



SAIA-KZN NEWS

SAIA President 2020-21

By way of a virtual inauguration, Kate Otten was recently declared 68th president of the SA Institute of Architects.



Kate is Durban-born and commenced her studies in Architecture at Natal in a cohort of 'stars' that included Bruce Clark, Michál Cohen, Dean Jay, Janina Masojada, Erik Orts-Hansen, Colin Polwarth, Ruben Reddy, the late Mike Tod, Cindy Walters and more.

On graduating at Wits and gaining experience in the offices of Jo Noero and Henry Paine, Kate commenced private practice in 1989 in Johannesburg. To her various SAIA awards, should be counted the honour of $25^{\mbox{th}}$ Sophia Grav laureate in 2013. Congratulations, Kate!

KZN is well-represented on SAIA Board. At the same ceremony Ruben Reddy of the original cohort with Kate at Natal was declared SAIA vice-president. Incoming K7N-president Skura Mtembu is a Board member, while Karuni Naidoo, who is coopted, chairs the Transformation Committee.

SAIA-CEO



The SA Institute of Architects has announced as its new chief executive officer Mthembeni Mkhize. This is the first time that a KZN

member has been appointed to this high office and only the second time that the incumbent is an architect. Although Mthembeni opted for a career in practice, he later joined his alma mater, Natal/UKZN, and rose to become the Architecture discipline head, where his even-handedness in stabilising architectural education saw

SAIA-KZN confer on him a scroll of honour in 2015. Mthembeni will be

relocating to Johannesburg to join the team at the SAIA national office, now based in the Design District Building, 3rd Floor, corner Tyrwhitt and Keyes Avenues, Rosebank with the very best wishes of his colleagues in KZN.

Hans Hallen 90!



On 31st August, Durban-born SAIA gold-medallist and architectural legend, Hans Hallen, turned 90 in Sydney, his adopted city since 1987.

To mark the occasion, Silvia Bodei, senior lecturer in Architecture, UKZN, has edited a book on selected Durban projects of the 1960s. essentially by the practice Hallen & Dibb, with chapters by herself, Rodney Harber, Michelle Jacobs and Walter Peters, and a concluding interview with Hallen. The book of 153 pages is published by Libria of Melfi, Italy, and is available at €20.

In this auspicious year a number of other SAIA-KZN legends turn 80: Paul Mikula (31 May), Gerald Seitter in Vienna (9 September) and Rodnev Harber (9 October). while Prof em. Don Dyke-Wells turned 95 (13 February). Happy birthday to them all.



Letters

SAIA-KZN Journal 1/2020: Aotearoa (New Zealand): The KZN contribution

Sydney Baillon of Howick applauded the online version of the Journal and praised the contents of this particular edition: "It reinforces what I have often stated that, given the opportunities, South African architects can take on the world and be a force to contend with. Those South Africans who opted to emigrate to New Zealand in this instance, are a credit to themselves and the country they have settled in but all sadly at South Africa's loss."

While Andre de Graaf from Auckland wrote 'Congratulations and well done on the years of dedication to this publication. To be honest I had lost touch with KZNIA activities but now find myself once again intrigued with the goings on back in SA. So, thank you for opening that door again too. Keep safe and all the best."

Barbara van Zyl, Auckland, wrote "Congratulations Errol and Wally – what a labour of love! Thanks very much...for collating this material into a great edition of this Journal. I enjoyed reading everyone's articles and good to catch up on KZN news." "One thing is for sure we had an excellent grounding at Natal School of Architecture all that time ago."

"I fully concur with Barbara's sentiments...it was an honour to be invited to participate in the KZNIA Journal. Stay safe...strong and kind." Thom Craia. Christchurch

"...and, likewise, from me. Well done everyone involved and many thanks Wally for vour longstanding dedication to the profession." André Hodgskin, Auckland



Editor's notes

 \equiv his issue falls within the lockdown enforced since 20th March to stem the Covid-19 pandemic. While almost every activity, and construction in particular, has been stopped in its tracks for five months now, and even the annual academic highlight, the Corobrik student of 2019, cancelled, SAIA-KZN is delighted and grateful indeed that Corobrik has advised, nevertheless, to continue with this Journal in the strained economy.

With that godsend, in this issue we can feature the Point Promenade, the last piece along Durban's beachfront, which now stretches for 8km, from Blue Lagoon on the uMgeni River mouth in the north to the harbour entry on the south. The portion from Country Club beach to uShaka Marine World with a link to Moses Mabhida Stadium was realised 2009-10, to a deadline determined by the FIFA World Cup kickoff, see KZNIA Journal 3/2010, while the northernmost section to Blue Lagoon was completed subsequently. The southernmost portion took all of seven years from incubation to realisation, of which period construction was carried out in 2018-19 - at a cost just under R400m! But, the impact of the investment for Durbanites and visitors alike is priceless, and something well worth documenting.

Although South Africa moved to lockdown Level 2 on Tuesday 18th August and with that entered into a new phase of the Covid-19 pandemic, we continue to live in hope that normalisation will return – and soon. Walter Peters, Editor

This journal, now in its 45th year of publication, has from inception been sponsored by Corobrik.

••• COROBRIK

Editorial Board: Angela Wilson (Chair), Kevin Lloyd, Lauren Haiden, Chantal Pieterse, Karuni Naidoo, Louis du Plessis, Silvia Bodei, Deborah Whelan, Garryn Stephens (student member). Editor: Walter Peters Assistant: Janet Whelan Published by: SAIA-KZN, KwaZulu-Natal Region of the South African Institute of Architects. 160 Bulwer Road, Durban 4001. Tel: 031 201-7590 Fax: 031 201-7586 E-mail: admin@kznia.org.za Website: https://www.kzniajournal.org.za/find-journals Copying of any material from this Journal is encouraged, provided the author and SAIA-KZN are acknowledged.



INSTITUTE OF ARCHITECTS SAIA KWAZULU-NATAL

COVER: View northward from upper deck of the Point Promenade.

ABOVE: View from north showing the two-levelled Point Promenade in the foreground of Durban's Bluff. The Millennium Tower atop the Bluff remains unrepaired since storm damage of October 2017 (see *SAIA-KZN Journal* 2/2018). The needle at right is located on Timeball Square (see *KZNIA Journal* 1/2009).

Photography: Craig Hudson



BACKGROUND. In early 2013 COX Architecture of Sydney, Australia, was appointed by UEM Sunrise, Malaysia, to undertake an analysis of the current Development Framework Plan (DFP) for the Point. The brief was to discover what was needed to revive the project and resolve the planning impasse and sales vacuum, but it soon became apparent that the impediments to development had resulted from 'Save Vetch's Pier'* campaign, finding suitable accommodation for water sports clubs, including Point Yacht Club, and seine netters **.

In the revised DFP the following amendments were proposed:

- Providing a looped road system with a simple and legible layout for travel within the various designated areas of the Point.
- Abandoning the proposed small craft harbour and instead providing for a boat-launching site with direct access from the parking area (The small craft harbour was to have been located between Vetch's Pier and the North pier of the harbour entrance canal).
- » Conserving Vetch's Pier.
- The canal system to remain as an internal water body not connected to the ocean as originally proposed (see KZNIA Journal 1/2008).
- Easy vehicular access to the beach for emergency and maintenance vehicles as well as for launching of boats at the southern end.
- Landscaping with dense vegetation appropriate to Durban's sub-tropical climate.

*Vetch's pier is named after Captain James Vetch, an engineer attached to the Admiralty in London, who in 1857 produced a report and plan to improve the harbour entry, obstructed by a sand bar, yet he never actually visited Durban. His proposal was to enclose the natural entrance by means of two breakwaters, one curving northwards from the base of the Bluff headland and the other curving southwards from the Point beach. Construction of the latter began in 1861 only to be abandoned in 1864, largely because Vetch's plan ignored the prevailing wind and ocean currents. In time the submerged finger of the incomplete pier, which expensive relic drained the colonial treasury for years to come, redeemed itself by developing into a marine sanctuary and reef, and a valuable asset of Durban. ** Seine netters are fishermen who fish with a net called a seine that hangs vertically in the water with its bottom edge held down by weights and its top edge buoyed by floats. In Durban this method is traced to indentured labourers who on release commenced seine netting, originally on Salisbury Island. Today's netters are licensed to net 'mixed shoal fish' all year round and may operate along the beachfront and use rowing boats to deploy their nets.

- Solution use of the second second
- Replacing the proposed central multi-level car park with disbursed parking areas and public transport options.
- All building developments to be located behind a setback line.
- A promenade was proposed to be located between the erosion line and the building set-back line.
- Accommodation for water sports clubs, seine netters and public car parking integral with the proposed promenade design.
- An extension of Prince Street southward to afford better access and entry to the Point.
- A transport hub to be located within the precinct on ground level with mixed-use development over.
- Floor-space-ratio increased to accommodate the feasibility and functional requirements of the Point, particularly along the beachfront strip.
- The height of buildings along the waterfront and harbour to be amended to achieve a better cityscape and image.
- Public access along the entire beachfront promenade with designated portions for swimming, fishing, canoeing and boating.

The revised DFP took cognisance of the Record of Decision entered into with the Department of Environmental Affairs, amendments associated with the abandonment of the proposed small craft harbour, the implications of the promenade and the harbour entrance canal, and restricted all building development to behind the erosion line. **3**



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FROM A TOWN-PLANNING consideration, the Point precinct extends from the alignment on the north of Margaret Mncadi Avenue (formerly Victoria Embankment) into Dr Langalibalele Dube (formerly Winder) Street and Rochester Street to the harbour mouth in the south, and from the Point beachfront on the east to the port land along Shepstone Street which extends as Mahatma Gandhi (Point) Road on the west. Additionally, the precinct includes the area containing the existing terminals for passenger cruises, for vehicles and for multi-purpose cargo, as well as the Transnet offices on the former Ocean Terminal pier.

The primary strategic roles identified for the precinct were tourism, entertainment, recreation and residential. To this end the eThekwini Inner City Local Area Plan states that "The development of the mixed use area at the end of the Point will greatly enhance the tourism, office and commercial role of the precinct" (7.6.1.2) and that "Ecologically the protection of the beach area is important for the resilience of the precinct and for the protection of new infrastructure from coastal storms and sea level rise. Biodiversity will be improved with the indigenous landscaping of the area" (7.6.1.4) (*eThekwini 2040 Inner City Local Area Plan*, November 2016, both p.190).

The same document cites as 'key ideas' for the Point:

- Extending the current promenade around the full extent of the precinct to link to the Margaret Mncadi waterfront area and the pedestrian cycle link to the provide the state of the pedestrian cycle
- link across the city back to the uMgeni River;
 Development of the new cruise terminal at the south of the precinct, linking this to the precinct and the continuous promenade; and
 Development of the southern-most portion including the following:

- Urban regeneration to create a unique and vibrant area which offers commercial, retail, residential and tourism opportunities.
- Enhanced beach environment by linking it to the rest of the beachfront.
- Continuous beach and harbour promenade, extending Durban's existing promenade (see *KZNIA Journal* 3/2010) bringing users to this southern area.
- Accommodation for water sports clubs and seine netters underneath the promenade and promoting their integration into the economic spinoffs of an amplified tourism product.
- Sub-tropical landscape, promoting the indigenous character of Durban through appropriate and signature landscaping.
- Promoting Durban's identity as an exciting 21st century African city by creating a built environment that is integrated with the central business district.
- Transportation node, to link users to uShaka, Point precinct area and other parts of the development.
- A rational road system, that promotes linkages and traffic flows rather than severing areas from each other.
- Creating new living opportunities in a range of accommodation typologies that will respond to a growing demand for realty and in preparation for catalytic events.
- Expanded retail and hotel opportunities, especially concentrated in the uShaka precinct.
- New and various commercial sites designed to complement the residential areas.
- Support for the operation of uShaka as a major tourist attraction.



VERSO: Bay around which Durban grew is protected by two promontories. The one on the north, known as the Point, is about oneand-a-half km long and rises just a metre or a little more above sea level. The one on the south is a sand-dune, known as the Bluff, which skirts the south-eastern shore of the bay for about 6km and rises to over 90m above sea-level. At the end of each of these a pier was built out to the sea to protect the harbour entrance.

ABOVE: The southern part of the Point merges with the harbour entrance, widened and deepened in 2010.

THE POINT PROMENADE



Glanville Jacques, B.Arch (Natal) 1979; MCP&UD with distinction (UCT) 1983. Began at ZAI on Durban Exhibition Centre (*Architecture SA*, July/August 1984); and in 1988 joined Stauch Vorster (SVA; Director 1994-2008). Inner city projects with SVA include 88 on Field office building (*NIA Journal* 3/1993),

WWW.

Old Fort Road precinct; Kingsmead Office Park (Design Review member from inception in 1997); lead architect for the First Rand office building, La Lucia Ridge (KZNIA Journal, 3/2003). Joined IYER in 2008; partner as of 2011. Projects include Moses Mabhida Stadium precinct, ILASA awarded (KZNIA Journal 1/2010); Cornubia new town including housing and IRPTN project (SAIA-KZN Journal 2/2018); Point Promenade; and Greenhaven Lifestyle Estate, Pinetown. Urban Design tutor at

Urban Design tutor at UKZN (2006-2013) and DUT (2007 & 2008).



John Ferendinos, B.Arch (Natal) 1984. Joined FGG and in 1986 Stauch Vorster (SVA; Director 1994-2003); project lead architect for ICC Durban with HCS, JMA and Philip Cox (*KZNIA Journal*, 1/1999). In 1999 moved to SVA, Cape Town, for CTICC collaboration. In 2003 joined COX Architecture in Sydney; Durban ICC expansion with ZAI, Ruben Reddy Architects and OMM Design Workshop (*KZNIA Journa*(1/2006); and Point Promenade with IYER.

Completed projects with COX include Civic District, Jubilee pedestrian bridge, and Concourse Skyline apartments, Singapore; Indonesia ICC, Jakarta; Kaohsiung ICC, Taiwan; and Ken Rosewall Arena and precinct upgrade at Sydney Olympic Park. Current projects include replacement of Sydney Football Stadium, Centres of Excellence for Cricket NSW and Waratahs Rugby, and the new Sydney International Speedway.

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Sketches by Philip Cox, 2016:

- View from the promenade deck towards the harbour entrance and Bluff.
- The proposal of a double-level promenade with tower buildings indicated in the background.
- Access to the beach through the structure at the southern end of the promenade terminating Mahatma Gandhi Road.

Typical section. The promenade is a two-level structure – the deck is at the upper level and at the lower level are facilities for water sports clubs, seine netters, public ablutions, public parking, lifeguard facilities, boat storage, first aid facilities and cleaners' change rooms and dining facilities.

Ground conditions and water table might mitigate against the incorporation of basements.



THE POINT PROMENADE structure, which is a strategic component of the DFP, was implemented jointly by COX Architecture, Sydney, and IYER Urban Design Studio, Durban, together with a range of consultants for the Durban Point Development Company.

The structure was designed to be a new public domain, which connects the existing beachfront promenade with the north pier of the harbour mouth while improving public access and convenience to Point beach, one of the safest and most popular in Durban. It is also the only north-facing beach and, because it is sheltered by Vetch's Pier, offers calm, warm, all-day swimming for all ages.

For accommodating water sports clubs, seine netters and beachgoers generally, public parking,



any dedicated spaces, ablutions and change rooms, lifeguard facilities, boat storage, first aid facilities and cleaners' accommodation were all located on the lower floor, where a timber boardwalk provides continuous access along the seaward face. Parallel to this runs a vegetated dune that will discretely act as a storm surge buffer in extreme climate events and prevent the beach sand from blowing onto the boardwalk and into the facilities. Public shower facilities are provided within the dune vegetation zone (see cover)

Vehicular access from the rear is achieved by two roads, one which is an extension of Browns Road and the other on the south is the termination of Mahatma Gandhi Road. The former gives access to public parking areas and allows for emergency vehicles to gain access to the beach; in addition, the latter dedicated to water sports clubs, for which a 4m structural headroom clearance was provided to ease ski-boat

2

access and egress to the beach. To reduce congestion and for security purposes, all parking areas are controlled by access control systems. As parking and ablutions are consigned to the lower level they are



out of sight in the environment and create the opportunity for pedestrians to stroll along the deck above free from vehicular traffic, while also enjoying full access to the beach below or connecting by the ramps to future inland structures. The deck, or promenade, performs as a public space with seating areas clustered around trees and lighting, and has a lifeguard tower positioned to give views over the full extent of the beach. Over time the deck will afford an opportunity for activity through bars, restaurants and retail outlets. It is intended to complement the high tourist pursuit of uShaka Marine World and offer prolonged stays within the precinct. Pedestrian access to and from 'back-of-beach' is via ramps.

Universal access to the lower timber boardwalk and beach is provided by ramps on the northern and southern ends of the promenade, and a centrally located combined stair and ramp doubles as an amphitheatre for public events.

An important objective was to create a simple but significant piece of infrastructure with the form of the design drawing clues from its natural setting on the coastline melded with patterns originating from the original dune vegetation. As such, the plan form and paving design were influenced by wave patterns with durable construction and finishes to respond to the harsh beachfront conditions.

Planning and documentation commenced in November 2015; construction began in January 2018 and completion in November 2019. **W**

ZONE 5

BEACH

ZONE 4

8

ZONE 6







Marine Civil Engineering

A report prepared by the marine civil engineers indicated that based on a 100-year return period storm event, including climate change to 2070 and the upper limit sea level rise scenario of 550mm, the design erosion levels would vary along the length of the promenade from 0m MSL, 2,4m MSL and 1,2m MSL.

It was thus determined that a medium sea level rise scenario of 350mm was appropriate for determining wave run-up levels, and the design could be adapted to accommodate a higher sea level rise, should this occur during the lifespan of the structure, through the raising of the height of the vegetated dune buffer on the seaward side.

Erosion and shore protection

A structure comprising sheet piling was chosen for shore protection. The sheeting follows the curves of the front of the structure and piling was driven to three different depths to accommodate the three different erosion levels identified by the marine civil engineers. The task was left to the main contractor, and the

> site was divided into ten zones for accommodating 433 piles varying in lengths of five, ten or eleven metres.

The Structure

The promenade structure is approximately 700m long. Construction was split into zones working outwards from the middle with the two sides being constructed simultaneously. As the construction site was reclaimed beach area there was a high number of weak pockets, approximately six metres deep. The shallow water table, at two metres deep, affected approximately 70% of the sewer trench and culverts, and a variety of other obstructions hindered the piling process. Piling. Continuous flight auger (CFA) type piles were the most feasible founding solution due to the existing sandy soils and the absence of bedrock. A total of 1055 CFA piles were installed as well as 221 self-drilling anchor-type micro-piles of 130mm diameter. Foundations. The foundations consist of pile caps and ground beams. The former are supported by two 600mm diameter CFA piles, which accommodated the large column loads. The ground beams are supported on 450mm diameter CFA piles and support the sub-loads. Ground Level. The structural system for the ground level slab is a 230mm thick suspended reinforced concrete slab, with ground beams to reduce the spans and provide lateral bracing to the pile caps. Due to the length of the structure expansion joints were included in the slab design. Upper Level. The structural system for the deck is a 320mm-thick posttensioned slab (bonded system) with column heads. The posttensioned slab allows for large

cantilevers. The columns are spaced at approximately 12m centres and the planter boxes are fixed in positions over the column heads. Topping to the concrete structure. The upper level of the promenade has an in-situ concrete floor to falls with a 100mm coloured aggregate finish with granite cobbles separating the various colours. **The amphitheatre.** The most challenging element of the structure was the design and construction of the amphitheatre, which consists of a series of inter-linked undulating curves and an integrated, universally accessible pedestrian ramp. A timber stage is provided for public performances with power supply for musical equipment. The amphitheatre was designed as the focal point of the promenade.

Services

Fire safety systems. A dedicated ventilation system was installed in the parking area where natural cross ventilation is impossible. Fire ventilation shafts were needed to extract smoke in the event of a fire, and these are utilised as signage pylons on the upper level. Fire-fighting equipment, signage and fire sealing/stopping have been provided to all areas in order to satisfy statutory requirements.

Lighting. Area lighting units mounted on poles of glass reinforced polymer (GRP) at a height of 5m, designed with outreach arms for banners, were used to light up the promenade walking areas. The lower level is lit from fittings mounted to the underside of the concrete overhang.

Graphics and wayfinding signage. Signage to the facilities at the lower level was conceived as bold, colourful super-graphics with smaller braille signs mounted adjacent. On the upper level wayfinding pylons were positioned at intervals along the length of the promenade.

Street Furniture



Seating cluster of hollow polymer concrete around a planter b Due the load limitations on the upper level slab, the planters (2500×2500×640mm) were placed on the column heads. The height of the planters was restricted to 640mm due to the weight of the soil which, in turn, affected the choice of plant material.

The benches (2400 x 550 x 420mm high with 100mm radius on all four corners) were also specified to reduce their weight, and a hollow polymer concrete bench was chosen, adapted from the standard 'pebble' range offered by a specialist manufacturer and supplier of resin-based poly-concrete installations. The soft form and rounded corners were chosen to prevent chipping and have reference to the soft, worn pebbles one finds at the beach.

The bins (500 x 500 x 700mm) are of a standard range developed by IYER for the Moses Mabhida stadium precinct in 2010 (see *KZNIA Journal* 1/2010). Similarly, the bollards (500 x 500 x 500 mm) were from the range as used at the stadium. All the benches, bollards and bins are secured to the topping using stainless steel pins.







From top to bottom: Good lighting along the promenade.

Public ablutions boldly designated along the boardwalk. Lifeguard tower on deck in background.

Fire ventilation shafts utilised as signage pylons on the deck. Photographs, Craig Hudson





Top: Restaurant seating space spilling out to the boardwalk and dune vegetation – deserted during Covid-19 lockdown. Above: Established dune landscape. Photographs, Craig Hudson

Landscaping

Dune vegetation. The approach to the dune rehabilitation on the Durban beachfront was to firstly understand the prevailing weather and environmental conditions. It was necessary to identify what grows in the surrounding areas on the dunes, adapted to heat, wind, salt and beach sand. Also, how the plants would cope with the shock of coming from a nursery to the exposed conditions on the beachfront. We consulted Leitch Landscapes who have been involved in all the dune rehabilitation work on the Durban beachfront since the 2009 World Cup upgrade and worked closely with Dr Elsa Pooley and Geoff Nichols who were the landscaping consultants on the upgrade.

The sand on the beach is not ideal for growing plants and there was a need to improve the soil condition with nutrients and to enhance its ability to retain moisture. A large quantity of quality compost was turned into the beach sand together with an added application of fertiliser. An equal amount of bark mulch was applied to retain moisture and enhance the chances of survival of the plants. Sacrificial fencing (wire netting with shade cloth) was installed to carry out the function of vegetation covered dunes which were no longer found on this section of the beachfront. The sacrificial fence trapped the wind-blown sand and provided some protection to the newly planted dune species while they adapted to the prevailing conditions.

When planting, the following had to be considered: the various dune zones (fore-dune, mid-dune and back-dune) and what species were found in which zone. Keeping vagrants and members of the public out of the dunes was of vital importance both for security reasons and because they damaged the plants which could cause wind 'blow-outs'. Carissa macrocarpa (Numnum), with sharp spines, was planted around the edges of the dunes to deter people. It was more important to use plants with a strong, healthy root system, than to use large plants. They often lost their leaves after planting in response to the harsh conditions, reshooting from the base with stronger growth adapted to the beach

As the dune started to form against the sacrificial fence, it was important to control the sand build-up and maintain the dune height to prevent excess build-up of sand in the

dunes. The dune vegetation would eventually take care of itself as long as the human element was managed.

Planter boxes. The following trees which have grown successfully at other places along the beachfront were used here: *Hibiscus tileaceus, Euclea natalensis* and *Mimusops caffra*. The groundcovers in the planters are – *Asparagus densiflorus, Dyschoriste depressa, Plectranthus neochilus, Delosperma lineare* and *Carissa macrocarpa*.

Preparation of the planters. A stone drainage layer was placed at the base of the planters with a 2% fall. This was then covered with a 20mm lightweight green roof substrate made of long rock mineral wool fibres specially needled to form a compact and dimensionally stable felt, was applied for extra water holding capacity.

The planters were filled with imported topsoil mixed with 30% compost filled to 100mm below the planter height. As the newly planted trees tried to adapt to the beach conditions after the protection of the nursery, they dropped their leaves and looked like dead sticks. All the trees were cut back to speed up the adaptation process. All pruned stems were sealed using a tree sealer. The new shoots started budding within two weeks of the trees being cut back.

Planting inland of the promenade. Larger trees were planted on the pedestrian access ramps. The trees chosen were *Euclea natalensis* (Natal Guarri) as this has been one of the more successful tree species planted along the Durban beachfront in the past upgrades. The trees were bought in 100l bags and the holes were specifically prepared to a depth of 1.2m-1.5m. The holes were then lined for extra water holding capacity and backfilled with a soil mixture of 30% compost. Swathes of



indigenous grasses were used along the length of the ramps and under the trees with a border of *Aloe arborescens* along the top of the embankment and finished with a 100mm layer of bark chip mulch. The grassing of the banks at the rear of the promenade is *Cynodon dactylon*.

Planting at the lower level. At the lower level the following species were planted – *Strelizia nicolai*, *Hyphaene coriacea* (Lala Palm) and *Cocos nucifera* (Coconut Palm). The groundcovers are *Asparagus densiflorus, Dyschoriste depressa, Plectranthus neochilus, Delosperma lineare* and *Carissa macrocarpa* (Green Carpet).

Conclusion

Now that the Point Promenade is complete it will provide the catalyst to release beachfront development opportunities along its entire western edge with the intention to revive the area and create a mixed use destination worthy of the beach that it borders, and begin the revival of the Inner City of Durban. The hope is that the Point Promenade will over time be accepted by the public to become another significant component in the wonderful array of facilities along the Golden Mile.

Glanville Jacques and **John Ferendinos** with special thanks to Andre Maistry of IYER who kindly prepared the illustrations.

Reference: *eThekwini 2040 Inner City Local Area Plan.* eThekwini Municipality, November 2016.

Project team

Client - Durban Point Development Company Principal Agent - NAKO ILISO International Architects & Urban Designers - COX Architecture: Australia Local Architects & Urban Designers - IYER Quantity Surveyor - MLC Quantity Surveyors (Pty) Ltd Structural and Civil Engineer - NAKO ILISO Mechanical Engineer - NAKO TRIOCON Electrical Engineer - JCF Engineers & Services (Pty) Ltd Transportation Engineer - NAKO ILISO Occupational Health & Safety Officer - Safe Working Practice Environmental Control Officer - Pravin Amar Development Planners Coastal Engineers - PRDW Contractor - Stefanutti Stocks Coastal

"...a building and environment that says more about [Barrie's attitudes to architecture than anything he has writte Jack Barnett, 1992.



EXMOUTH AVENUE



AT RISK OF DEMOLITION HOUSE BIERMANN



A decorative motif that adorned a M'pogga house, which combined abstract and figurative sources based on a Pretoria mosque (above) and the Palace of Justice (below). A photograph of the latter was inserted (Spence, B. & Biermann, B. M'Pogga. Architectural Review, July 1954).

HOUGH MANY REMEMBER Barrie Biermann as the academic and artist his pithy Boukuns in skilled at drawing, his exact contemporary and class mate at the University of Cape Town, the late Jack Barnett (1924-96), considered 38 Glenwood Drive as a "building

and environment that says more about [Barrie's] attitudes to architecture than anything he has written" (NIA Journal 2/1992: 1). Now this house, one of his few built projects, has been lying vacant since 2016 and is at risk of being demolished.

Barrie Biermann (1924-92) was the author of substantial contributions in significant publications. But what might have passed many by is that the focus of his disciplinary research was never on high architecture but on the vernacular and indigenous.

'Mud as building material' was the title of his first article (SA Architectural Record, Sept 1947) published while still a student, while his piece on the M'pogga (with Betty Spence) found itself featured in the (British) Architectural Review (July 1954), and both his 'Indlu: The domed dwelling of the Zulu' (1971) and 'Architecture of the Ndebele people' (1975) were included as chapters in books edited by the late Paul Oliver, whose name is known internationally for vernacular architecture.

Biermann's PhD thesis 'A contribution to the study of the origins of colonial architecture at the Cape' (1952), focused on Cape Dutch, a vernacular architecture particular to South Africa. On being appointed Lecturer at the University of Natal (now UKZN) in August 1952, he reconfigured the thesis, the scope of coverage and his delightful sketches, which

came to full bloom in Suid-Afrika (1955).

It was during this time that Biermann acquired a residential property near Entabeni Hospital ('on the mountain' in isiZulu) on Durban's Ridge, well located for the quick trip down the undulating topography to Howard College campus. In 1962 he remodelled the existing house on its western incline on a low budget; opted to



GLENWOOD DRIVE

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ABOVE: The veranda as an extension of the living space overlooking the court. LEFT: View from dining space to court with bedrooms and ablutions ramping down one side

VERSO, TOP: The entrance porch composed of cast-iron Victorian fripperies salvaged from demolition yards. BELOW: Whitewashed curvilinear walls enclosing the court.

mediate the gradient with a design on two terraces around a courtyard, and a continuous sloping roof that Harber, among others. reflected the angle of the terrain. To mitigate the adverse orientation he added a deep veranda to the top terrace, actually an extension to the living space, and he integrated dense vegetation and trees to create a blend of modernity and vernacular in a natural environment, in many ways indebted to Brazil.

Brazil is attributable to his tour of inspection as the first recipient of the UCT Helen Gardner Travel Scholarship (1944). While Biermann's focus was on 'Observations of fenestration in Brazil'* (SAAR, July 1950) i.e. the vernacular, his tour coincided with the Brazilian variant of modern architecture becoming rooted.

Returning now to House Biermann, Barnett wrote: On arriving at the front door from Glenwood Drive "...one is already a convert to Biermannism, captivated by cast cement heads in amongst the pavers, cast-iron Victorian fripperies salvaged from the demolition yards...". "The world outside is forgotten as one enters the modestly scaled front door...the living room and stoep, taking up almost the entire width of the house, look to a beautiful internal garden [court] through great floor-to-ceiling sliding glass...ramping down one side of the patio [court] are situated the bedrooms and ablutions, none of which are conventional in shape or finish. The bedroom and study at the bottom of the patio [court] look out to more garden spaces on the other side" [towards

Exmouth Ave]. What Barnett did not mention was muurkaste, wall cupboards, a frequent occurrence in Cape vernacular architecture.

Following Biermann's death in 1992, the house served as the family home of a former student for well over two decades. At the time of its transfer the new owner indicated that the building would be retained

without alteration, to serve as consulting rooms for a laboratory services facility located on the adjacent Hospital property. But now, a substantial expansion is proposed at the expense of architectural heritage and survival is difficult to foresee.

As Jack Barnett summarised, 38 Glenwood Drive "says more about [Barrie's] attitudes to architecture than anything he has written". It is a document by a young architectural academic on the cusp of his legendary career, that represents a bold and fresh approach to design, with vernacular finishes and the inclusion of recycled elements set in a lush, subtropical landscape. It is also a pivotal building that inspired and helped shape an original, local architectural expression, as can be seen in the early works of his students who themselves achieved considerable renown: Hans Hallen, Paul Mikula and

collaborators in Building Design Group, the late John Frost of Interarc and Rodney 38 Glenwood Drive is well worth fighting for.

Readers willing to join the battle for its survival should urgently make contact with the Chair of SAIA-KZN Heritage Committee (admin@kznia. org.za) or the KZN Heritage Resources agency (built.enviro@amafa pmb.co.za). 🔘 Walter Peters

* The published article is

report Barrie Biermann

submitted in terms of

the conditions of the

Travel

Scholarship.

It is pleasing

indeed that the

'Donor's copy'

has recently

surfaced, and was acquired on

auction by Craig

former student

School' resident

Thanks to Craig

a digital copy

will soon be

through UCT

Collections and

Barrie Biermann

Architecture Library,

are taken from the

UKZN. The images here

accessible

Special

report.

Hamilton, a

of the 'Natal

in the UK.

excerpted from the

BOVE: West elevation of studio facing Exmouth

LEFT: View from Studio to patio. Ahead is a muurkas (wall cupboard)





FROM THE CONVENTIONAL TO OPEN ARCHITECTURE AND E-LEARNING





'The history of Zimbabwean dance can be summarised in these words

Dancing to the gods, a period where we happily danced for our ancestors;

Dancing to other peoples' tunes, when our traditional dance was replaced with the waltz and tango.

No more dancing, the curse of a fallen economy in the arts.

This was a fitting climax to the final cohort of Open Architecture (OA) students who had registered for the degree B Tech: Architectural Technology (Applied Design), accredited by Cape Peninsula University of Technology (CPUT), Cape Town, last November. This remote teaching technique has now been absorbed in the new CPUT Advanced Diploma programme.

OA demonstrated the objective of transforming our profession, by making qualification up until B Tech level available to the many students who were previously stuck in the system and unable to afford to return to fulltime study. The programme produced 78 B Tech graduates of which 46 (59%) were from previously disadvantaged backgrounds.

The idea of Open Architecture

This distance learning concept germinated in about 2005, when I visited Oxford Brookes University from where the RIBA (Royal Institute of British Architects) distance learning initiative operated across Europe. It was very impressive to see how a lonely student in Bulgaria could participate, albeit by email.

At the same time CCN (Construction Communication Network) was launched in Durban by some of our colleagues c.2008. The idea was to offer on-line services to the construction industry and included a license to operate a Webinar programme for participation by groups of people.

With such an online platform, distance learning or Open Architecture could be considered and the search for a partnership with an accredited Architecture Learning Site (ALS) commenced and which eventually bore fruit with CPUT.



A page from Rodney Harber's notepad depicting his thought process for Open Architecture.

The launch of the Open Architecture programme

This innovative KZN distance learning programme was introduced at Docklands Hotel in Durban during the 'New Paradigms' conference of November 2012. Natal graduate, Dr Elena Pascolo, based at the Architecture Association critted a series of student projects at the Durban venue while working in London. This demonstrated the possibilities.

John Stevenson, Programme Manager of RIBA Office Based Education had been invited to attend and described our programme as 'the biggest paradigm shift' in architectural education. With that compliment OA was formally launched during the UIA (Union of International Architects') World Congress held in Durban in August 2014.

eThekwini Municipality provided much-required funding to include OA as a UIA 2014 Legacy Project, supplemented by a corporate donation from Corobrik. During 2015 SAIA took on the OA project as part of its transformation agenda, thereby elevating OA as a national initiative.



Candidates had to apply to be accepted and undergo a selection process. Students then met for block programmes and portfolio reviews three times a year at CPUT, but all other teaching took place online. Students had to work in an office with professionals registered with SACAP (SA Council for the Architectural Profession), the sole requirement being to link onto the web to participate in lectures and crits.

Since it was a part-time programme, it took twice as long, but students were kept within the economy in their offices, enabling them to work whilst continuing studies. OA also had the advantage of not being bound to a geographic location apart from being within a member country of SADC (Southern African Development Community). Importantly, it also saved the state considerable capital expenditure.

The impact of Covid-19*

Little did anybody know last November that in six months' time we would all be lurking behind masks, compartmentalised and waking up each morning to hear the infection and death scores. Humans, inherently sociable beings, have suddenly become very lonely.

No end is yet in sight as we walk through shopping centres with blanked out windows, empty offices and see our huge campuses with no activity. Home is no longer only a place to sleep. Worse still, the existing socio-economic fissures in our society are being forced wider with a shrinking economy resulting in huge job losses, uneven education and many remaining in inadequate, crowded housing, thereby finding it impossible to practice social distancing.

The standard classroom, which has basically remained unchanged since the Industrial Revolution: uni-directional 'chalk and talk' and rote learning has suddenly been heaved into a major paradigm shift where instructors have to become programme designers and facilitators and the pupils elevated from receivers of information to creative learners.

Emergency Remote Teaching (ERT), as online distance learning is referred to at University of Cape Town (UCT), has suddenly become the New Normal. However, whereas OA focussed on the senior programmes where students had already received a solid grounding, it is now a reality from square one.

UCT and UKZN responded to questions about their experiences. At both schools the sudden lockdown was filled by providing their new students with online lecture courses dealing with History of Architecture and Building Construction while staff scrambled to decide which platforms to use to deal with architectural design.

The Year 1 challenge at UCT

UCT First Year convenor, Buhle Mathole, together with Andrew Nimmo and James Page (both Natal /UKZN graduates) and their colleagues, commented as follows:

"We struggled to get our heads around various communication tools (Zoom and MS Teams technologies) but discovered that once one learns to use the tools the experience is great. ERT teaching of studio-based courses demand that everyone (staff and students) challenge their normal work methods and workplaces. A lot more rigor and planning ahead is necessary compared to normal studio discussion and crit. But we all put in the effort together. Some student work has been remarkable.

Overall, technology has served us very well and there are tools that I think we can continue to use in a hybrid model going forward. Digital PDF-submissions and running oral exams via video conference in which participants in different locations are able to communicate with each other in sound and vision, were especially effective. A major benefit is having these interactions recorded and kept for reference.

For teaching staff it can often feel like one is 'shouting into the void': a lecture gets delivered or written feedback at a crit, and only later that week does one see if the students have understood and incorporated the concepts being taught. Without the opportunity to interact with students in person and evaluating understanding by listening to their architectural vocabulary and seeing their sketches, we are forced to evaluate their progress based only on how well they have satisfied the requirements of our briefs. They also miss out on a lot of interaction with each other, and it is clear that their learning is happening in isolation. We have implemented some strategies for sharing students' work with the group so that they can see how their progress compares with others, but the inherent cross-pollination of studio learning is patently lacking.

We took on a primarily asynchronous approach, assuming some students had very little access to data, and we accepted photographs of hand drawings taken by cell phones. The aim, as always, was to look at and assess the drawing and design-work not the technology presentation methods. This approach includes giving a lot of written weekly feedback for each student submission.

Data and network remains the only challenge that inhibits this communication – despite the free data offered by UCT, which was of A Year 1 UCT student, working remotely, explored measuring up, documenting and then designing a revised multi-use layout for their own bedroom space during lock-down, being guided in representation, drawing conventions and scale through on-line 'crit' feedback.

Section A-A

* Given the magnitude and severity of the COVID-19 (coronavirus) outbreak, the World Health Organisation (WHO) declared a global pandemic, and the South African government promptly followed suit. In mid-March 2020, it classified the pandemic a 'national disaster' and ordered a lockdown, which although eased to lockdown Level 2 in mid-August, still has no end in sight.

Scale 1:25







immense help – certain students out of the country

in on time, but in short as the clichéd saying goes

work collectively as a team.

students."

UKZN experience

and a broad audience.

struggled and found it hard to communicate and hand

'where there is a will there is a way'. It has been great

to be creative to see all the various tools available and

UCT conducted an anonymous, online poll at the

end of the first semester to assess the impact of ERT on student performance. Only 65% responded:

'Weekly Modules/lesson pages/assignments for the

93%'. This is remarkably positive although one

wonders why the balance failed to submit. In this regard there is clearly a difficulty with disadvantaged

Bridget Horner, co-ordinator of Year 1 at UKZN, with

"Switching to emergency remote online teaching in

opportunities for students and staff alike. What it has

afforded the staff is an expansive view of the entire

students' work and assess their progress at any

Instagram to generate online portfolios for

class's participation as well as the opportunity to view

moment in time. It means students have learnt new

drawing 'apps' and to make use of social platforms like

themselves and to showcase their work to classmates

discipline with a means of engagement that is foreign

from what they have come to know, which expects

learnt in the studios, in a collaborative and palpably

experienced environment where staff and students

are all co-present in one space and time. Going online

participation, a reiterative process and learning

together. These characteristics would have been

They transition from school into a signature

half the size of class and almost 90% previously

disadvantaged responded as follows:

Year 1 has come with many challenges and

studio. Courses are well set up and easy to follow/use.

Perspective (never mind lecturer fatigue), the 'ideal' student trumps in online

teaching – such as the one with ...let's start from the basics.... electricity, internet access, data, ideal home conditions to work, time to work so no home base responsibilities, working devices, no underlying mental health issues, confidence, the young, no dependants, those not living with health-care workers or families with underlying co-morbidities and those who have come in with skill – i.e. already have an ability to communicate through visuals. However, some students don't necessarily like nor are they able to engage online and this severely limits our ability to assist".

fails to emulate the excitement contained in the

studio processes.

students.

The 'ideal' students are very few in our school. I have played the role of mentor, coach, social worker, drill sergeant and lecturer over the last few weeks trying not to leave any one behind but am realising the odds are, quite honestly, severely stacked against some of our

'Effective' or 'efficient'

depends on who we are referring to and in what manner. If we are speaking about this from the student

Conclusions

From the above one can deduce that Covid-19 has challenged staff and students to peek into the next Industrial Revolution and has proven that online teaching is possible, including in the foundation years and with limited technology. Only time will eventually judge this.

A blended approach is likely to evolve. In this way it will be possible to share the best teaching resources, nationally and internationally, on web platforms and still retain the irreplaceable studio contact. It is evident that to achieve this, access to networks and affordable data must become a national priority to get our economy moving efficiently, especially education.

Clearly, there is still much space for other approaches like the part-time model of OA, where students are employed in an office for support and with available technology; where they can also be gainfully employed in small centres like Umtata, Mbabane, Gweru or Thohoyandou. The first ALS to offer on-line learning at Masters level, on a part-time basis, will hit the jackpot with a substantial waiting list already lined up in the records of OA!

On the full-time staff of Natal/UKZN for almost four decades, the teacher in Rodney Harber never retires. Editor.

South - EAST Section

CATED

UKZN Year 1 student, Yolanda Mpanza, drew on her knowledge of a Zulu *indlu* and on natural references for the inspiration behind the design of a neighbourhood bus stop. Sourcing design problems that are easily accessible and familiar, enabled students to work independently and remotely with regular online feedback during the pandemic.

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Durban Heritage Trust: Drawing from the past

Drawings are, to some degree, scaled down pictures of buildings. But to think of drawings as pictures cannot account either for the instrumentality of architectural representation nor for its capacity to render abstract ideas concrete. (Allen, 2000: 32).

n *Drawing from the Past*, a catalogue prepared by Michelle Jacobs, Leonard Rosenberg and Brian Kearney, it is evident that the role of architectural drawing moves beyond its capacity to *realise* a building. In a context of such rich architectural heritage and history, architectural drawings additionally hold the necessary capacity to preserve these ideas, long after their built reality, and most especially, as a memory once that built reality has ended.

The exhibition catalogue is a palatable overview of a wider body of significant work. It documents 75 prints of architectural drawings selected from three recent publications by the Trust and coincided with the launch of a fourth*.

The drawings are predominantly of exemplary built works (some now demolished) by prolific architects practising in Natal between the late 19th and early 20th century, most notably in Durban and Pietermaritzburg. These include the architectural work of Phillip Dudgeon (Durban's Main Post Office, the original town hall, 1885), A A Ritchie McKinley (Quadrant House, 1927) and, arguably the most prolific, William Street-Wilson and his various partners (Durban Railway Station, 1896; Pietermaritzburg City Hall, 1899-1900).

Primarily notational (elevations, sections, and details), as well as representational (three-dimensional views and perspectives), the drawings are indicative of the rich variety of restrained, revived or appropriated architectural styles of the country's colonial heritage. The drawings document how settlers responded to advances in construction and material technology as is evident in the emulation of the traditional Natal wood and iron house, and how local conditions became acknowledged.

While largely drawings by the architects themselves, the catalogue includes a portion of measured drawings by students of the Natal School of Architecture between the 1960s and 1990s (expanded on in A Measure of the Past). To me the most memorable example is M. Rimensberger's evocative

drawing (on page 51) entitled Motala's Farm (drawn 1995), which records the informal backyard characteristic of the 'homogenous wood and iron houses of former Indian market gardeners' of Motala Heights, Pinetown, who would 'take advantage of the sub-tropical climate and use external spaces and yards as outdoor rooms.'



Focussing on a drawing per page, the brief descriptions are mostly specific to a characteristic element of the building, the architect(s), and/or the architectural style(s) as articulated in the dynamic role of the architectural drawing itself. It therefore encourages the reader to look more intently at the drawing, and the principles which guided its subject. In an age of producing digital drawings, the catalogue of these drawings also preserves the heritage of drawing by hand, as well as the necessary skill of composing a page of drawings in a way that communicates a building idea cohesively.

To share a part of the rich architectural heritage and history of KwaZulu-Natal from your coffee table, the catalogue, at only R30, can be purchased from SAIA-KZN (accounts@kznia.org), the publishers (publish@digniti.co.za) or the editors (rebt@telkomsa.net; jacobsm1@ukzn.ac.za). 🔘 Garryn Stephens

Student member, SAIA-KZN editorial committee

Allen, S (2000) Practice: Architecture, Technique + Representation. G+B Arts International.

* Itafa Amalinde Heritage Trust (2010) Durban. Architecture and History, A Guide; Jacobs, M, Harber, R & Kearney, B (2015) A Measure of the Past; Jacobs, M & Kearney, B (2016) The Street-Wilson drawing collection; and Jacobs, M & Kearney, B (2018) The Berea Style.

THE POINT PROMENADE

Addington Children's Hospital and Nurses' Home



Hugh Bland:

Addington Children's Hospital and Nurses' Home. Published by HBB, 2020.





hen in 1975 I first came across this fine building, locked but abandoned in the middle of its large site, I could not believe the classical

design of the hospital and its landscape setting, let alone the roundels I found in the spandrels to the spinal accessway and the figural sculptures in the fountains of its courtyards. These were artworks by Mary Stainbank, I later learnt, but little did I realise that Addington Children's Hospital was actually a ghost building in the making.

This is the status that author, Hugh Bland, found in 2011, 36 years later, when he undertook a photo shoot, the basis for the book *Addington children's hospital and nurses' home*. His timing was co-incident with the formation of the KZN Children's Hospital Trust that aimed for the re-establishment of the hospital and lead to the external restoration and stabilisation of the building and the nurses' home, 2012-13 (see *KZNIA Journal* 1/2015) and, hopefully soon, its internal renovation and resurrection as the KwaZulu-Natal Children's Hospital.

I often wondered why a hospital would be located on the beachfront and the purpose of a dedicated children's hospital. The first was a decision in the late 19th century related to the alleged benefits of sea air to convalescence; the second, different from a maternity or paediatric ward, Bland puts down to an upsurge in tuberculosis and the 1918 influenza pandemic, mortality from which was disproportionately high not only in the very old but also in children younger than five. The reason for positioning the building in the middle of the site was thus very likely to control the contagion of infectious diseases.

But, the main decision for Addington Children's Hospital was commemorative, built as a living monument to the fallen of World War I, different from the cenotaph on Francis Farewell Square, 1921-26. Such resolve had been the driver for the first dedicated children's hospital in South Africa, the Transvaal Memorial Hospital for Children, in Joubert Street, Braamfontein, Johannesburg, which opened in 1923 to the design of Cowin, Powers & Ellis, won in competition (Artefacts). While Addington was built a decade later, what particularly surprises is that despite the fact that it fell within the grips of the Great Depression, 1929-33, an excess of a third of the funds was generously donated by the public, and artworks 'integral with the building' were not excluded.

The Braamfontein building is similar in design, entered symmetrically through an entrance portico, arranged around a courtyard, and covered with a steep, oversailing hipped tiled roof. This too sprouted roundels, albeit only two, in the style of the 15th century Italian sculptor Luca della Robbia. His works students of Architecture usually came across when covering the history of the Renaissance, in particular Brunelleschi's façade to the Foundling Hospital, Florence, 1419-1423, originally an orphanage with the aim of nursing sick and abandoned infants back to health. To the Foundling Hospital, Della Robbia added the glazed blue terracotta roundels with reliefs of babies, in the twelve spandrels of the arches. This iconography suggested the function of the building and is most likely the generic origin of roundels in the context of children's hospitals.

The technique for finishing the roundels with tinglazing was allegedly invented by Della Robbia and is



most often referred to as faïence (Wikipedia). However, that name, correctly spelled with two dots on the i, is derived from the town of Faenza, located between Ravenna and Bologna, with which faïence was originally associated. To compound matters, faïence is there also known as 'majolica' because such ceramic work originated from Majorca (Michelin)! My digression is because the book makes much use of the terms Della Robbia, majolica and faience, and uses the last in the conventional way and spelling when referring to fine tin-glazed pottery on a delicate pale buff earthenware body.

Besides the roundels in coloured faience and the sculpted fountains at Addington, Mary Stainbank also carried out the exquisite large panel over the portecochère of the main entrance on the landward side to Prince Street, which was cast in The Ceramic Studio at Olifantsfontein, at Irene in Midrand, and has been restored

Like the Braamfontein precedent, above cot positions were affixed ceramic plaques inscribed in majolica, says the book, to commemorate those who endowed moneys for cots or wards, of which some bore place names of particular battles of World War I, or the names of its military leaders.

Unfortunately, the hand-painted friezes which stretched above the picture rails of the wards (see KZNIA Journal 1/2015) had already been painted over in the 1960s, according to Bland. But some wards retain vestiges of the surviving nine panes of stained glass designed and produced by Florence Vann-Hall, who shared the studio at Coedmore, Bellair, with Stainbank. The panes were included in widows of Austral type, which to the uninitiated might appear as particularly high sliding-sash windows, but at the time were applied where increased ventilation was needed. Thus, these have the upper panel dropping before tilting outward and the lower rising before tilting inward, and a pivoted fanlight over. The architect of this thoughtful resort was JS Cleland, secretary to the (national) Public Works Department, and its chief architect from 1932 until retirement in 1938.

The Transvaal Memorial Hospital for Children remained open until 1978 when its functions were moved to the then newly opened Johannesburg

General Hospital in Parktown, now Charlotte Maxeke Johannesburg Academic Hospital. A similar fate befell Addington when, with the opening of the new Addington Hospital in 1967, the functions of the Children's Hospital were gradually relocated into the new, until in 1984 the dedicated building closed. However, unlike languishing Addington, the Johannesburg building still remains in use today by community groups dedicated to the service of children.

This beautifully illustrated book by Bland does not cover the years of active use. It picks up from the peeling paint of the





interiors, symptomatic of the incorrect use of coatings and desolation, but includes the detached nurses' home, which suffered the same fate and now too is restored – externally. What the book tells us is that even ghost buildings can regain their resourcefulness after a few decades of disuse and exposure to the corrosive sea air, provided there are sufficient professionals who care, and that the Trust so formed has access to political power and funding. But there remains much to be done as the author concludes, before the Trust can get down to the resurrection of the interiors and some of its art.

Though an accountant by training and practice, Bland has well told the story of the Children's Hospital, the dedicated professionals, the artwork and artists. He has harnessed his skills in photography and heritage research toward his passion, and thereby produced his third book on KZN historical architecture, following Farmhouses (2017) and Trappist (Mariannhill) missions (2019) (see SAIA-KZN Journal 2/2019), an altogether admirable achievement.

The book of 181 pages is in full gloss, stitched and section-bound, which allows for the pages to be savoured because they open out fully. The price of a numbered copy is R800 and the standard edition is R700, exclusive of courier costs. It is published by HBB, and is available from the author by e-mail at hughbland031@gmail.com or, on 082-772-6503. 🔘 Walter Peters, Editor

France (1916) and at Delville Wood TOP LEFT: Porte-cochère to Prince

Str with Della Robbia panel sculpted by Mary Stainbank. TOP RIGHT: Courtvard with roundels and fountain by Mary Stainbank.



Austral windows to increase ventilation. The upper panel drops before tilting outward and the lower rises before tilting inward. Note also the commemorative plaques on the wall above cot positions



Depictions of Columbine and Harlequin in stained glass by 'Wilgie Vann-Hal



Fig 1a. Classroom being built in unstabilized adobe with clay-lime plaster, Seven Fountains Primary School, Shayamoya, Kokstad.

Fig 1b. Seven Fountains Primary School, Shayamoya, Kokstad. East Coast Architects, 2006-08. Photo: Angela Buckland

Fig 2. Assembly hall, Economic Development Centre, Rocklands, Bloemfontein. Haasbroek Architects, 2004.

Fig 3. Environmental Education Center, O.R. Tambo Cultural Precinct, Wattville, with Leeupan in the background. Odyssey Architects, 2013.

Fig 4. Curator's house in soil-cement (rammed earth), Oliver Tambo Precinct, Wattville.

Fig 5. Villiersdorp Resources Centre Training Facility, Villiersdorp, Western Cape. CCNI Architects, 2017.

A Travel Diary:

Social cohesion and earth-constructed education spaces in South Africa

n many communities across the globe, traditional earth construction is regarded as inferior. The combined efforts of some committed building professionals have changed this image with a new attitude towards contemporary earth-constructed buildings in South Africa.

The National Building Regulations and Building Standards Act, 1977, together with inconsistent local building control, known for its shortcomings, compound the issue. Municipal officials will not always accept a rational design, even signed off by a structural engineer, if an un-conventional building system is not certified by an Agrément South Africa process.

The problem with most of the eleven categories of earth building systems is that only soil-cement walls, compressed earth block (CEB) and sandbag wall systems can be certified in terms of embedded quality control and standards. Agrément does not accommodate cob used for straw-bale, straw-clay, wattle and daub or sun-dried blocks (adobe). Agrément SA rewards a patent owned by an entity while the bulk of earth construction techniques are at most, owned by humanity. Other institutions have provided new useful knowledge of contemporary earth construction techniques.

Several international institutions* including Earth Unit at University of the Free State are partners in the UNESCO Chair. Over the last two decades these institutions have taken on challenges, many based on perceptions. Negative perceptions of traditional building materials are often influenced by the overall structure of the economy, consumer behaviour, status,

*International Centre for Earth Construction (France), Auroville Earth Institute (India), Escola Superior Galacia (Portugal).



imitation and aspects of urbanisation such as migration and upward social mobility. Furthermore, in the presence of government-provided RDP houses, traditional earth-constructed houses are even less socially acceptable in South Africa.

Some projects over the last 23 years have promoted the use of contemporary earth-constructed public buildings such as schools and training facilities. One of the earliest CEB buildings constructed in 1996, was for the *Alliance Française* in Mitchell's Plain, Cape Town, designed by ACG Architects and Development Planners in collaboration with the Community Project Organization at the then Pentech. This language school showed how to combine CEB with conventional building material that also included treated gum poles and reeds.

The Earth Unit of the University of the Free State supported Haasbroek Architects in 2004 with the training and production of cement stabilised compressed earth blocks for the construction of several workshop spaces and an assembly hall (Figure 2) for the Economic Development Centre in Rocklands, Bloemfontein. The secondary school next door also made use of the assembly hall for gatherings and activities.





The following year the European Union (EU) supported a design team appointed for the Thuba Makote project (schools as centers for adult education). The EU provided training and technical support for a brickyard that provided the cement CEB wall components of the Bankhara Bodulong Secondary School near Kuruman in the Northern Cape. One reason the local community accepted the CEB can be explained in terms of the many local privately owned small brickyards that produce cement stabilised adobe and make a living from selling these to local home builders.

Two celebrated built projects constructed after 2006 that receive worthy attention were contributed by Andy Horn from Eco Design Architects and Consultants in collaboration with East Coast Architects for the Seven Fountains Primary School (Figure 1a & 1b) completed in 2007 at Shayamoya in Kokstad (see KZNIA Journal 2/2006 & 2/2009). The second project, in collaboration with Tunde Oluwa of Odyssey Architects SA the Oliver Tambo Precinct with Environmental Education Center (Figure 3) at Leeupan in Wattville near Benoni, was completed in 2013. This center's buildings addressed the acceptability issues of cob and adobe, while introducing other earth technologies such as soil-cement refered to as contemporary rammed earth (Figure 4), urbanite and straw bale techniques.

More recently the Villiersdorp Research Centre Training Facility, Western Cape, (Figure 5) was completed in 2017. This building by Charlotte Chamberlain and Nicola Irving (CCNI Architects) was designed and constructed in collaboration with Eco Design Architects. The team decided to make use of a timber pole cross-braced load bearing column and beam structure, built first to provide for shelter during the training and construction phases. Some adobe walls are in-fill and some load bearing with a timber ring beam and buttresses, all on a plinth of face brick cavity walls on conventional strip foundations. Clayey soil excavated on site was mixed with nearby local sand and used to make un-stabilised adobe. A plaster mix of lime, sand, dung and claywater was used for plastering, while openings were reinforced with non-corrosive plaster fibre. Waterbased breathable paint was used for all wall finishes.

In all of the mentioned built projects, unemployed male and female individuals were involved. In terms of the SONA 2019, the spirit of "fostering social cohesion" was high on the agendas of these projects that also focused on "...those not in any education,



Dr Bosman is an Associate Professor of Architecture at the University of the Free State where he heads up the Earth Unit. In the latter capacity he has been involved in training students and small builders in the contemporary use and production of cement-stabilised compressed earth blocks and stabilised adobe techniques since 1996. Editor.



training or employment – into productive economic activity and further work opportunities". The reservation towards the construction material should not be ignored.

The influence of migration, social capital and upward social mobility help to explain the low acceptability of traditional earth construction and should help guide through the pitfalls for the promotion of contemporary upgraded earth technologies. The formation of the UNESCO Chair in Earthen Architecture was a far-reaching achievement and made valuable contributions to heritage conservation, new scientific knowledge and the contemporary application of sustainable earth construction in architecture worldwide.

South African building professionals and earth builders have made valuable contributions for changing perceptions of earth-constructed buildings. These efforts contribute to the shared new knowledge in an age old building culture. COVID-19 has placed an increased focus on the built environment in a world that trends for a greener economy the construction industry will aim even higher not just for reduced global carbon emissions, but for healthier buildings. Gerhard Bosman SAIA-KZN Journal sponsored by *Corobrik*