of James's reminiscences, Muller suggests a far-sighted alternative to the Sydney School. "I call my approach 'site specific'. I consider that a few Australian architects in the 1950s and 1960s, working alone, seldom in communication with each other, adhered to an architectural idea that I called site specific. By this I mean they gave due consideration to the native physical attributes and the location of each site before commencing the design process. This attentiveness to retain [the] integrity of the site almost necessarily implied the use of natural materials such as timber and stone."

Muller, of course, is identifying a regionally adapted architectural methodology. Since the 1960s the Sydney School hypothesis has been diluted by an inclusive 'regionalist' philosophy popularised by the well-known Columbia University scholar Kenneth Frampton and others that seek to "...foster connectedness to [...] place and [...] be a response to the needs of local life, not in spite of global concerns and possibilities, but in order to take better advantage of them. [...] It should open up possibilities for understanding where and with whom one lives. It should encourage awareness of local climate and the changing of seasons." There is room within this "Regionalism", as James suggests, for "sandstone rocks and angophoras."

Michael Bogle is a design historian. His most recent publication is a chapter on the interior architecture of Sydney espresso bars and cocktail lounges in Leisure Space: The Transformation of Sydney 1945–1970 (UNSW Press, 2014).
The transition from hardwood to concrete in the construction of Sydney changed the face and foundation of the city’s architecture, as NSW Heritage Officer Dr Noni Boyd explains.

In 1907 the Bendigo Advertiser reported on the increasing use of concrete in building construction, stating this era was to be an ‘age of concrete’. From the late 1890s onwards the Professor of Engineering at the University of Sydney, William Henry Warren, tested building materials. His experiments were well known throughout New South Wales, but as the Clarence River Advocate noted, his work in the testing of reinforced concrete was new to the world. In early 1905, the use of concrete in buildings was under discussion at the Royal Institute of British Architects (RIBA), however, use of ‘ferro-concrete construction’ was still restricted in London and had only been used in buildings erected by dockyard companies and in railway yards.

The 1906 San Francisco earthquake provided a valuable architectural lesson for other cities: reinforced concrete fared better than traditional masonry construction, which suffered considerably in the quake and subsequent fire. New South Wales architects were well aware of which type of buildings survived the quake; in reports on the new Globe Hotel in Albury (1909, designed by J.T McCarthy), and the Criterion Hotel in Newcastle (1912, by Eaton and Bates), the San Francisco precedent is mentioned.

By 1906 the firm of Kent and Budden and the architect Herbert S Thompson were each employing concrete floors for commercial buildings in Sydney. Thompson died suddenly in 1907 and his quirky Lombard Chambers in Pitt Street (1905–1906) have since been demolished, however, the exposed steel sections on the facade would have appeared revolutionary at the time. It is probably no coincidence that architects who advocated the use of concrete had their offices in new fireproof city office buildings. Eaton and Bates, the architect J.T McCarthy and the architect and civil engineer John Jasper Stone all had their offices in Challis House. Erected in 1907, Challis House in Martin Place was intended to be as fireproof as possible, employing concrete floors and concrete-encased stanchions. Funded by the Challis bequest and erected to designs by Robertson and Marks (in conjunction with the NSW Government Architect), Challis House was built for the Senate of the University of Sydney. Concrete stairs and floors were then used in a series of public schools designed by the Government Architect’s Branch in 1908 including Annandale South, Arncliffe, Gardeners Road in Mascot, Tempe and North Newtown.

The Bathurst Post reported in June 1907 that large quantities of reinforced concrete were being used in Sydney buildings. The following month James Nangle invited the NSW Institute of Architects to witness tests on concrete beams, which were undertaken by the Department of Architecture at Sydney Technical College. Among the architects who attended were those who had already been using concrete for fireproofing: Harry Kent, his partner Henry Budden, and George B Robertson of Robertson and Marks.

In city buildings the transition from hardwood posts to concrete construction methods occurred in the years leading up to World War I, and can be seen inside Sydney’s Federation-style warehouses. Bennett and Wood’s warehouse, factory and shops, designed by Harry Wilshire, were erected on the corner of...
Pitt and Goulburn Streets in 1908. Internally the lower floors were supported by concrete-encased steel stanchions, whereas the remainder of the building had more traditional hardwood posts. The stair and window heads were reinforced concrete. The building, which survives, had goods elevators, sprinklers, and a rooftop ‘recreation reserve’ and dining room for staff.

Innovations in the use of concrete were not confined to Sydney. By 1905 concrete floors were being used in institutional buildings in country New South Wales, such as the Roman Catholic orphanage at Kenmore designed by the Goulburn architect E.C Manfred. As a young architect, Harry Ruskin Rowe, then working for Spain and Cosh, the architectural firm that his late father had established, supervised the construction of A.G Robertson’s new Red Flag Store in Lismore. Erected in 1906 this store had concrete block foundations and steel-encased stanchions. Ruskin Rowe retained an interest in the possibilities of concrete, one of the first tenders in early 1912 from the newly created partnership of H.E Ross and Rowe was a substantial reinforced-concrete stables block in Pyrmont.

Discussions in 1907 of the aftermath of the great fire in Murwillumbah that destroyed much of the commercial heart of the town advocated the use of concrete blocks, noting that concrete was the ‘coming building material’. Five of the new shops erected in 1908 were of this material. Concrete blocks had been available in country New South Wales since around 1901, having initially been used in constructing lighthouses and septic tanks. In 1906, the Wagga Wagga-based architect W.J Monks designed a ‘concrete’ homestead for the Friend brothers at Bendenine Station. The Nampoo Homestead at Cal Lal on the Murray River built in 1908 was described in contemporary reports as being of reinforced concrete, however, more recent photographs show block work. Hammond and Wheatley’s commercial emporium in Bellingen – designed by a local contractor G.E Moore and erected in 1908-1909 – was built of concrete blocks made of Bellingen River gravel and Portland cement. It was proudly noted that all of the materials for the emporium – which is still in use – were Australian with the exception of English plate glass. The Lismore-based architect Frederick Board designed a concrete Methodist church at Alstonville in 1908 that survives today.

New South Wales expertise in building in concrete had become known in other colonies. In 1910 tenders were sought from as far afield as Sydney to erect the reinforced concrete Grand Pacific Hotel for the Union Steamship Company in Suva, Fiji, which was designed by a...
Dunedin firm of architects Salmond and Vanes. This hotel has recently been substantially upgraded, retaining the wide verandahs that characterised this elegant colonial building. New South Wales also provided expertise in the design of lighthouses: James Shirra, the Scottish-trained marine engineer and surveyor sent to Fiji from Sydney in 1907, recommended ferro-concrete lighthouses to mark the route to the then capital, Levuka. A prefabricated concrete light tower had already been installed at Bradleys Head in Sydney Harbour in 1905.

In his survey of 200 years of concrete, Miles Lewis notes that the innovations in the use of concrete by the engineers upgrading Sydney’s wharves did not have any impact on mainstream building construction. The recent detailed research undertaken into the construction of buildings in Millers Point has found that techniques initially developed for the waterfront were utilised in building construction. In the terrace houses built by the Sydney Harbour Trust in Dalgety, Munn and High Streets from 1906 to 1912, precast concrete planks were used to provide fire separation between the upper and lower flats. W.E Adams, who developed the planks, had previously worked in conjunction with the Melbourne-based engineer John Monash to develop precast units for the new seawalls at Millers Point. Houses at 2–40 High Street contain precast planks separating the upper and lower flats, and in the remainder of the row the later, and now more common, technique of reinforced concrete slabs was used.

Other government agencies also made good use of concrete, as they were free from the requirements of the City Building Surveyor. Which is not to say that the municipality was not interested in new techniques, fireproofing of buildings was of great interest to the city fathers. The intersection of George Street North and Cumberland Street was realigned in 1914–1916 in the City Beautiful manner. The NSW Housing Board designed a warehouse within the concrete framework that supported the roadway, which may well be the first building in inner Sydney to express its concrete frame externally. The transition from the use of timber and load bearing masonry to the use of a concrete is outlined in the accompanying table.

FOOTNOTES
2. Newcastle Morning Herald, 28 Jan 1905
3. The Newsletter 6 Sept 1906
4. Newcastle Morning Herald, 19 Sept 1907
5. The Sydney Morning Herald 31 May 1910
# Use of Concrete in Sydney Buildings

<table>
<thead>
<tr>
<th>DATE</th>
<th>BUILDING</th>
<th>ARCHITECT</th>
<th>TIMBER STOREY POST</th>
<th>TIMBER FLOORS</th>
<th>STANCHIONS</th>
<th>STEEL GIRTERS</th>
<th>CONCRETE FLOOR SLAB</th>
<th>OTHER</th>
<th>REF</th>
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<tbody>
<tr>
<td>1907-1916</td>
<td>Challis House Martin Place</td>
<td>NSW Government Architect / Robertson &amp; Marks</td>
<td>Concrete encased</td>
<td>Cinder concrete, expanded metal lab</td>
<td>Yes</td>
<td></td>
<td>1909</td>
<td>Evening News 26 Dec 1909</td>
<td></td>
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<tr>
<td>1907</td>
<td>Additions to Art Gallery of NSW</td>
<td>NSW Government Architect</td>
<td>Concrete encased</td>
<td>Steel Girders</td>
<td>Yes</td>
<td></td>
<td>1907</td>
<td>SMH 24 September 1907</td>
<td></td>
</tr>
<tr>
<td>1908-1909</td>
<td>Bissace &amp; Co-warehouse Holt House Kent Street</td>
<td>Robertson &amp; Marks</td>
<td>Concrete encased</td>
<td>Steel Girders</td>
<td>Reinforced concrete, expanded metal</td>
<td>SMH 14 April 1908</td>
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<tr>
<td>1908</td>
<td>Three Warehouses Clarence St, General Electric, Tucker, Central Agency</td>
<td>Robertson &amp; Marks</td>
<td>Steel stanchions</td>
<td>Steel Girders</td>
<td>Concrete floors</td>
<td>Wellington Times, 16 January 1908</td>
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<tr>
<td>1908</td>
<td>Woollen Mills, Sydenham Road, Marrickville</td>
<td>Frederick Morrehouse</td>
<td>Concrete floors</td>
<td></td>
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<td>SCC Building Application Plans 0057/09</td>
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<tr>
<td>1908</td>
<td>Factory and Showroom for Bennett &amp; Wood</td>
<td>H A Whishare</td>
<td>Concrete floors</td>
<td></td>
<td></td>
<td></td>
<td>SCC Building Application Plans 024/310</td>
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<tr>
<td>1909</td>
<td>7 Storey Warehouse, 185 Clarence Street</td>
<td>Arthur Pritchard</td>
<td>Concrete floors</td>
<td></td>
<td></td>
<td></td>
<td>SCC Building Application Plans 0111/08</td>
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<tr>
<td>1910</td>
<td>Nelson House - Warehouse</td>
<td>Louis Spier Robertson</td>
<td>Concrete floors</td>
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## By 1907 Transition to Use of Concrete Encased Stanchions and Reinforced Floor Slabs

<table>
<thead>
<tr>
<th>DATE</th>
<th>BUILDING</th>
<th>ARCHITECT</th>
<th>CONCRETE FLOOR SLAB</th>
<th>OTHER</th>
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</thead>
<tbody>
<tr>
<td>1911-1912</td>
<td>Commonwealth Stores, Reid Edward Victualling Yard, Darling Harbour</td>
<td>Attributed to NSW Government Architect W.L. Vernon</td>
<td>Concrete encased column</td>
<td>Concrete floors</td>
<td>Concrete roof</td>
</tr>
<tr>
<td>1911-1912</td>
<td>Department of Public Instruction</td>
<td>NSW Government Architect George McRae</td>
<td>Concrete encased steel frame</td>
<td>Concrete floors</td>
<td>Masonry Exterior</td>
</tr>
<tr>
<td>1912-1913</td>
<td>Culwulla Chambers</td>
<td>Spain &amp; Co</td>
<td>Concrete encased steel frame</td>
<td>Concrete floors</td>
<td>Masonry Exterior</td>
</tr>
<tr>
<td>1912, BUILT 1913</td>
<td>AGL Engineers Office Haymarket</td>
<td>Attributed to L L Ramsey</td>
<td>Monier System</td>
<td></td>
<td>SMH 8 August 1915</td>
</tr>
<tr>
<td>BY 1913</td>
<td>Hippodrome</td>
<td>City Architect R H Beach</td>
<td>Arthur Hart’s paper on re-inforced concrete cites this building</td>
<td></td>
<td>See also re-inforced concrete work &amp;c under the supervision of Arthur John Hart in the Dunphy Collection, Mitchell Library PAA 1000</td>
</tr>
<tr>
<td>BY 1913</td>
<td>Marrickville Margarine Factory</td>
<td>Donald Eaplin</td>
<td>Arthur Hart’s paper on re-inforced concrete cites this building</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BY 1913</td>
<td>Warehouse for W Adams, George St</td>
<td>Hall and Dods from Brisbane</td>
<td>Arthur Hart’s paper on re-inforced concrete cites this building</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BY 1914</td>
<td>Perpetual Trustees</td>
<td>Robertson &amp; Marks</td>
<td>Concrete encased steel frame</td>
<td>Concrete floors</td>
<td>Masonry Exterior</td>
</tr>
</tbody>
</table>

## 1914 External Expression of Concrete Frame

<table>
<thead>
<tr>
<th>DATE</th>
<th>BUILDING</th>
<th>ARCHITECT</th>
<th>TIMBER FLOOR SLAB</th>
<th>OTHER</th>
<th>REF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1914-16</td>
<td>Warehouse for Tylor &amp; Son</td>
<td>W H Foggatt, NSW Housing Board</td>
<td>Concrete columns</td>
<td>Concrete floors</td>
<td>CMP prepared for SHFA</td>
</tr>
<tr>
<td>1915</td>
<td>W H Soul Patterson now Tyne House, Wentworth Avenue</td>
<td>George Durrell</td>
<td>Concrete encased steel frame</td>
<td>Concrete floors</td>
<td>SCC Building Application Plans 0366/15</td>
</tr>
<tr>
<td>1915</td>
<td>345B Sussex Street</td>
<td>Bonya Hadley</td>
<td>Concrete encased steel frame</td>
<td>Concrete floors</td>
<td>SCC Building Application Plans 0443/16</td>
</tr>
</tbody>
</table>

This chart based on the comparative analysis undertaken by Jean Rice & Noni Boyd as part of the Conservation Management Plan for the AJAX building, 23 George Street North prepared for SHFA, with additional city buildings provided by the heritage specialists at the City of Sydney. A more detailed chart can be obtained by emailing noni.boyd@architecture.com.au. SMH= Sydney Morning Herald.
THE JACK ARCH: its origin and use in NSW

Conservation architects Sean Johnson and Ian Stapleton discuss one of the most important design elements of 19th century architecture: the jack arch.

Used throughout the 19th century for its incombustibility and strength, the jack arch was a widespread form of floor construction. It was not a flat arch in the US sense of the term, rather, the jack arch consisted of shallow brick or concrete vaults spanning between iron or steel joints. This composite construction was often concealed between timber flooring and plaster ceilings, but sometimes it was intentionally exposed, often in verandahs and arcades, with satisfactory aesthetic results.

The jack arch system, an innovation of the mid 1800s, was widely used in New South Wales, however, it was the result of a long evolution that started in the 1790s in England. After a series of disastrous fires in timber-framed multi-storey mills, William Strutt built the first ‘fireproof’ mill in Derby; it was constructed of brick vaults spanning between shouldered timber beams, in turn supported on cast-iron columns. An attempt was made to protect the timber beams by encasing them with metal sheeting. The Benyon Marshall and Bage Flax Mill, built in Shrewsbury in 1796–1797, was the first fully iron-framed multi-storey building. It used cast-iron beams with similar wedge-shaped bases angled to provide a springing point for the brick vaults.¹

From these evolved the flanged beams we are familiar with today. This system became widely used in public buildings, and especially in “mills, warehouses, sugar factories and other buildings, where great weights have to be stored.”² It was also used in private houses, for example Queen Victoria’s holiday home Osborne House, on the Isle of Wight, UK, by Thomas Cubitt, built between 1845–1851.

The jack arch was for many years believed to be fireproof, but the bottom flange of the iron joints remained exposed to heat and by the late 19th century it was realised that this was a fatal flaw. Rivington’s Notes on Building Construction: a book of reference for architects and builders, and a text-book for students, stated in 1884 that “iron at one time held a very high
place as a fireproof material, but it has of late years been found to be untrustworthy". Paul Hasluck, in the 1906 publication Iron, Steel and Fire Proof Construction, referred to a large warehouse with “so-called fire-proof floors” composed of brick arches between iron girders and cast iron columns, which was “destroyed by fire within an hour in Berlin a few years ago". 3

Despite this, the jack arch continued to be used in New South Wales well into the 20th century. It usually consisted of unreinforced lightweight coke concrete vaults cast on curved corrugated iron sheets spanning between iron beams: a 19th century version of the familiar Bondek slab. According to architectural historian Miles Lewis, this system was invented in 1848 by the British engineer James Nasmyth, and its first use in Australia was at the Old Treasury Building, Melbourne, designed by J J Clark and built between 1858–1862. 4 By the 1880s, a heavier gauge corrugated iron with deeper ridges specifically designed for jack arches was imported from Germany and employed here.

The first use of the jack arch in Sydney was at James Barnet’s General Post Office (GPO), which was built in stages between 1866–91. Here the extremely flat, lightweight concrete arches were cast on formwork and generally concealed behind floors and ceilings, however, shallow plastered vaults are exposed at basement level. During the recent conversion of the GPO, the structural engineers were initially doubtful about the strength of the arches, especially if they were to become wet in the case of fire. They loaded an arch with sandbags, however, it was found to be remarkably stable and no further strengthening was required.

Barnet used jack arches again throughout the floors of the Lands Department Building, the first stage of which was built during 1876–1881. They were generally hidden above plaster ceilings but were exposed on the upper floor. Smooth plastered concrete vaults were also exposed to view on the ground floor of Barnet’s Callan Park Asylum in 1876–1885.

Corrugated vaults were adopted in Australia more than in the UK. The system was taken up widely by other Sydney architects: Thomas Rowe used corrugated jack arches in the verandahs of the Sydney Hospital 1880–1894, while George McRae used them on the ground and first floors of the Corn Exchange building, 1887. In the Queen Victoria Building, 1893–1898, McRae used brick vaulting spanning steel beams.

Barnet’s successor as Government Architect, Walter Liberty Vernon, continued the jack arch tradition into the 20th century in his additions to the Australian Museum (built 1897–1910), and at Central Station (1904–1908), where corrugated jack arches were used for strength and solidity, rather than fireproofing, throughout the lower level under the paved forecourt areas.

The jack arch was an economical way of building a strong, non-combustible floor structure that could be left as a visible ceiling with a satisfying structural logic. It was largely superseded by the introduction of thinner and more fire-resistant concrete-encased steel and reinforced concrete floors later in the 20th century. However it remains an expressive and strong form of construction that still occasionally reappears, for example in Sigurd Lewerentz’s brick St Peter’s Church, Klippan, Sweden (1963–1966) and more recently at the Ravensburg Kunstmuseum by Lederer + Ragnarsdóttir + Oei. 5 Perhaps it’s time to put the arch back into architecture?

Sean Johnson and Ian Stapleton are conservation architects and partners of Clive Lucas Stapleton and Partners.  

FOOTNOTES
5. Architectural Review, 9 September 2013

IMAGE CREDITS * Photographs are by the authors unless otherwise stated

- Lands Department building, typical third floor space in 2015.
- Callan Park, now Sydney College of the Arts’ Library in 2015.
- Central Station, Sydney, Eddy Avenue arcade in 2015.
In 1974 the Department of Public Works New South Wales began a comprehensive program of new school buildings using a radical concrete dome technology pioneered by Italian architect Dr Dante Bini. Rebecca Hawcroft examines their legacy.

The post-war period was a time of considerable focus on the possibilities of concrete, with a number of architects experimenting with thin shells, geodesic domes and tensile structures. When Dr Dante Bini graduated from the University of Florence, Italy, in 1962, he was influenced by the experimental work of Heinz Isler, Felix Candela, Frei Otto and Buckminster Fuller. Although interested in domes as a built form, for Bini the expensive and complex formwork required was prohibitive.

In trying to resolve this, Bini began exploring the potential of inflatable formwork, or what he would term ‘Pneumoform’. His technique utilised an inflatable neoprene-coated nylon membrane overlaid with a network of steel springs and reinforcing bars. A thin layer of concrete was then poured over the membrane. In a process that took roughly one to three hours the membrane was then inflated, the entire mass of wet concrete, springs and reinforcement rising to the desired form. The Pneumoform used readily available materials, reduced waste, eliminated costly formwork and large site teams, and dramatically sped up the construction process.

Bini successfully demonstrated his technique in 1965 in Crespellano, Italy, with a 12-metre diameter, hemispherical concrete shell structure. Intrigued but disbelieving, prominent US engineer and professor at Columbia University, Mario Salvadori invited Bini to demonstrate the method at Columbia’s New York City campus. In 1967, over just a few hours, an audience of 700 watched as a 15-metre dome rose to completion. As Will McLean notes in the introduction to Bini’s recent book Building with Air, “this experience, and the subsequent worldwide press exposure, launched the unique career of Dante Bini as an architect and building systems inventor.”

The patented automated system was licensed across the globe with Binishells rapidly constructed in Brazil, Cuba, Saudi Arabia and the UK. Again a source of great attention, Bini designed and constructed a two-level Binishell in Costa Paradiso, Sardinia, in the late 1960s, as a holiday villa for legendary film director Michelangelo Antonioni.

In 1971 the Department of Public Works New South Wales was seeking a fast and cost-effective construction technique to add desperately needed multipurpose centres, gymnasiums, libraries and other buildings across New South Wales schools. Ian Thomson from the NSW Government Architect’s Office, travelled to Italy to meet Bini and explore the system. Clearly impressed, the Department of Public Works engaged Bini as an architectural consultant to design, direct and train its staff in all aspects of constructing the domes. Bini’s considerable energy and charm burst on to the Sydney architecture scene, and he remained in Sydney for six years as a prominent figure advocating, developing new construction techniques, and lecturing at the University of Sydney.
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The first school project, Narrabeen North Public School library was a showpiece of the method’s potential. The three-dome complex, still loved and well used by the school, remains one of Bini’s career favourites. Between 1974 until 1978 the Department of Education constructed eight Binishells or shell complexes. The program included 18-metre diameter shells or shell complexes, generally used as libraries, and 36-metre diameter multipurpose centres, often used as gymnasiats.

The method proved challenging for the department and incurred increased scrutiny following a failure during construction of a dome at Fairvale High School, Fairfield. Despite this, the program was considered safe and efficient and a further six domes were constructed. In total, 14 schools received Binishells or multi-shell complexes. Although the Pittwater High School dome collapsed in 1986, most of the Binishells have proved useful and durable, with 10 remaining in New South Wales schools.

Bini’s legacy is considerable with 1,500 Binishells constructed in 23 countries. In 2014, his villa for Antonioni was featured in a project by Will McLean at the 14th Venice International Architecture Exhibition. Bini’s company, Binisystems, remains in operation, run by son Nicolo Bini. With an increased focus on structural efficiency and the minimal use of materials, the firm continues to explore the possibilities of air-formed structures.

A Binishell constructed in 1978 at Malvern Girls College in Worcestershire, UK, has been listed as a Grade II structure by English Heritage. The National Trust NSW is preparing similar nominations for Binishells at Ashbury Public School and Ku-ring-gai Creative Arts High School. Although examples of Binishells can be found around the world, the comprehensive use of the system by the Department of Public Works New South Wales remains unique. With the bicentenary of the NSW Government Architects Office due to be celebrated in 2016 it seems a good time for the brave and innovative Binishell program to be acknowledged by heritage protection.

**FOOTNOTES**

2. NSW Department of Public Works publication Construction of Binishell Reinforced Concrete Domes, NSW, Australia, 1978, p.7
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The Small Homes Service (NSW) was intended to provide plans for small houses - plans that were architecturally correct, economically built, and correctly planned – expanding the opportunity to experience architecture to all. Dr Noni Boyd, NSW Chapter Heritage Officer investigates the history of the scheme and its impact on residential design across the state.

The Small Homes Service instigated in Victoria by Robin Boyd and The Age newspaper in 1947 was not the first such plan service in Australia; the NSW Institute of Architects had operated a similar scheme in Sydney during 1926–1928. Proposed by the Chapter President Professor Alfred S Hook, the scheme was modelled on an example in Minnesota, US. Notes pasted into the Chapter minutes explain that the NSW Small House Plan Service was intended to provide ‘plans for small houses which shall be architecturally correct, economically built, and correctly planned’. The Australian version of the service, Hook noted, was unlike American schemes: it was open to all architects and it wasn’t just a money-making scheme, but a service to the community. Florence Taylor of Building Magazine, who in 1926 had promoted the extension of the service to country New South Wales, later demanded its closure. By February 1928 it was apparent to Taylor that the service had been instrumental in creating hardship. Homeowners did not see the need to hire an architect. Architects felt that the Institute was undercutting them and there were reports of resignations.

The idea of a small homes service was reintroduced in the late 1940s. The Sydney Morning Herald and Home Beautiful lobbied the NSW Chapter to establish a service along similar lines to that established in Victoria. In New South Wales building costs had doubled between 1939 and 1946 and building materials were very hard to get. There was up to a two-year wait for bricks in areas with no brickworks, such as Hornsby and Pittwater.
By 1952, builders weren't even bothering to tender. It was not until late 1952, when building restrictions had finally been lifted, that the NSW Chapter reluctantly agreed to consider conducting a similar service. Prominent Sydney architect, Morton Herman flew to Melbourne to see the Victorian scheme firsthand. The Chapter had asked two architects, John Coates and Charles Madden, to investigate and their advice was that the time was not opportune.

In September 1952, designs from the Victorian service were published in the Sun Herald alongside a modest timber house designed by Hans Peter Oser for Walter Magnus at Blackheath. The press seemed to have tired of asking and had simply announced that a New South Wales service would be commencing before the Chapter had finalised its negotiations.

The service in New South Wales was overseen by two architects: Frank William Turner and Stanley Albert Morris. Eric (Erik) Sodersten was appointed Director in November 1953 and plans began to be regularly published in the Sun Herald. A Small Homes Service was also opened in South Australia in 1953.

The aim was, as it had been in the 1920s, to raise the standard of home design. A series of talks given by architects including Robin Boyd, Walter Bunning, Peter Muller and Harry Seidler helped to introduce the scheme. Topics included choosing a site, choosing a plan, suitable building materials, and planning for outdoor living. Seidler designed four different small homes and he kept the published designs in his scrapbook. Michael Dysart recalls receiving royalties for his Small Homes Service designs prepared in 1956. The New South Wales series of plans was differentiated from the Melbourne series by their code, having an 'S' at the start. Designs were in brick (S/B), brick veneer (S/BV) and timber (S/T). A conventional three-bedroom (S/BV501) home was one of the initial designs, published 29 November 1953. One of the first timber houses published, S/T403, was much more modern in plan and appearance.

Those living in country New South Wales could write in with their requirements and a selection of suitable plans would be sent out by the service. In 1954‒1955, the NSW Chapter published a series of plan booklets produced by Small Homes Service (NSW) entitled Homes for Every Taste, which included a number of designs that had already been published. The number of designs submitted by members was not as many as had been anticipated when the scheme had been proposed. The total number of designs, including designs by fourth-year students, in September 1956 was about 40. No detailed records that match the published designs with architects have yet been located. Douglas England, Arthur Griffiths and Russell Jack of the NSW Chapter's Younger Members Committee had all submitted designs. By 1957 individual designs had stopped being published. It was among the timber house series that the more modern designs could be found. Despite considerable effort by Bunning to promote modern architecture the public seemed to prefer the more conservative designs. In 1958 Australian Home Beautiful announced that after "a two year analysis of home plan sales, somewhere between conservative and slightly modern lies Australia's most popular home". 1.

Homes for Every Taste brochures produced by the RAIA in the mid to late 1950s. Individual architects' work is not identified.

Image 3 and 4: A number of the issues produced by the Small Homes Service are held in the Caroline Simpson collection at Sydney Living Museums and can be viewed online at: http://sydneylivingmuseums.com.au/post-war-sydney-home-plans-1945-1959

RAIA Small Homes Service Design S/T 403
Published in December 1953
Courtesy of Sydney Living Museums
The NSW Chapter continued to promote the well-designed modern home, and encouraged the Sydney County Council to update their Design for Comfortable Living pamphlet. The Chapter recommended that the Sydney County Council include the House of Ideas designed by Hely and Whitelock for Taubmans at Woolooware. This house survives today.

The Australian Women's Weekly proposed a scheme of their own in each state; however their houses were more expensive, costing up to 7,000 pounds. The NSW Chapter commented that this amount exceeded considerably the generally recognised amount for a ‘small home’. The Australian Women's Weekly home planning centre opened in Anthony Hordern’s department store on Brickfield Hill (south of Liverpool Street, Sydney), and there were centres in Melbourne and Adelaide. The Australian Women's Weekly published plans on a regular basis, some of which actually featured the architect’s name. Not to be outdone, Grace Brothers in Parramatta opened a service during the same month, September 1957. Their home planning advisory service had been operating in their Broadway store since 1954. By the late 1950s many designs were being promoted as holiday homes rather than as main residences.

A similar scheme was planned for Canberra in 1954 and it was intended to obtain plans from both the New South Wales and Victorian small home services. The idea was shelved for a time, as most of the leaseholders in Canberra were employing an architect. In 1958, the National Capital Development Commission (NCDC) decided that it would open a small homes service after all. Victorian designs were used initially, however, the following year, Sydney designs were also available to home seekers, in all a total of 100 plans. The New South Wales and Victorian numbering system was retained. Monaro T355 was a Victorian design, whereas Tallara (S/B301), Goodradgibee (S/T622) and the split-level Booroomba (S/T643) were all from New South Wales.

Small Homes Service (NSW) operated out of the fifth floor of David Jones, and in 1960 a full-sized example was erected within the store as an example. The annual reports of Chapter Council continued to paint a positive picture: “The Small Homes Service (NSW), conducted by the Chapter in conjunction with Home Beautiful, continues to operate satisfactorily, giving a useful public service which aims at contributing to the improvement of design standards in small low-cost houses.”

By 1964 the mood had changed, the Chapter was concerned at what they considered to be the poor standard of design of Small Homes Service (NSW) plans. The Victorian service was cited as an example of the comparatively high standard that could be achieved. The decline in the popularity of the plan service seems to correspond with increased interest in project homes. A subcommittee was set up that recommended the service be disbanded and an alternative developed, however, they noted that the staff “accomplished a minor miracle by keeping the service functioning for nearly 12 years with very little support from the profession”.

In 1967‒1968, pressure from members saw the service continue despite the reservations of the Chapter Council. In 1970, the service was to be wound up as no agreement could be reached regarding an alternative. Ownership of Small Homes Service (NSW) was transferred to the Building Information Centre and the name changed to the SYBIC Homes Service. To supplement their design range, SYBIC held competitions, such as the 1970 Houses for the Seventies.

While the New South Wales service overall may not have been viewed as a success by the Chapter Council, the regular publishing of designs had an impact. The combined living-dining area – initially the result of the need, in the late forties and early fifties, to plan houses in a compact manner to meet official size restrictions – became widely accepted. Living areas opened onto paved terraces. Designs with names like Bringing the Outdoors Indoors, published by the Small Homes Service (NSW), contributed to the widespread adoption of the idea of informal living for which Australia is now known internationally.

FOOTNOTES
1. Sun Herald 21 Sept 1952, AIA Register 4703450
2. Australian Home Beautiful Feb 1958
3. Annual report of the Chapter Council 1962
4. AIA NSW Chapter, September Executive Meeting, 1965

IN FOCUS
More than once Broken Hill has been given five years (or less) to live. That dismal outlook has hampered the progress of the town. Those who have taken the bold and confident view and have acted upon it are the winners today and have been so all along. Let their children prove worthy of them.

The Barrier Daily Miner, September 5, 1933

In January 2015 Broken Hill became the first urban area to be listed on Australia’s National Heritage List. Mary Knaggs from the NSW Government Architect’s Office describes an exciting new project that could infuse the historic CBD of the Silver City with a new energy.
VISION

In 2014 Broken Hill City Council engaged Allen Jack + Cottier, the NSW Government Architect’s Office and Electrolight to prepare a CBD renewal strategy.

The resulting draft strategy forms part of Broken Hill Heritage City – Living Museum and Perfect Light Project - an initiative from Council to foster creativity, inclusion and innovation including a film studio, state of the art conference facilities and festival venues.

The project aims to restore Argent Street to its rightful place in the social fabric of the nation – uniting residents with visitors in Australia’s first National heritage city. The brief provided by Council envisioned a Silver City which features dynamic urban art installations incorporating sound and light technology, sending a clear message to residents, visitors and investors that Broken Hill is a destination differentiated from all others, through its originality, fearlessness, creativity & cultural narrative.

INSPIRATIONS

Community voice
This is more than a main street beautification project. It is authentic, grounded in the place and a reflection of the people. The team gained a clear idea of the core values, desires and concerns of the community. Participants displayed great pride in the unique character and heritage of the town and contributed a variety of creative ideas for urban activation and interpretation.

Colours
The project references the red dirt, stone and rusted steel that has built the town, the vast landscape that stretches to a distant horizon, the huge expanse of sky, the pattern of water through the desert and its hardy vegetation. The ‘Line of Lode’, a massive mound of mining waste that dissects the town, is a major presence, visible from near and far and illuminated by the setting sun.

Perfect light
For decades Broken Hill has been known as a place phenomenally blessed with perfect light. The climate allows a unique clarity and intensity of light by day, and a dark night sky highly valued by astronomers. Reflection was a key project driver: in the landscape and in the glittering silver world of Priscilla. A thriving art scene continues to attract artists, photographers and film-makers to the Silver City.

Silver city
The rich geology of Broken Hill is the reason for the town’s existence. These minerals and elements give their names to the town streets - Argent, Iodide, Oxide, Chloride, Sulphide, Bromide, and Kaolin. It is proposed that the colours of the minerals be used in the new works
such as paving, street furniture, landscape and artworks to reflect the sense of place.

Living museum
The Living Museum is the city, its structures, its people and its culture. The heritage streetscapes provide an unchanging setting for the human story – the blood, sweat and tears that are part of life in a frontier town. Descendants of miners and pastoralists are proud to share their stories. Visitors want to meet and mingle with these characters and learn how they live, work and play.

ACTIVATION + PUBLIC ART
An essential part of the vision is to create a unique, lively and diverse town centre that is safe and open to social and cultural exchange. Activation will be on a daily basis as well as for special events and festivals. The draft renewal strategy recommends a combination of immediate and long-term strategies achieved through council initiatives and public/private partnerships. Immediate actions include wifi provision, illuminated shopfront displays, extended trading hours and pop-up enterprises. Longer term strategies consider a range of town centre housing options, relocating the library as a main street anchor tenant and a diversified retail strategy.

The city becomes a living showcase for home-grown and international artists to tell the many, layered stories of Broken Hill using traditional techniques and leading technologies. Public art strategies include a laneway program that engages with local youth and the development of a new Broken Hill heritage and culture app using first person narratives and imagery to bring the city to life.

LINE OF LIGHT
A key element of the draft strategy is Electrolight's Line of Light which creates an innovative lighting artwork, using reflection to create a landscape that is familiar yet hauntingly surreal.

Beautiful by day and by night, the illuminated cable provides a dynamic physical connection from Argent Street to the spiritual heart of the city - the Line of Lode.

Reflective silver mirrors on the slope of the Line of Lode reflect the Line of Light at night and the sky during the day. These mirrors can be engraved and sponsored by community members and visitors, continuing the tradition of commemorating those whose lives contributed to the story of Broken Hill.

The Line of Light continues down the centre of Argent St providing street lighting during normal operation. Full RGB colour change capability allows thousands of unique lighting scenes and effects to be created for specific seasons, events and festivals.

FACADE LIGHTING
Facades of the heritage buildings are brought to life and celebrated with custom lighting. The use of colour will create a modern twist on a heritage façade on a daily, weekly or seasonal basis or for special events. Various methods will be used - internal video projection which can be themed and tell a story, internal lighting and facade projection.

STREETSCAPE
The intersections of cross streets with Argent Street are a location for a new type of public space. By widening the footpath and providing shade, a place is created for visitors and locals to gather. At Chloride Street, the properties of chloride, its uses and historic relevance to the town will be made evident in commissioned artwork, custom seating and paving.

The draft design complements the language of continuous verandahs by strategic planting of reliable shade trees along streets and in public spaces.

TOWN SQUARE
In the draft strategy the square is the hub of town, incorporating infrastructure for temporary events and wi-fi connection. Shopfronts and verandahs will form active edges with opportunities for outdoor dining and vibrant window displays. By providing a level surface, the reconfigured square becomes accessible to all – a place for everyday gathering, and festivals. Inlaid pavement artwork is overlaid with a thin shimmer of water, using harvested, filtered stormwater and functioning as evaporative cooling in the desert heat. A row of water jets provide play opportunities. The water can be turned off at night, during water restrictions or for special events where space is required.

CONCLUSION
The unique qualities of Broken Hill are seen in the desert environment, its perfect light, the rich geology on which it was founded and its heritage. It is these qualities that are reflected in the draft CBD renewal strategy and concept designs for the town centre.

Client: Broken Hill City Council
Design Team
Allen Jack + Cottier,
NSW Government Architect’s Office, Electrolight
Heritage: GAO Heritage Group
“At Sydney Living Museums we interpret the past through contemporary eyes, melding old with new. It is a rare thing when the architecture and experience of the institution’s headquarters embodies our very purpose and mission. Ten years on, and every day, this special place, gives our visitors and our staff pleasure and inspiration” Mark Goggin, Executive Director, Sydney Living Museums.

This year marks the tenth anniversary of the conversion of The Mint, on Macquarie Street, into the headquarters of the Historic Houses Trust (now Sydney Living Museums). Ten years on, The Mint continues to be a benchmark for the interrelation and synthesis of contemporary architecture and conservation.

With its continuity of use and adaptation from early 19th century to the present day, the Mint is a historically unique site. The buildings have served as a military hospital, dispensary, infirmary for the poor, Royal Mint, public service offices, law courts and museum. The Mint contains one of the oldest buildings in Sydney, the Southern Wing of Governor Macquarie’s Rum Hospital (1811-16) as well as important remains of the Sydney brand of the Royal Mint (1855-1926). These buildings serve as great examples of architecture from the colonial period.

Completed in 2004, The Mint project involved the transformation this precious historical site into a meaningful and accessible public place, characterised by both the conservation and adaptation of heritage structures and the careful insertion of contemporary buildings.

The project has received many awards and remains to be the first and only project to simultaneously receive the Australian Institute of Architects’ Sir John Sulman Medal for Outstanding Public Architecture and the Francis Greenway Award for Conservation. The Mint was also awarded the Lachlan Macquarie Award for Heritage and nominated by the UK’s Building Services Journal as one of the ‘top 30 ground breaking buildings of the world’.

“When we got here the place was wet and dirty and … almost ready for demolition”, yet there was “strange beauty in the crumpled walls and torn facades” Design Director, Richard Francis-Jones.

A sensitive adaptive reuse approach involved carefully weaving a new layer of contemporary architectural forms into the existing heritage building fabric. The design for the new buildings evolved out of the symmetry of the original buildings. Rather than following the centralised geometry conceived in 1854 (by original designer, the Royal Engineer Joseph Trickett) a new asymmetry was created based on the position of the northern entry to the Macquarie Street Mint Offices and the central Superintendent’s Pavilion. The new structures are clearly articulated and distinguished from the older fabric, yet they complement the proportions and geometric alignments of the existing buildings.

A dialectical character embodies these two pavilions; new and old, light and heavy, stone and glass. A collage of materials and forms of the new were created in juxtaposition with the solid sandstone forms to contrast and complement, to create greater transparency and openness, to transform a walled place for secure industrial production into an inviting public place and campus like environment for the Historic Houses Trust.

“The whole ensemble is given cohesion through carefully modulated scale and proportion, juxtapositions of materials, light and shade, old and new, inside and out. A 19th
The 19th century walled factory has been transformed into a 21st century campus.” Judge, Australian Institute of Architects’ Sulman Award and the Greenway Award in 2004.

Original doorways, windows and skylights were re-opened to return light to the buildings and new floors, and openings and services were carefully located to preserve existing fabric with its evidence of use and adaptation. Archaeological elements were also incorporated into the new interiors. A rich palate of timber, steel, glass and aluminium complements the sandstone surrounds, references the site’s Colonial past, and looks to the future - acknowledging timber as an environmental, sustainable resource.

The metamorphosis of the 1850s Mint from a cluster of ruinous and neglected shells to a superb ensemble of restored, adapted and invented forms and spaces... [is] a gift to Sydney... an exemplary collaboration of minds and skills: talented design architects, gifted specialist consultants and a client with a reputation for expertise and innovation in such projects” Australian Institute of Architects jury.

The ‘campus’ combines an exhibition space, flexible theatrette/function space, bar, library, contemporary workplace, a resource centre for the public (the Caroline Simpson Library and Research Collection) and public passages linking Macquarie Street with the Domain. These clearly defined public rooms and facilities are gathered around a central courtyard that is given new life and form as a significant public space of the city. A bold raised grassy platform edged with new stone sits within the historic sandstone courtyard. The scale and form of the new buildings combined with the soft and hard landscaping, has enhanced the nature of the central courtyard as it offers a place to sit and relax in a sheltered public space.

“A quiet oasis in the heart of the city ... a great new asset for the city,” Design Director, Richard Francis-Jones.

A revitalisation of this historically layered site has fostered new uses of this space within the civic realm. The project continues to be visited and referenced by architects and conservators as an exemplary benchmark for; the integration of authentic contemporary architecture within sensitive heritage sites; the creation of a meaningful public open space and public places within heritage environments; the integration of sustainable environmental design into sensitive heritage sites; and the integration and interpretation of archaeological remains. The Mint also continues to successfully adapt to its contemporary purpose and is enjoyed by all sectors of the community, whether as a casual visitor, participant of public programme or tour, attending a private or corporate function, visiting the Sydney Living Museums head office and Library & Research Centre or even enjoying lunch at the Mint cafe.

The Mint provides us with a touchstone for rethinking the merging of conservation and contemporary architecture. The Mint will continue to withstand the test of time as it simultaneously preserves the magical quality of this remarkable historical site, whilst offering a vibrant, inviting public space.

This series of photos of the completed works to the Mint were taken by John Gollings.
EXPANSION AND CONFLICT

13th International DOCOMOMO Conference Seoul

It promised an insight into a culture and architecture that has, for millennia, been overshadowed by its two powerful neighbours: China and Japan. But did South Korea deliver? Scott Robertson reviews the 13th International DOCOMOMO Conference held in Seoul in September 2014.

In the conference title, Expansion and Conflict, Docomomo Korea has reflected the Korean sensibility of a country torn between the politically and culturally expansionist ambitions of indomitable neighbours, and attacked by the expansion of Western culture into North Asia.

Like the Meiji Restoration in Japan, the Korean Emperor (installed when Korea broke away from the suzerainty of China) tried to modernise Korea, but this was quickly terminated when Japan annexed Korea as a colony in 1910. From then on, modernisation in Korea was through the agency of the Japanese overlords.

The Seoul conference, like the 2000 conference in Brasilia, Brazil, challenged the accepted forms of the modern movement by emphasising the clash of cultures in the modernisation of Korea at the turn of the 20th century.

The respected Korean architect and chair of the conference organising committee, Jong Soung Kimm (a disciple of Mies van der Rohe), wrote in the introduction to the conference proceedings:

“The genesis of Modernism may have been a revolutionary process anywhere. In Asia, it had been more tortuous, and it was nothing less than a ‘conflict’, because it entailed superseding a whole inventory of architectural styles before Modernism took root.

“Before Paris was confronted with an apartment block on rue Franklin by Auguste Perret, or Vienna was scandalised by a house without eyebrows by Adolf Loos, the walled city of Seoul was suddenly thrust with a Gothic cathedral on the Myeongdong hill at the end of the 19th century. That was how ‘western’ architecture made its debut on the Korean peninsula.”

Following the opening up of Korea to the Western world in the 19th century, Western architecture, in the form of churches, was introduced by Western architects. The Royal family also commissioned Western style palaces that were also designed by Western architects. Following the annexation of Korea by Japan in 1910, Western style buildings were designed and constructed by Japanese architects. It was not until the interwar period that Koreans were educated as architects in Japan at the Imperial
Today's Korean architects more than any other group are redefining the tradition of building re-use that had, in fact, been the original catalyst for the establishment of Docomomo in 1988, when the organisation’s founders conserved the derelict state of the Netherlands first high-rise building and the conservation challenges in repairing Mies van der Rohe’s S.R. Crown Hall in Chicago, and the conservation of the Netherlands first high-rise building, the Rijnhaven office building in Eindhoven.

When Docomomo Korea formally became part of Docomomo in 2003, its booklet of the 100 most important South Korean buildings emphasised buildings dating from the beginning of the Japanese colonial era in 1910. This was the beginning of Modernity for Koreans because of the profound effect western culture had on their society.

If you accept that the Modern Movement was not a style but a way of seeing the world and working towards its betterment (or at least change), then the Korean emphasis on such architecture is perfectly acceptable and challenges the stylistic emblems of white box, flat roof, strip window European Modernism.

The Technology sessions included an excellent presentation by Australians Peter McKenzie and Peter Hartog on the concrete façade of Sydney’s MLC Centre, the conservation challenges in repairing Mies van der Rohe’s S.R. Crown Hall in Chicago, and the conservation of the Netherlands first high-rise technical college.

At the conclusion of the conference, Docomomo’s founding credo, the Eindhoven Statement was modified to explicitly include the re-use of Modern Movement buildings. This revised Eindhoven-Seoul Statement codified the existing practice of building re-use that had, in fact, been the original catalyst for the establishment of Docomomo in 1988, when the organisation’s founders conserved the Zonnestraal Sanatorium in the Netherlands.

The conference venue, the National Museum of Modern and Contemporary Art, Seoul (MMCA Seoul), was a physical demonstration of re-use as the old wing of the museum was a former 1930s Japanese military hospital and the new wing is a four-storey building half buried in the ground to maintain the sightlines to and from the adjacent Gyeongbok Palace.

In conjunction with the conference, there was an exhibition of modern architecture organised by MMCA Seoul and Docomomo Korea that concentrated on South Korea’s post-war Modern Movement heritage, and, prior to the conference, there was an international student workshop on the adaptive re-use of a one kilometre-long concrete megastructure, the Sewoon Arcade. The results of the workshop are available online through the Docomomo International website. Website for the student workshop (each student team has its own link but all the links can be access from the following): http://www.docomomo.com/docomomo_news.

The next Docomomo conference will be in Lisbon, Portugal, from 6–9 September 2016, and will include a conference tour to Porto to examine its modernist heritage, including a conference meal at the seaside restaurant designed in 1954 by Pritzker Prize winner Álvaro Siza, which he recently saved from a derelict state.

Scott Robertson BSc(Arch), BArch(Hons), M.B.Env(Blg Conservation), PhD, FRALA

Scott Robertson is a director of the Sydney-based architectural practice of Robertson & Hindmarsh Pty Ltd. He is President of Docomomo Australia, a member of Docomomo International’s Advisory Board as well as a member of its Scientific Editorial Board. He was a National Councillor and Treasurer of the Australian Institute of Architects, a part-time lecturer in architectural practice at the University of New South Wales and is the author of articles in journals and chapters of books on the history of architecture and conservation.

All of the photographs were taken by Scott Robertson in 2014.
HERITAGE AND LANDSCAPE AS HUMAN VALUES:
Icomos General Assembly 2014

Sheridan Burke reviews the 18th triennial General Assembly (GA) of ICOMOS which took place in Florence between 9 - 14 November 2014.

One of the highlights was the new section of Florence’s mercato central at San Lorenzo, dedicated to Italy’s speciality food and wine. Photograph by Sheridan Burke
Since 1976 Australia ICOMOS has been committed to improving conservation philosophy and practice for culturally significant places. With over 600 members it's one of the largest national committees of the Paris based NGO which acts as a cultural heritage adviser to UNESCO. Australia ICOMOS members developed the Burra Charter in 1979 to guide Australian conservation practice, and it's widely regarded today as international best practice.

More than 1600 participants from 94 countries represented 73 of the National Committees of ICOMOS and 28 of the ICOMOS International Scientific Committees (ISC) at the 18th triennial General Assembly last November. The Australian delegation numbered 45, presenting scientific papers, chairing committees and program sessions.

The theme of the Florence GA was two-fold: heritage as a human right and the importance of landscape heritage in building a peaceful and democratic society. The Assembly adopted the Florence Declaration on “Heritage and Landscapes as Human Values” resulting from the discussions during the Scientific Symposium. Speakers argued that 'In Europe, the farmer is an endangered species' citing compounding threats to landscape that require the development of new management concepts that bridge the gap between culture and nature conservation. The critical importance of sharing knowledge -innovative and traditional- amongst conservation practitioners and those responsible for the complex management and governance of cultural landscapes resounded in most case studies.

After many years of debate, the members at the GA agreed to amend the ICOMOS Statutes, dating from 1978, to improve the organisation's governance and incorporate in the new statutes the ICOMOS Ethical Principles; the essential, internationally agreed, statement on professional ethics which governs the work of all ICOMOS members.

Forty nine resolutions were approved by the GA business sessions, over 60 evening and side events, including a Youth and Heritage Festival, were held during the GA programme – the most important being the celebration of the 50th anniversary of the Venice Charter and the 20th anniversary of the Nara Document on Authenticity. Florence lived up to its reputation for fine food and wine, and repeat visits to the newly refurbished San Lorenzo Markets were enjoyed by all, demonstrating how the city has embraced food as cultural heritage and promotes it so successfully.

Of particular relevance to Australian architects was the international launch of the Nara Document on Authenticity. Florence lived up to its reputation for fine food and wine, and repeat visits to the newly refurbished San Lorenzo Markets were enjoyed by all, demonstrating how the city has embraced food as cultural heritage and promotes it so successfully.

A dozen international honorary members of ICOMOS were announced, including Ms Kristal Buckley, a former ICOMOS VP, from Australia.

Of special satisfaction to the delegation of 45 Australians at the GA was the resounding election to the international ICOMOS Executive Committee (2015-2017) of Sydney architect Peter Phillips, Life Fellow of the Australian Institute of Architects and a past Chairman of the RAIA (NSW Chapter) Architecture Conservation Committee.

In addition to the GA business sessions, over 60 evening and side events, including a Youth and Heritage Festival, were held during the GA programme – the most important being the celebration of the 50th anniversary of the Venice Charter and the 20th anniversary of the Nara Document on Authenticity. Florence lived up to its reputation for fine food and wine, and repeat visits to the newly refurbished San Lorenzo Markets were enjoyed by all, demonstrating how the city has embraced food as cultural heritage and promotes it so successfully.

Of particular relevance to Australian architects was the international launch of guidelines for Twentieth-Century heritage management entitled: Approaches for the Conservation of Twentieth-Century Architectural Heritage (Madrid Document)². This publication marks the finalisation of an international review process by the ICOMOS ISC for Twentieth Century Heritage, and the translation of the document into a dozen languages already is an indication of its usefulness in architectural practice.

The papers presented at the Scientific Symposium of the GA will be published. The papers focussed on tourism and interpretation; environment as cultural habitat; sustainability through traditional knowledge; and local empowerment. The theme on emerging tools for conservation practice included papers on projects involving the use of survey drones to map archaeological sites; underwater robots; a multitude of new GIS and laser scanning applications from art restoration to entire landscape units; and practical survey and engagement tools such as the Arches Project, presented by the Getty Conservation Institute.

The ICOMOS Florence GA was notable for the increasing visibility and audibility of a newer generation of Asian colleagues, even though the event itself was in Europe and focussed on new young members involved in international ICOMOS activities, lending vitality and fresh engagement with ICOMOS, which this year celebrates its 50th anniversary.

The next ICOMOS GA will be held in Delhi, India in October 2017. It too will be a lively and stimulating event showcasing newly emergent Asian committees with a diversity of conservation approaches open for debate.

FOOTNOTES

For additional information visit:
Australia ICOMOS toolkit
australia.icomos.org/publications/australia-icomos-heritage-toolkit/

Madrid Document
icomos-isc20c.org/id13.html

Sheridan Burke is a partner at GML Heritage and is president of the ICOMOS ISC (Twentieth Century Heritage).
MODERNISM WEEK 2015:
Snapshots from Palm Springs

One of the world’s biggest celebrations of mid-century architecture and design, Modernism Week marks 10 years in 2015. Former Architecture Bulletin Editor Laura Wise visited Palm Springs and sent back these snapshots from festival.
Image 1 Public fireplace at The Ace Hotel.

Image 2 Poolside at The Christopher Kennedy Compound – Modernism Week Show House 2015.

Image 3 Modernist masterpiece from the Twin Palms neighborhood walking tour.

Image 4 Twin Palms neighborhood walking tour.

Image 5 The view from The Christopher Kennedy Compound patio.

Image 6 Matching automobile and abode design captured during the Twin Palms neighborhood walking tour.

Image 7 Modernist magic extends to the smallest details in the backyard of a home from the Twin Palms neighborhood walking tour.

Image 8 Palm Springs modernist perfection on the Twin Palms neighborhood walking tour.

All images: Laura Wise.
A residential project in Longueville, Sydney has benefited from versatile shading solutions provided by the Markilux Planet range.

The home, located next to the picturesque Lane Cove River, required awning coverage for an upper balcony and for the pool area that overlooks the river itself.

Simon Lightfoot of Blindmaster, which supplied and installed Markilux products for the project, said the poolside location in particular required a specialised approach.

"The client required a bespoke shading solution for the seating area around the pool and over the pool itself. One of the hurdles with this installation was that there was no wall or façade available for fixing an awning."

"In addition the client wanted something a bit more upmarket than a simple cantilevered umbrella; it also had to be able to withstand high winds, while the anti-corrosion profile of the product finally selected was ideally suited to a waterside location."

That product was the Markilux Planet, a freestanding structure ideally suited to alfresco living for use in gardens, patios, decks or poolside areas.

"The client actually came to us requesting the Markilux Planet as it had been highly recommended by their landscape designer. They looked into the product and discovered that it ticked all the boxes for them."

"Designed and manufactured in Germany, in terms of aesthetics and functionality, the product is perfectly designed. Anchored to a concrete base, the Markilux Planet has a 15 square metre shading footprint and instant aesthetic appeal. In addition the Servo Assisted Gearbox provides smooth operation for the manually controlled system chosen."

"The model selected was the Markilux Planet Fix in the 6000 Uber cocoon version, which has a stunning, high-design profile."

"For the fabric, the client selected a vibrant green stripe, which provides a beautiful ambience and blends well with the surroundings and nearby plantings," said Simon. "The fabric is impregnated with UV inhibitor which gives it SPF 50-plus sun protection, of huge benefit in the harsh Australian climate."

The Markilux Planet is available in seven standard colours or can be custom powder coated in over 200 colours, while the range also encompasses 250 fabric patterns. It is available in two versions: fixed in place as the Markilux Planet Fix or as the Markilux Planet Flex, which can be rotated by up to 335 degrees. The system is also designed to be coupled with a wide range of ancillary shading devices if required, and is available in both manual and motorised versions.

"Aside from its clear functional benefits, the Markilux Planet installed at Longueville provided real visual and functional enhancements to this beautiful riverside home."
Cambridge tiles from Monier have proven the ideal roofing product for a Hunter Valley “dream home.”

Built in a style influenced by French Provincial and New Hampshire aesthetics, the home’s owners had stipulated that it should be constructed with quality and longevity in mind, meaning materials were key; the resulting home has a granite base and façades in rendered brick mixed with weatherboard.

Finding the appropriate product for the roof was critical to completing the project to the owners’ quality requirements. They had specified a dark, grey-black roof with the look of slate, but offering solidity and durability.

Builder Neil Albert of Stibbard Homes, who led the home’s construction, said there were valid reasons not to go for the obvious choice of slate, which is frequently imported from China and, while more expensive than roof tiles, is not always of consistent quality.

Albert, who has used Monier products for 25 years, confirmed that ultimately the Monier Cambridge roof tile was selected. The Cambridge offers the beauty and traditional look of slate with the benefits of a modern day material.

“The Cambridge roof tile fulfils everything we wanted; it ticks every box,” commented the homeowners. “It looks robust. It looks solid. It’s the colour we wanted. It’s not too dark. It’s not too light. It’s not shiny. It’s flat and not corrugated. It just compliments the house perfectly. It’s lovely. We wouldn’t swap it for anything.”

In addition to the Cambridge used on this Hunter Valley house, Monier also offers the Georgian, Madison and Nullarbor profiles, combining the aesthetic of natural slate with the benefits of modern materials at an accessible price point.

Flooring supplied by International Floor Coverings (IFC) has stood the test of time in the high traffic zone of a leading Sunshine Coast resort.

Liz Myers of IFC confirmed the company supplied 194 square metres of IFC Platinum Antron Megaweave 280 to the site now known as Aqua Lounge and Bar (formerly known as Mel Bar) at the Novotel, Twin Waters on the Sunshine Coast.

“This product has an extreme heavy duty use wear rating, very suitable for all commercial applications and is fire rated for all classes of buildings and fire isolated exits,” said Myers.

“The Antron also has Teflon soil/stain resistance technology, making this the perfect carpet for high traffic, contract commercial projects.”

The range features woven Antron in Sisal style designs with Teflon fabric protection. Its secret lies in a patented hollow filament construction with precisely placed interior channels running along the fibre’s length, minimising the visual effects of soiling without compromising wear performance.

With the flooring installed in 2008, Twin Waters’ executive assistant manager Bradley Conder attested to its durability.

“It’s held up extremely well given the amount of work it has to do. We have 125,000 guests coming to the resort every year and for 15 weeks of each year, during the school holidays, we have around 400 to 500 kids in this high traffic area. If you can think of the worst things kids get up to and multiply it by about 450, this is the kind of treatment the floor is subject to; we’re talking about food and dirt literally being ground into the floor. With professional cleaning on a reasonably regular basis, it still looks very good.”
Multidisciplinary design firm Hassell has radically streamlined its ability to capture and share information through specialist software package Newforma

Operating in architecture, landscape architecture, interior design and urban design across Australia, South East Asia and the UK, in addition to other regions as projects require, Hassell works across multiple studio locations and handles a plethora of information at any given time. As such, a new solution was required to enable the company to access information more quickly and efficiently.

Hassell technology manager Johnny Chloride says the firm has been a Newforma customer since late 2012 early 2013. “We first became aware of Newforma through blogs and specialist publications. We went along to a seminar in Perth some years ago and the program then resurfaced in the last couple of years as it grew and gained more market share.”

The company adopted Newforma because it had reached a pivotal point in its existing document management system, which was based on the SharePoint system, he says. “We felt we’d gone as far as we could go and it needed some more key features and to be more aligned with our industry. Newforma looked like it was going to be the best fit.”

While Newforma offers a wide breadth of features, Johnny says the key features Hassell staff members are using to best effect are project email and file transfer, which enable them to send large files outside the organisation to consultants and clients. “The email filing component was taken care of with our previous system, but nowhere near as well as Newforma. In terms of sending outside of the Hassell organisation, this was also being taken care off with a hybrid FTP solution, which was a little messy and needed a lot of administration to maintain.”

“The improvement with Newforma is that you can file directly from Outlook. We can now file emails from Outlook from a mobile phone, from iPhone email and from a desktop. In addition, being able to find those emails is just incredible; there’s really no other way to describe the email search offered by Newforma. It allows you to pinpoint a specific email that you’ve received in the last six months or year, very, very quickly.”

Because Hassell runs multiple studios across different locations, the connectivity offered by Newforma is also a significant bonus, he says. “Before Newforma, we were able to interconnect with our network in different studios, but being able to see and search for files was very slow; so slow it wasn’t really workable. Using Newforma Project Centre now allows us to connect across to different studios but then also to search all those files and see the information in them; and you can do this without having actually to open the files themselves.”

“A key advantage of Newforma is in risk mitigation,” Johnny adds. “It reduces risk because we’re not losing project related emails in people’s mailboxes. For example when a staff member leaves the company, the email box is decommissioned and a particular email that may be specific to the project risks being lost. Now, because emails are filed across into Newforma, they’re saved for ever after.”

“And because Newforma makes it just so easy to be able to file emails for people and projects, people end up filing more emails related to the project. Conversely when people leave Hassell we have saved those emails in the project.”

In addition, using Newforma, particularly the Info Exchange website, enables people outside the Hassell network to connect to files that have been shared directly from the project folder. So at any time people can log in from a website and access those files from any device, using a web browser.

“Another way that Newforma is enabling our people on site is with the Capture App,” says Johnny. “This captures defects directly on site and saves them into...
our projects back at Hassell. Before Newforma, our people were using Excel files and pieces of paper and clipboards, and the information then had to be transposed into a spreadsheet or document once they came back to the office, resulting in double handling. Newforma was surprisingly easy to implement, he says.

“Since we have over 250 different applications and add-ins, implementing Newforma was really straightforward and that’s because it acts as an additional layer that connects into the existing project folders.”

It is also user friendly, he says, with new users of Newforma having taken to it exceptionally quickly. “I think this is because it’s laid out in a straightforward manner. There’s also a contextual task panel that appears on the left hand side; as you work your way through the different project activities, the tasks that appear in that task panel match with the project that you’re in.”

“Implementing Newforma, you can quickly see the difference it makes. When people come out of our one hour training sessions, they’re confident and motivated to use it. When they get back to their desk and they start using it they really embrace it. Features like the Info Exchange mean they’re easily able to see really large files, which provides a real incentive to use the application.”

“I’d describe Newforma as a piece of software that acts almost like an internal Google. It lets you search through different project folders and it will index not just the files, but also the text within the files and be able to return those results really fast. It’s quite incredible.”

“Once you’ve used Newforma, if you try to go back to just basic project folders, you miss those features like searching and being able to easily file all your emails directly into the project. This is significantly harder without an application like Newforma.”

“I believe because of the unique features it offers, Newforma is the best available in the market at the moment. You can’t get better than that.”
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