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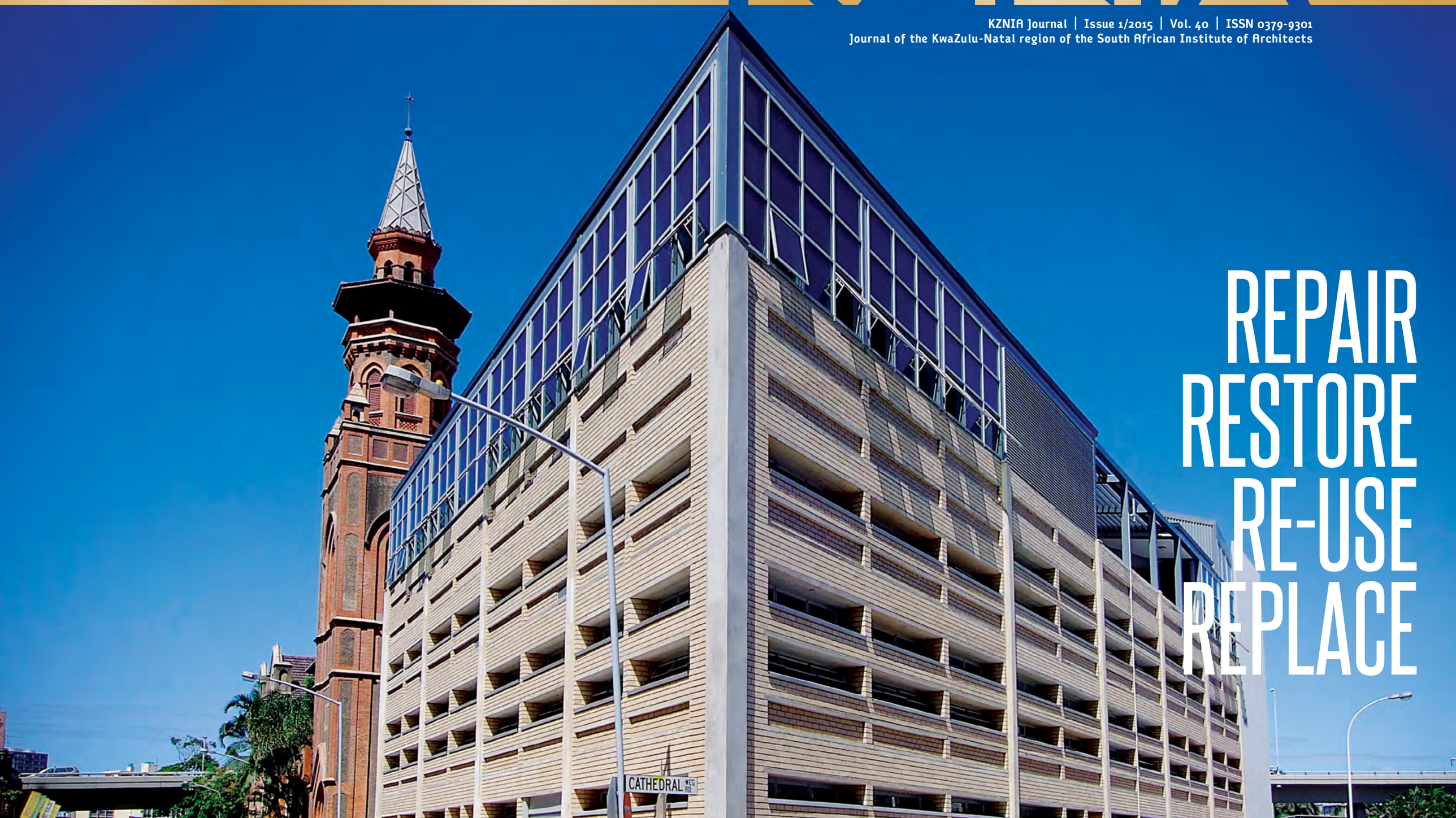

REPAIR RESTORE RE-USE REPLACE

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This journal, now in its 40th year of publication, has since inception been sponsored by *Corobrik*.

KZNIA NEWS

KZNIA PRESIDENTIAL INAUGURATION

On Tuesday, 31st March, Ruben Reddy was inaugurated as KZNIA President for 2015–16. The event was held in the Presidential suite of Sahara Stadium Kingsmead sponsored by *Corobrik*. Guest speakers included Ruben's university classmate, Cindy Walters, who had come from London; and good friend Luyanda Mpahlwa from Cape Town.

RIGHT: Outgoing KZNIA President Kevin Bingham handing the chain of office to Ruben Reddy, KZNIA President 2015–16. Photography of the event by Roy Reed.

ABOVE, LEFT TO RIGHT: Luyanda Mpahlwa, newly inaugurated KZNIA President, Ruben Reddy, Cindy Walters, outgoing-president Kevin Bingham and *Corobrik* MD Dirk Meyer.

Chris Mungle, *Corobrik* Sales Manager for eThekwini; Natal University classmate of Ruben Reddy and original practice partner, Eric Orts-Hansen who travelled from London, with AJ Corbett, fellow class mate from East London and President of the Border-Kei Institute of Architects, 2013–14.

CORRECTION Issue 3/2014

The architects for the Library Kiosk (p3) were eThekwini City Architects in association with Architecture Fabrik.

OBITUARY: Mike Tod 1964–2015

Michael Gordon Tod commenced his architectural journey in the now auspicious class of '82 at the University of Natal, Durban. Mike was never entirely convinced by the architectural theory espoused by our lecturers relying instead on his own intuitive conceptual response to any architectural problem. University for him was a means to an end and shortly after registering he set up his own practice, initially in Stauch Vorster's basement print room. Although his offices were only about 3m² he was already punting for massive development projects of many thousands of square meters. Mike was never daunted by reality.

Mike followed his dream of starting his own practice and did extremely well; his ability to respond quickly and authoritively to a client's brief was behind the prolific success of his practice. Mike's clients were never permitted any doubt that his ideas were the only way to go.

Further testament to Mike's ability to intuitively come up with the right conceptual solution is Durban's now vibrant promenade stretching from the Moses Mabida Stadium to the Point. This tremendously successful project, for which Mike was the lead architect, is loved and appreciated by all Durbanites; and will be his lasting legacy. In this project Mike combined his love of design with his deep love of Durban and the ocean.

Mike received Natal colours for hobie catting, and was a keen and adept surfer, windsurfer, kite boarder, jet skier, and stand-up paddle boarder. If there was a new sport that involved the ocean, Mike was quick to embrace it. Having mastered all ocean-based sports, Mike got his pilot's licence and bought a helicopter so he could fly over the ocean.

Mike was a true peoples' architect; loved by clients and contractors alike, an accoldae not many architects can lay claim to. In fact, a dose of Mike's warmth and humility would go a long way towards re-establishing some regard for the profession of architecture.

Above all, Mike was a great character; fun-loving, charismatic and generous to a fault, with a broad grin and wicked sense of humour, he touched the lives of all those who knew him and were privileged to call him a friend.

My deepest condolences go to his family, his amazing daughter Rebecca and his many friends. Rest in peace my friend.

– Dean Jay

OBITUARY: William Oscar Servant 1929–2015

As the provincial Director of Works based in Pietermaritzburg, Dr Servant was unusually highly qualified holding memberships of numerous professional bodies and both M.Arch. and Ph.D. degrees by research, the latter in Fine Arts was awarded by the University of Natal in 1981. Oscar as he was known to all will be remembered as a true gentleman.

ABOVE: Harold Johnson, *Corobrik* Architectural Student of 2014.

Corobrik STUDENT OF THE YEAR 2014

At a function held at the Maslow Hotel, Sandton, on 22nd April, Harold Johnson was announced *Corobrik* student of the year. This is the 28th time the coveted title was awarded, and the first by an entry from the University of Johannesburg.

Harold decided to challenge the conventional design thesis of 'problem-then-a-solution' with his project entitled *The 'Dark' City: Critical interventions in urban despair*. In this, Harold presented a detailed process with the potential for multiple outcomes of abandoned buildings in downtown Johannesburg. The award now carries a purse of R50 000.

A Commendation for Excellence went to Walter Raubenheimer of the University of Pretoria for his thesis entitled *'Redefining Industry: Architecture as a constructive extraction*, which made use of waste material found on site. Walter won a prize of R10 000 as his thesis was deemed the 'best use of brick'.

Judges were Karuni Naidoo of Durban, Chris Wilkinson of Tshwane and Malcolm Campbell of Cape Town.

ALL THE *Corobrik* REGIONAL WINNERS

ABOVE, BACK ROW FROM LEFT: Dirk Meyer, *Corobrik* Managing Director; Graeme Noeth, Tshwane University of Technology; Simon Henstra, University of Cape Town; Walter Raubenheimer, University of Pretoria; Harold Johnson, University of Johannesburg; and Musa Shangase *Corobrik*, Commercial Director. FRONT ROW: Brigitte Stevens, University of KwaZulu-Natal; Marius du Plessis, University of the Free State; Alexandra Wilmot, Nelson Mandela Metropolitan University; and Sarah de Villiers, University of the Witwatersrand.

AIA FELLOWS

Damian Farrell, Natal graduate of 1984, living and practicing in Ann Arbor, Michigan, since 1987, has been elected to the College of Fellows of the American Institute of Architects. This high honour, in recognition of "notable contributions to the advancement of the profession of architecture", carries the fellowship medal, conferred on Damian at the Investiture of Fellows ceremony integral with the AIA Convention held in Atlanta in May.

Interestingly, honorary AIA Fellowship was simultaneously conferred on another Natal graduate, Jo Noero.

Many congrats to both. –Editor.

REPAIR, RESTORE, RE-USE, REPLACE

IN THIS ISSUE we feature four projects in KwaZulu-Natal in which its architects have had to grapple with the ethics of heritage conservation.

Conservation is the action taken to prevent decay and prolong the life of old buildings. For this, the Burra Charter (1979), like others, advocates a cautious approach, doing as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained.

However, different degrees of cultural significance may lead to different conservation actions. Buildings of historic and/or architectural significance such as Government House, Pietermaritzburg, demand no less than scholarly restoration and the skills for finding innovative ways of inconspicuously installing the facilities and services required today, i.e. retrofitting.

A building in dire need of remedial work such as Addington Children's Hospital exposed to salt air and decades of abandonment first requires its envelope repaired and made weather-tight again. Knowing that the craftsmanship we command today is unavailable or inferior, elements might have to be replaced by cast, and we would surely try to replicate them as accurately as possible so that in the level of restoration, the integrity of the whole would not be compromised.

Of course, old buildings have values besides cultural ones; they embody capital invested in building materials and energy exerted in their construction. Many are being re-used, though our architectural approaches to them can be very different. The conversion of a warehouse or factory like the former Lion Match factory in Durban offers more freedom and could be adapted for many uses, provided the rejuvenation does not adversely alter the original architectural character.

To the uninitiated it might seem strange, but a tenet of conservation implores us to retain the best of the old, not just every old building. However, when replacing the old, architects should also be skilled enough to know when it is appropriate to 'make a statement' and where it is right to 'fit in', as was the case of the Denis Hurley Centre opposite Emmanuel Cathedral, Grey Street Juma Masjid and Madressa Arcade, Durban.

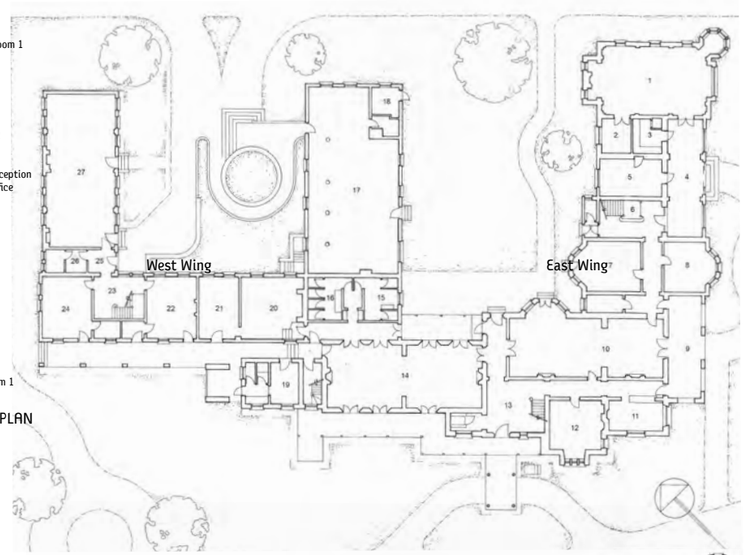
I trust readers will concur that a well-considered approach to working with old buildings and their contexts has taken root among the architects of KZN.

Walter Peters, Editor

GOVERNMENT HOUSE (UNISA)

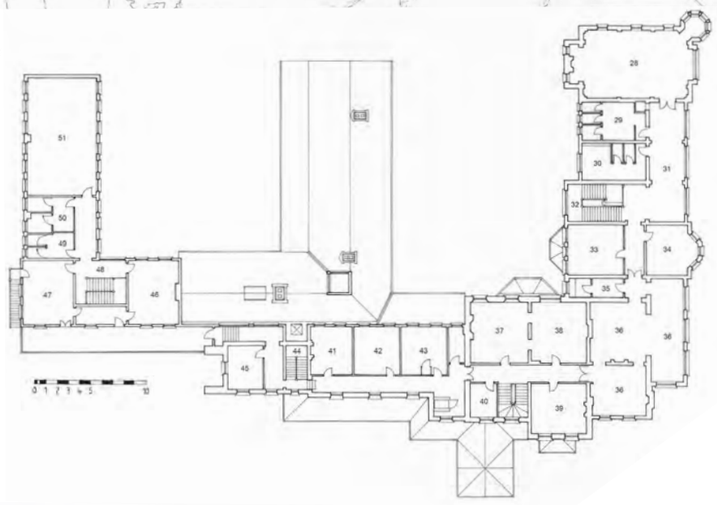
1 LANGALIBALELE ST, PIETERMARITZBURG

1. Main Conference Room 1
2. Store Room 6
3. Service Kitchen
4. Entrance 1
5. Reception
6. Stairwell 2
7. Conference Room 1
8. Conference Room 2
9. Entrance 2
10. Lounge 1
11. Administrator's Reception
12. Administrator's Office
13. Entrance 3
14. Lounge 2 & 3
15. Male Ablutions 1
16. Female Ablutions 1
17. Library
18. Store Room 5
19. Staff Day Room
20. Kitchen
21. Scullery
22. Office 2
23. Stairwell 1
24. Office 1
25. Entrance 4
26. Ablutions 1
27. Lecture / Work Room 1

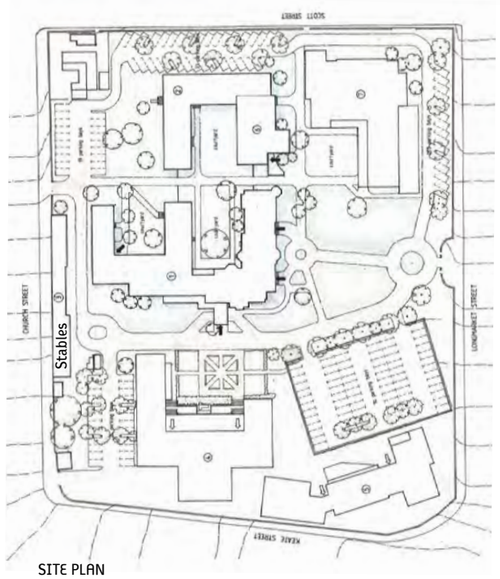


GROUND FLOOR PLAN

28. Main Conference Room 2
29. Female Ablutions 3
30. Male Ablutions 3
31. Break Away Area
32. Stairwell 2
33. Conference Room 3
34. Conference Room 4
35. Gallery Store Room
36. Gallery
37. Museum Room 1
38. Museum Room 2
39. Museum Room 3
40. Museum Store Room
41. Study 1
42. Study 2
43. Study 3
44. Service Stairs
45. Store Room 8
46. Office 4
47. Work Room 3
48. Stairwell 1
49. Female Ablutions 2
50. Male Ablutions 2
51. Lecture / Work Room 2



FIRST FLOOR PLAN



SITE PLAN

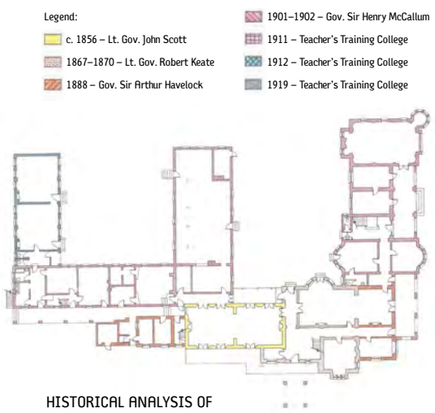
IN 2004 WE WERE ASKED by the University of South Africa (UNISA) to undertake the restoration and renovation of the former Governor's residence in Pietermaritzburg, commonly known as Government House, and its stables. At the inception of the Union of South Africa in 1910 the buildings were given a new function as a teachers' training college and handed to UNISA in the redistribution of tertiary educational institutions in the new South Africa.

THE PHILOSOPHIC PRINCIPLES THAT WERE IDENTIFIED FOR THIS PROJECT

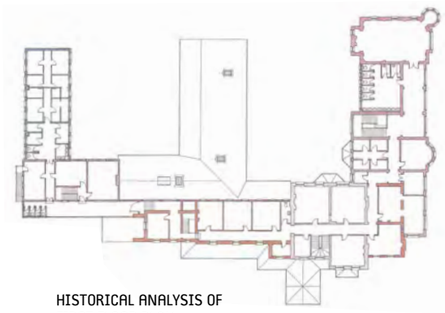
In any major restoration project the architect should assess the fabric he/she is given to work with and arrive at a clear philosophic programme. In this project we set ourselves the following philosophic goals:

- The recognition that this heritage precinct was being held in trust for the present as well as for future generations.
- To respect the original fabric from all periods of construction and the consequent need to retain as much of this as possible.
- To replace only those portions of the fabric, which were no longer serviceable or salvageable.
- Wherever possible, to make the interventions

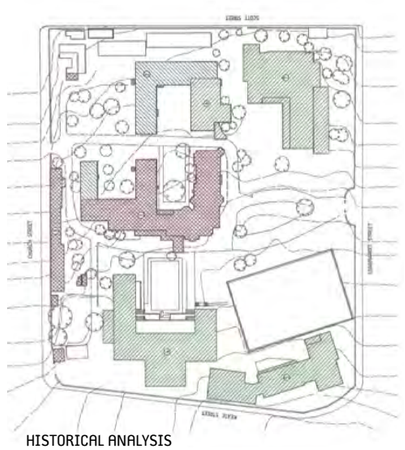
RIGHT: The historic core in its new gardens with the roads relaid away from the portico. The original cross-shaped roof of the portico had no provision for water run-off from the valleys. In the restoration, outlets in the form of spouts were added, and the timber forms thereof as well as the valleys were lined with 1,3mm sheet lead.



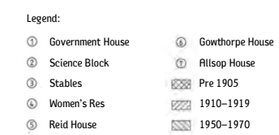
HISTORICAL ANALYSIS OF GROUND FLOOR PLAN



HISTORICAL ANALYSIS OF FIRST FLOOR PLAN



HISTORICAL ANALYSIS OF SITE PLAN



reversible,so that with future knowledge and improved skills, such interventions could be reversed.

- Where contemporary services that would have been unknown at the time of the building's construction were introduced, to do so in a manner that was both honest and respectful of the aesthetic enjoyment of adjacent areas. Where such interventions became major intrusions, they must always be of the highest standard achievable today, so that they can stand the scrutiny of future generations.
- That facilities be instituted to enable the proper and easy maintenance of the building in the future.

RECORDING, ASSESSING, PLANNING AND EXECUTION

As in any restoration project, the site and buildings had to be carefully surveyed and recorded. The magnitude of this task can best be imagined if one understands that we were asked to work on two sets of buildings: Government House and the Stables; that Government House had been built in at least seven different stages and under seven different administrations between 1848 and 1919; that there were 85 rooms, each of a different dimension in Government House alone; that there were 133 doors and 155 windows, many of differing sizes and detail depending on which phase of construction they came from. Every item of door or window ironmongery was identified and recorded... and so it went on. We discovered portions of the original electrical circuitry; a very valuable pressed metal ceiling which still retained its original (c. 1870) multi-coloured decorative finish – possibly the only such ceiling in the whole of the Province, if not in the land; Voortrekker furrows and much else that was unexpected.

REDESIGNING THE SITE

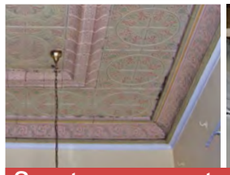
Problems that had arisen over the years, as the site had evolved from one function to the next were carefully analysed, and major landscaping recommendations proposed. This included the demolition of a very large swimming pool that had become redundant and impinged on the main architectural feature of the historic core.

The road network was re-designed to ensure that future vehicular traffic was less likely to damage the building's fabric. The quantity of parking was greatly increased without impinging on the aesthetics of the important buildings. A strong pedestrian core was developed through the heart of the campus.

DISCOVERY

The need to be ready to address one's responsibilities towards the safeguarding of our heritage can best be demonstrated by the discoveries made on site as the project proceeded.

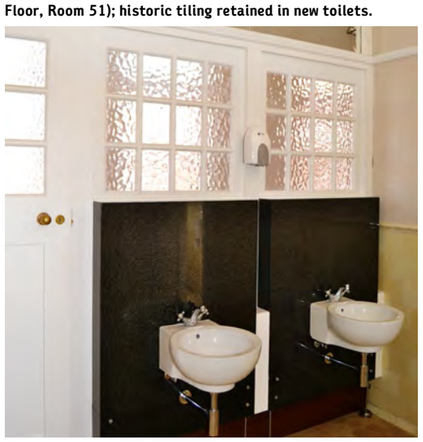
A gable that clearly showed previous 'fix-it-ups' in the shale construction was thought to be damaged due to settlement of the foundations. The foundations were opened up, both internally and externally and a large, brick, rainwater reservoir from an earlier extension was found to be located directly under the gable wall. On further investigation it became obvious that, while such building practices may be unorthodox, this was

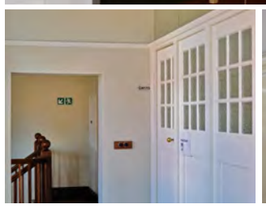


Great care was taken by the restorer, Joanna Roberts, to ensure that what she did was totally reversible, and the final product is remarkable.

ANTI-CLOCKWISE FROM TOP LEFT: Yellowwood beam in Reading Room; Reading Room ceiling before damage; ceiling damaged by subcontractors; restoration of the ceiling by Joanna Roberts. BELOW: water damage to lathing wall.

BELOW, LEFT AND RIGHT: In remodelling the West Wing, discarded historical partitioning was re-used in the ablutions for what has become the Council Chamber (First Floor, Room 51); historic tiling retained in new toilets.





patently not causing the problem in the gable wall. Only after the plaster around a bay window was stripped and the construction exposed, did we discover that Governor Sir Arthur Havelock's builders (1888) had chosen to cut through an existing two storey shale gable and introduce two 300 x 90 mm yellowwood beams across the opening. These had functioned perfectly well for 100 years, until poor termite control in the 1980s had allowed these *blighters* access and destruction followed.

A similar structural detail was discovered in the Reading Room where a new bay window had been cut into a two storey shale wall with clear opening of four metres. Here we discovered an ingenious construction of two yellowwood beams set alongside each other with a steel bar between them. The steel bar was anchored at both ends to the top face of both beams and was bent diagonally down at an angle of approximately 30° between the beams to a spreader bar below the beams before it continued. The steel bar provided the necessary 'reinforcement' to give the yellowwood beams sufficient strength to hold up a two storey shale wall over a four metre gap! It worked perfectly satisfactorily despite no computer being able to verify this!

Wherever possible such unique features, covered up for decades, have now been detailed so that they can be opened up for public appreciation and education.

A system of lath walls was discovered, which was also not anticipated. Not only was a sample of this construction left open for public appreciation, but the technique was used again in the reconstruction of earlier walls that had been made structurally unsound as a result of water ingress.

The re-use of original material and fittings was very important to us. The sanitary fittings that had been installed in 1910 had never been replaced, together with much of the original tiling. Where these could be retained, they were left. Where other functions happened to make the continued existence of these fittings impractical or impossible, great efforts were made to salvage them and re-use them to replace broken items. This sometimes necessitated the demolition of a portion of a wall to gain access to the ceramic plugs on the rear of basins which held them in the wall.

A COMEDY OF ERRORS

To ensure that the historic brassware and ironmongery would not be stolen from site, each door and window's fittings was taken off, labelled and sealed in a separate plastic bag, ready for servicing and refitting as per the door or window schedules. Several months into the contract, every one of those bags had been opened up and all the contents thrown into one huge pile of 'pieces'. There was absolutely no way either they, or we could sort out which handle went with which door lock or which small grub screw belonged to which catch. The historic, contextual relationship of fittings to a particular door was lost for ever.

We had advised the contractor of the importance of the historic painted, pressed-metal ceiling in the Reading Room (Lounge 1, Room 10 on the plan). We had instructed that the air conditioning slot diffusers were to be installed around the perimeter of the room, from above. To facilitate this, a very badly termite-eaten tongue and groove (T&G) floor in the room above would be removed and access gained from this space. Despite these explicit instructions we walked into the room one morning to find that their sub-contractors had been permitted to move into the room, had ripped away the pressed metal cornices, bent adjacent panels and generally destroyed the paintwork on these panels!

To restore this totally needless damage a specialist restorer was engaged to repair and restore those parts of the ceiling affected by the contractor's work. Great care was taken by the restorer, Joanna Roberts, to ensure that what she did was totally reversible, but that doesn't resolve the loss of original paint. Joanna spent nearly seven weeks on her back attending to the ceiling and the final product is remarkable.

Then there was 'black week'. It started on a Tuesday when we discovered that without reference to any one of the professional

ABOVE, LEFT TO RIGHT: Without an architect's instruction, the contractors had cut into the historic concrete floor to narrow the spacing of the bearers for the suspended timber floor over; view inside ceiling showing the erroneous hollowing-out of a tie beam to apparently enable continuity of diffusers.

ABOVE: In the Conference Room, we see the effectiveness of natural top-lighting when cleaned.
BELOW: Rafter ends destroyed by termites were carefully amputated and new, matching yellowwood replacements were finger-jointed onto the balance of original rafters.

team, workers had been sent into a particular passage (First Floor, 31. Break away Area) to cut new slots in an Edwardian concrete slab to take new soft wood fixing cleats spaced at 600 mm centres instead of the original 720 mm centres. The workers, regardless of the sound quality, or the intermittent showers of sparks, angle-ground the slots as instructed... only on completion did someone realise that the 'restoration specialist' had cut through the tops of almost all the Edwardian reinforcement joists! This necessitated the removal of a sample of the steel, the testing of it by the SA Institute of Welding and the preparation by this Institute of a specification for the filling in of all the cuts. The nature of the steel, in particular its high phosphorous content, was expected to be problematic and a welding process was specified that called for 16 welds per cut to reinstate the integrity of the reinforcement!

Later that same week, another team of workers was sent off to cut through an existing T&G ceiling so that slot diffusers could be fitted. No one bothered to check what the T&G boarding had been fixed to and no one bothered to question why in some places the skill saw cut through so quickly and in other places there was quite some resistance. When the boarding had been removed the remaining offending wooden blocks were broken out and the job was done... only for mechanical engineer Wynand Venter to discover that the workers had cut through every one of the 5 metre tie beams of a perfect roof truss system – not just once in every tie, but in two places!

ROOF TRUSSES

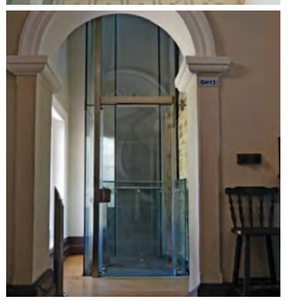
Engineer Hugh Bowman supported our determination that as much of the original material as possible should be retained, even if it was not in the public arena. Hence, instead of a previous generation's crass use of prefabricated roof trusses, which we found over part of the Stables building, rafter ends destroyed by termites were carefully amputated and new, matching yellowwood replacements were finger-jointed onto the balance of the original rafter. These replacements are of matching timber density, the graining is similar, the dimensions match perfectly, yet the tone of the new timber is naturally lighter, thereby clearly showing what is new. In time this will darken with age. Very few people will ever see these rafters in the roof space, but that is not of significance. What is significant is that the intervention has been kept to a minimum, is structurally sound, is in harmony with what has been replaced and lets future generations experience what we have had the privilege of experiencing.

VERTICAL CIRCULATION

Linda Ness was employed to translate our vision for the wheelchair lift shaft (niche off Room 13 on ground floor) and the East Wing security doors (Room 4) into a reality that would satisfy current legislation. It was necessary to provide a means whereby the disabled could gain access to the first floor of the oldest portion of the building. We accepted that the provision of a lifting device would be necessary, but that this would be something fairly alien to those who occupied the building in previous eras. Hence it was decided to design the lift and its shaft in a contemporary manner.

The experience of moving from one floor to the next should be more than purely practical. It could be visually stimulating and that led us to the design of a simple stainless steel platform, just big enough to take a wheel chair, rising within a glass lift shaft. Linda detailed our concept proposals, undertook the contract negotiations and supervised the installation. Then followed the nightmare of trying to convince a Government licensed Lift Inspector to approve an installation that totally complied with the regulations. The thought that a lift could be anything other than a commercial catalogue product proved too much for both the Mechanical Consultant and the Lift Inspector! It was eventually approved and it is there to be viewed by anyone. Its contemporary materials and design provide a fine contrast to the historic fabric of the old building, while retaining all the significant features of the surrounding structure.

LEFT: The niche with mosaic floor was two steps lower than the Entrance space. A new timber floor on steel structure was suspended over the mosaics which can be appreciated partially when the lift platform rises.



LEFT: Ground floor.

LEFT: First floor lift shaft with control panel.

ABOVE: Security glazing in the East Wing.
TOP RIGHT: Restored Reading Room ceiling – note horizontal slot of air-conditioning diffusers at cornice.

Neither the aesthetic appreciation of the room, nor the satisfactory functioning of the air-conditioning has been compromised by the cooling solution.

GLAZING-IN

Linda was also able to translate our proposals for the glazing-in of three archways on the East Wing veranda (4), to provide security and a breakaway area for the ground floor meeting rooms. Glazing-in of verandas has been done many times before, but generally scant concern has been shown in the detailing. Here we chose to acknowledge the profiles of the existing brickwork piers and to locate the stainless steel glazing clamps in the brick-joints to avoid any damage to the actual bricks as joints can be repaired more easily than bricks. The resulting glazing is scribed to the brick profiles and sits comfortably in the older structure, while being honestly contemporary.

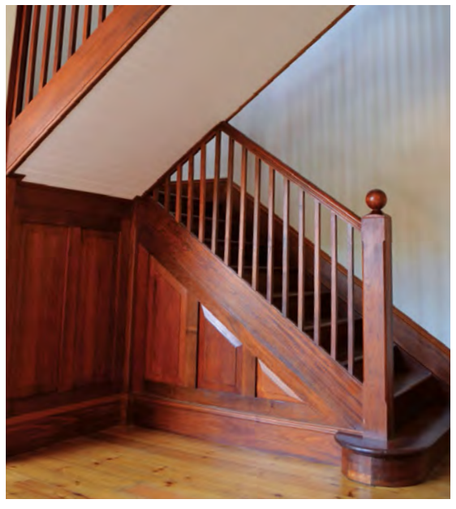
AIR CONDITIONING

Wynand Venter is not your standard mechanical engineer. He understood that the normal installation of air-conditioning diffusers and return air ducts was not appropriate to an historic environment. We made suggestions to him on how slot diffusers could be integrated along the walls as part of the cornice in the Reading Room, and he made it work. He was asked to make the supply and return ducts work above dropped pressed metal ceiling panels in the upper floor Council Chamber, and he made it work. He was asked to provide air conditioning through the floor of the ground floor Council Chamber, and he made it work. The great thing is that in each of these cases the cold mechanical and commercial aesthetics of standard air conditioning installations are almost non-existent and neither the aesthetic appreciation of the room, nor the satisfactory functioning of the air-conditioning has been compromised. It proves that with a bit of effort it can be done and there is no excuse for some of the poor installations that have appeared, and been accepted, in historic buildings.

CARPENTRY

Ryan Jenkins was subcontracted by GVK to undertake most of the carpentry work. Ryan saw to it that pieces of timber were transformed into that which we had detailed on paper, including a new timber staircase in the West Wing. The design called for a simple dog-legged stair in Merbau timber (ex SE Asia), to get students up and down in that wing. It has turned out as we had intended – sturdy, dignified and classically simple, in harmony with its surroundings. It serves its purpose very well.

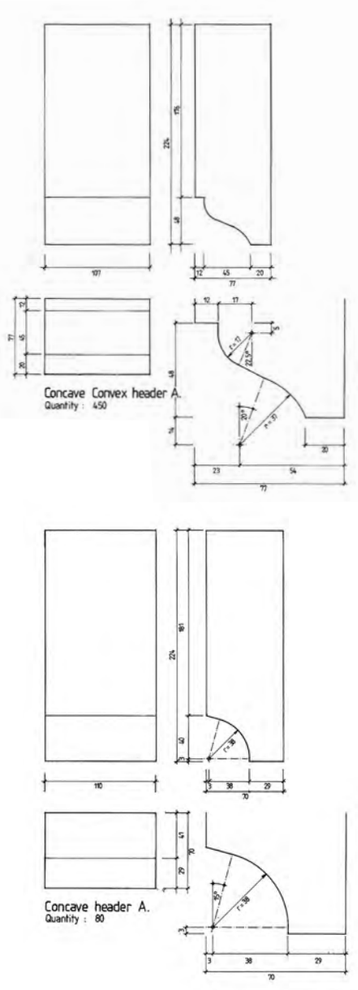
ABOVE: New gallery – air-conditioning diffusers integral with the lighting track. BELOW: New staircase in new stairwell.



We shall always be grateful to *Corobrik* for their generous co-operation, and their considerable subsidization of the costs.

ABOVE AND BELOW: The Ground Floor Council Chamber (Room 27) before and after rehabilitation.

ABOVE: Damaged brick courses which, despite earlier experiments of replacing with mortar and brick dust finish simply had to be replaced.
BELOW: Drawings of replacement bricks that were specially manufactured by *Corobrik*.



BRICKS

In any restoration project in Pietermaritzburg there is always the problem of sourcing 'salmon pink bricks' to replace the inevitable exfoliated bricks that are so typical of the city's heritage. For decades the only source of replacements has been demolition sites, but the chances of getting just the right profile, size and texture are minimal. *Corobrik* has been unable, or unwilling, to supply specials for some time now. However, we offered to make our own specials in a potter's kiln if they would supply the clays and advise on temperatures. After some collegial discussions with top management, it was agreed that *Corobrik* would undertake the manufacture of the required replacements, but we would have to supply detailed drawings of each special brick required. Measured drawings were then prepared of 19 different types of specials for the first order, which was placed in October 2012. Several months later a second order followed for yet others.

The clay was sourced in Eston, transported to the Midrand plant in Gauteng where the bricks were hand formed and sun dried before being returned to Avoca, KZN for firing in that plant's kiln. These specials were placed in predetermined positions in the kiln to achieve the desired vitrification and colour. The bricks were subsequently transported to the site. Provision had been made for more than the number required for the restoration, so that the client had a small stock for future repairs.

We shall always be grateful to *Corobrik* for their generous co-operation in this aspect of the project, and their considerable subsidisation of the costs; it turned out to be a learning exercise in what is possible, if the mind is willing, for both the company and ourselves. The testimony will remain for many years to come.

CONCLUSIONS

Every architect does his/her best, even under trying conditions, to make the end product satisfactory. In that we have achieved a degree of success, as long as one does not look too closely. Many of the rooms have reverted to clean, dignified spaces that reflect a degree of permanence and quality that we hoped to achieve. We have brought new life into a very old and tired lady, well past her doctor's appointment. There are now rooms that serve the student body and staff requirements efficiently and effectively; there are public spaces where we have enjoyed both classical and contemporary displays of the best musicians' talents; there is a new gallery that has helped resolve some very poorly conceived circulation between the earlier residential component and the Edwardian extensions. There are now facilities that serve the diverse and particular needs on a contemporary campus, respecting the old and showing the new.

Ultimately we feel that we have set a higher standard for restoration and renovation in this Province, we have pushed the boundaries set by others to a new level, assured that we have been able to engage the resident community of staff and many of the students in adopting the building as theirs, and hopefully their grandchildren will be able to enjoy the buildings in years to come.

Robert J W Brusse & Diederik Kruger

Architects: *Robert J W Brusse*
Structural Engineers: *LSC Brunette*
Engineers for specialised glass elements: *Linda Ness and Associates*
Mechanical and Electrical Engineers: *Dilhase represented by Wynand Venter*
Quantity Surveyors: *Randall MacLennan Ikusasa*
Main contractors: *Siya Zama GVK Building & Renovation*

Readers are also referred to the entry by Wilson, A Government Building, Pietermaritzburg in Herholdt, A (Ed) *Architectural Conservation in South Africa since* 1994: 100+ *Projects*. Port Elizabeth: DOT Matrix Publications, 2014. *–Editor*

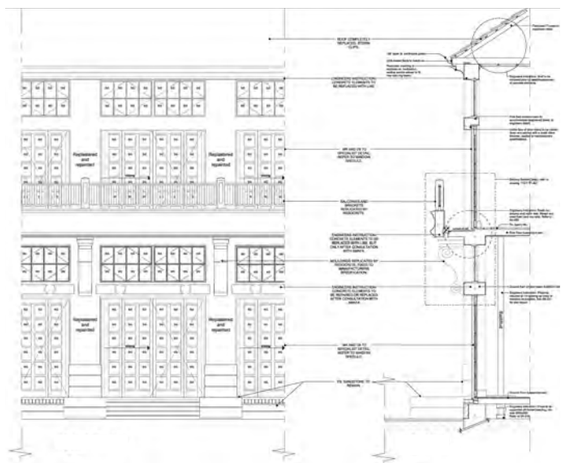
KZN (ADDINGTON) CHILDREN'S HOSPITAL

ERSKINE TERRACE, POINT, DURBAN

MAIN PHOTO: Rickshaws and people in front of the hospital at its opening. ABOVE, LEFT TO RIGHT: the sorry state after four decades of neglect; fitting the new cupola, replicated in *Resocrete*.

THIS ACCOUNT COMMENCES in the early 1930s where a rickshaw parade and curious onlookers are gathered right before their new Children's Hospital. The dating is evident because the original Roman tiles haven't been destroyed and replaced by Marseilles tiles due to the disastrous hailstorm on the beachfront shortly after the official opening.

Note the attire of the audience; ladies carrying bags and wearing modest skirts, apart from one daring to venture out in slacks. The menfolk are mainly in jackets and flannels or shorts but with knee high stockings and polished shoes. Times have changed! Having contributed one third of the cost (£44,000; Cumming-George: 1934, 151) they are justifiably proud of the first hospital of its kind in Africa. Their contribution was equally matched by the City Council and the Natal Provincial Administration.



BAY ELEVATION

STRIP SECTION

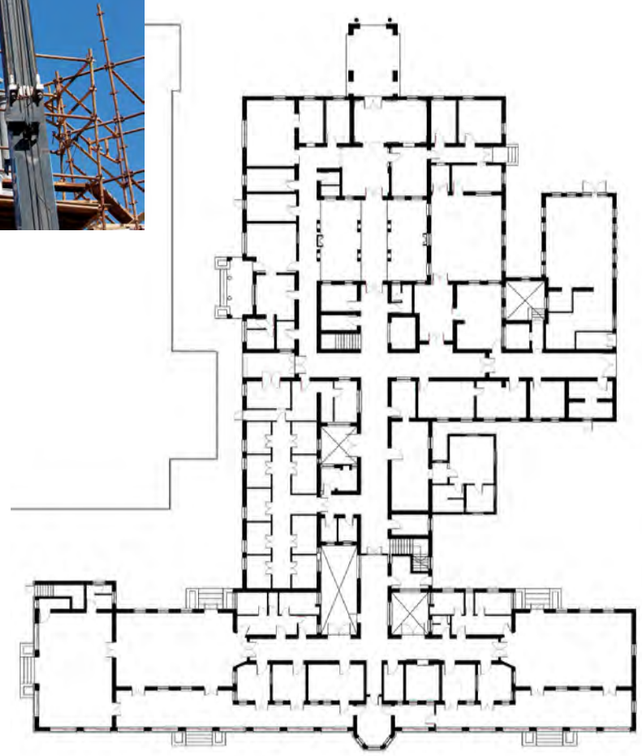
The wards were decorated with paintings illustrating "fairy tales and nursery rhymes, leaded lights depicting animals and birds, are provided in some of the panes to ward windows" (Cumming-George, L.)

ADDINGTON CHILDREN'S HOSPITAL

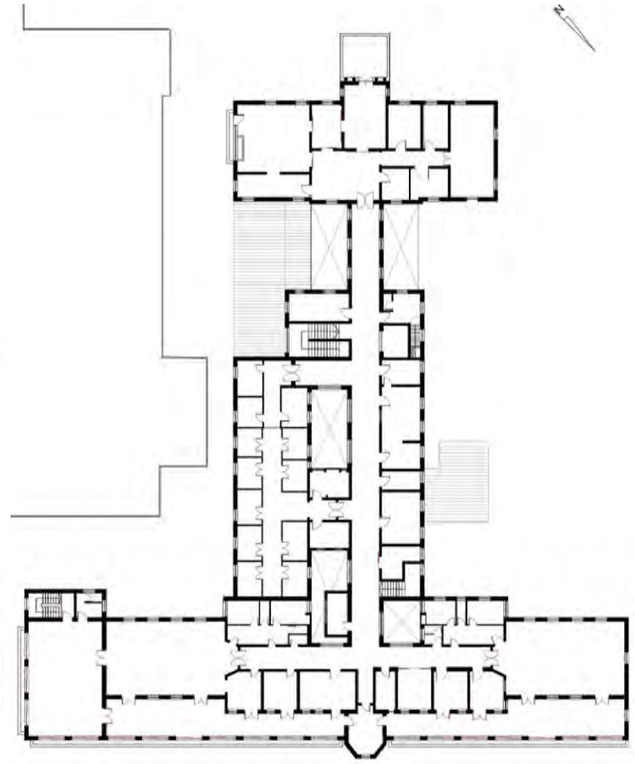
Addington Children's Hospital, 1930–3, was designed to accommodate 70 patients. It was "planned around open courts, which, together with the numerous large windows capable of being thrown wide open, will allow the entrance of as much air as possible; while at either end of the main block on the sea-front, open-air wards complete with their own lavatories and drinking fountains, and connected by verandas, house patients who require such conditions".

Source:

Cumming-George, L. *Architecture in South Africa*, Vol 2. Cape Town: The Specialty Press, 1934, pp 151-3).



GROUND FLOOR PLAN



FIRST FLOOR PLAN

ABOVE:
The restored East-facing wing of the hospital
LEFT TO RIGHT:
a bracket remade in *Resocrete* waiting to be re-affixed;
Historical photograph of the portico, by Mary Stainbank, in its original state (Cumming-George: 1934, 152).

The splendid tower was dominant on the beachfront and even served as a navigation beacon when ships were entering the harbour mouth. It lost this status to the Memorial Tower on Howard College campus, UKZN, after the War and this has now been finally supplanted by the pilots using a *Garmin*!

The hospital was abandoned for various reasons in 1974 and barely used thereafter. It became woefully neglected, eventually turning into a refuge for feral cats, homeless people and a sprinkling of idiots who set about smashing the fittings and stealing any metal for scrap. This included the lead flashing resulting in rainwater damage and the building becoming saturated. Ficus trees took root in the gutters, on some balconies and around the building causing structural damage.

The hospital was on the agenda of KZNIA Heritage Committee literally for decades before the initiative to restore it to its original splendour by Maternal, Adolescent and Child Health (MatCH) was launched, literally in the nick of time! It was limited to restoring the outside envelope only and resulted in a complex process of replacing the complete roof and all the teak joinery which had become neglected. Cores revealed that salt off the nearby surf had penetrated nearly forty millimetres into the plaster and masonry so all the plaster had to be stripped as well. Steel reinforcing had oxidised and chunks of concrete had dislodged.

The exceptionally well executed decorated plasterwork also had to be removed resulting in a conundrum about the skills to replace it faithfully. Skills for this work are now virtually non-existent and work permits were refused to import them from India.

The final solution is controversial, but we resorted to moulding remaining examples in *Resocrete*, a fibre glass composite with a final texture similar to plaster. More importantly it has excellent resistance to salt penetration. Moulds were cast and secured in panels, albeit hollow to reduce weight.

All the joinery was faithfully replaced in Iroko with matching furniture where possible, since Teak is no longer commercially available. Smashed panes were replaced by lightly tinted laminated glass to conform to the new energy requirements.

This restored masterpiece, now styled as the KwaZulu-Natal Children's hospital, is destined to be the historic foil of a massive, modern complex.

Rodney Harber

Original architects: ***Public Works Department (Secretary: JS Clelland FRIBA)***
Principal Agents: ***Ruben Reddy Architects***
Heritage Consultant: ***Harber & Associates***
Quantity Surveyor: ***John Royal***
Structural Engineers: ***Ove Arup***
Services Engineers: ***WSP***
Project Manager: ***Ian Rout***

DENIS HURLEY CENTRE

DENIS HURLEY ST, DURBAN

ARCHBISHOP DENIS HURLEY (1915-2004) dedicated a great part of his life to defending the rights of the underprivileged in an extremely difficult and politically turbulent period in the history of this country. The Denis Hurley Centre (DHC) strives to continue the legacy of the Archbishop. Located in vibrant central Durban, a few steps from Warwick Triangle and Victoria Street Market, the building has been conceived as a contemporary facility to uplift and serve the community – a welcoming refuge to all community members regardless of background, faith or nationality.

DHC occupies the site of the demolished Parish building adjacent to Emmanuel Cathedral. Various feasibility studies were done to assess the viability of restoring and refurbishing the old building. However, it was in a serious state of disrepair. Due to the substantial work required to refurbish the old structure as well as the inadequacy of the spaces for the requirements of the DHC, a decision was made to demolish the old building and design anew.

The site is confined by Cathedral Lane to the east, Denis Hurley Street, formerly Queen Street, to the north, and the pedestrian mall and Emmanuel Cathedral to the south. The site has a triangular shape with zero building lines and a site occupation ratio of 100%; this allows for maximum use of a relatively small site (approximately 500m² in total). However, the triangular shape of the site presented a real design challenge.

Due to the tight budget of the project and the necessity of keeping the running costs to a minimum, DHC had to be a highly energy efficient and low maintenance building. It is for this reason that the internal spaces are arranged around a central atrium. The atrium brings natural light to all circulation spaces across the building thereby improving their spatial quality. It serves as the lung of the building by providing natural ventilation to most internal spaces. Air extractors, located over the atrium on the third floor technical mezzanine level, extract rising stale air from the atrium, creating a draught from the operable windows located in each room and through ventilation grids located over the room doors.

The DHC envelope has been designed as a uniform breathable skin that maximises natural light and natural ventilation, whilst protecting it from direct sun penetration. This is achieved by providing deeply recessed, long and narrow windows evenly distributed across the north and east façades.

The south façade maximises the view of the adjacent Emmanuel Cathedral from the Centre. The highly reflective curtain wall creates subtle reflections of the Cathedral bringing contemporary and heritage architecture together in harmony. The DHC façade is modulated with a clear vertical rhythm emphasizing the building's primary structure as well as a secondary façade structure. This modulation responds to the building context

ABOVE: Aerial view of the site before demolition of the Parish building in the center of the photograph.

LEFT: Before; the former Parish building (*A First Listing*: 1974, 27).
ABOVE: After; the Denis Hurley Centre, opposite Emmanuel Cathedral, one of the best examples of Gothic Revival in South Africa by Street-Wilson & Barr, 1904 *(cover photo by Kim Thunder).*
BELOW: The central atrium that runs through the centre *(photo by Guy Spiller)*

NAMING OF THE CENTRE

The Centre is named after Denis Hurley, Archbishop of Durban, 1946–92, youngest ever Bishop and Archbishop respectively of the Roman Catholic church, remembered especially for his contribution to the struggle against Apartheid, his concern for the poor, and his commitment towards a more just and peaceful society.

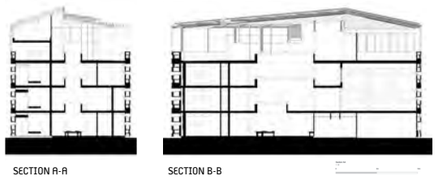
and in particular to the monumental proximity of Emanuel Cathedral.

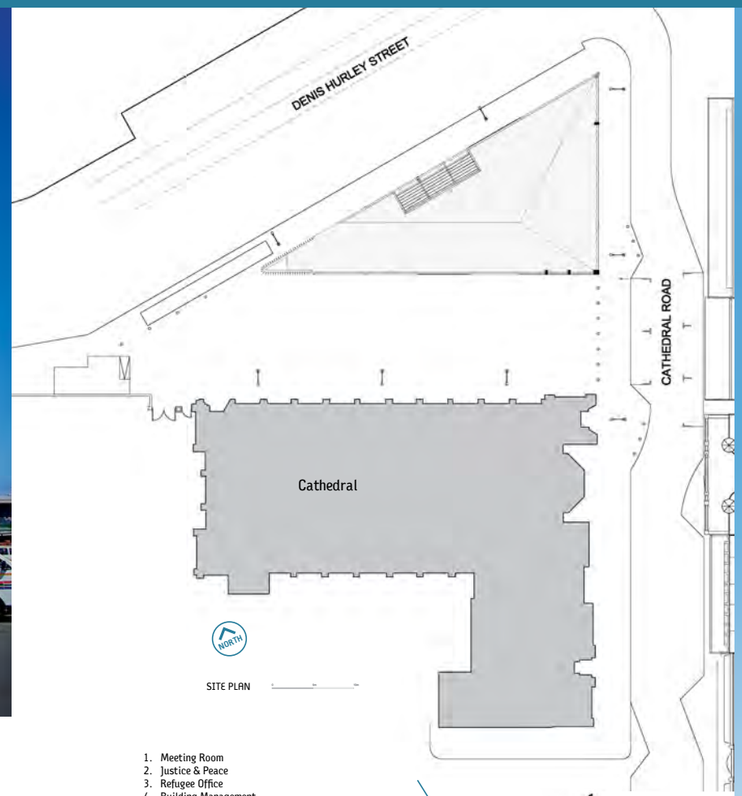
The DHC accommodates three non-Governmental programmes aimed to assist community members without access to social benefits. The Nkosinathi programme provides daily meals and shower facilities to those in need. The Clinic offers first aid, medical check-ups and screening to people with no medical aid or access to healthcare facilities. It is also a registered ARV roll-out site for people living with HIV/AIDS. The Refugee programme provides advice and counselling to refugees. All these programmes are accommodated on the ground floor to allow direct access from the street.

In addition to the programmes described above, the DHC provides a series of multi-purpose rooms of various sizes throughout the first, second and third floors. A variety of uses are envisaged for these spaces ranging from meeting rooms, skills development, catechism classes and conferences. A large double volume multi-purpose room is provided on the first floor for conferences, banquets, weddings and other events. This multi-purpose room flows into a foyer space and the open plan café/library/research centre. On the third floor a second large multi-purpose room is subdivided into three smaller rooms by movable acoustic partitions – adding even more variety to the range of spaces available in the Centre.

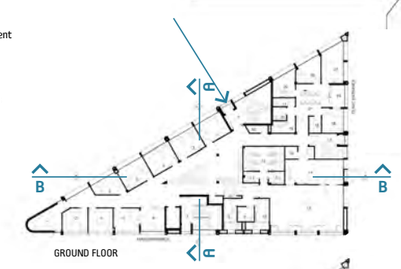
The diverse and multi-functional character of the DHC reflects the complexity, vibrancy and dynamism of the context and its users, as a catalyst to provide hope and aid to those most in need, and a living memory to the legacy of Archbishop Denis Hurley.

Client: ***Archdiocese of Durban***
Architects: ***Ruben Reddy Architects***
Project architect: ***Gonzalo Prieto Callejero***
Structural and Civil Engineers: ***Arup***
Fire, Mechanical & Wet Services: ***ADX projects***
Electrical: ***RWP Rawlins Wales KZN***
QS: ***Aecom***
Contractor: ***GVK Siya Zama Building Contractors (Pty) Ltd***



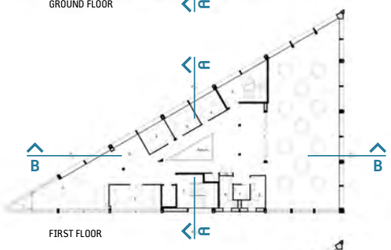


1. Meeting Room
2. Justice & Peace
3. Refugee Office
4. Building Management
5. Reception
6. Main Entrance
7. Fire Escape
8. Female Ablutions
9. Disabled Ablutions
10. Male Ablutions
11. Unisex Ablutions
12. Shower Room
13. Dining Room
14. Main Kitchen
15. Dry Food Store
16. Equipment Store
17. Service Entrance
18. Clinic Office
19. Sluice Room
20. Staff Kitchen
21. Seating Area
22. Patient Consult
23. Treatment Room
24. Clinic Entrance



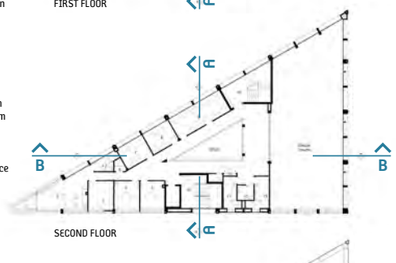
GROUND FLOOR

1. Terrace
2. Open Cafe
3. Computer Room
4. Meeting Room
5. Fire Escape
6. Female Ablution
7. Disabled Ablution
8. Male Ablution
9. Library & Exhibition



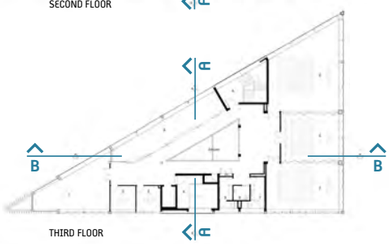
FIRST FLOOR

1. Terrace
2. Caretaker Flat
3. Caretaker Bedroom
4. Caretaker Bathroom
5. Volunteer Room
6. Volunteer Shower
7. Lounge
8. Skills Training Office
9. Skills training
10. Fire Escape
11. Female Ablution
12. Disabled Ablution
13. Male Ablution



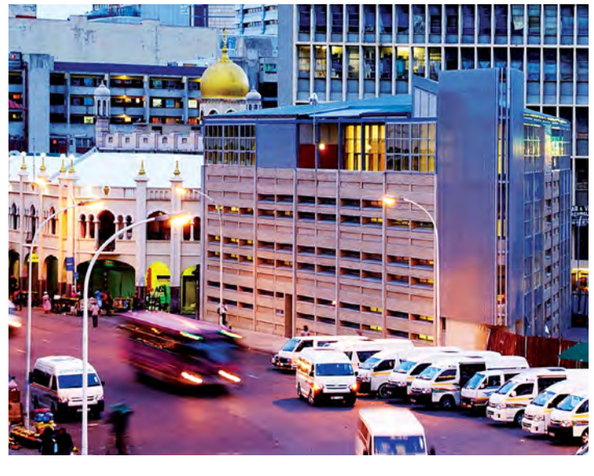
SECOND FLOOR

1. Prayer Room
2. Meeting Room
3. Verandah
4. Fire Escape
5. Female Ablution
6. Disabled Ablution
7. Male Ablution



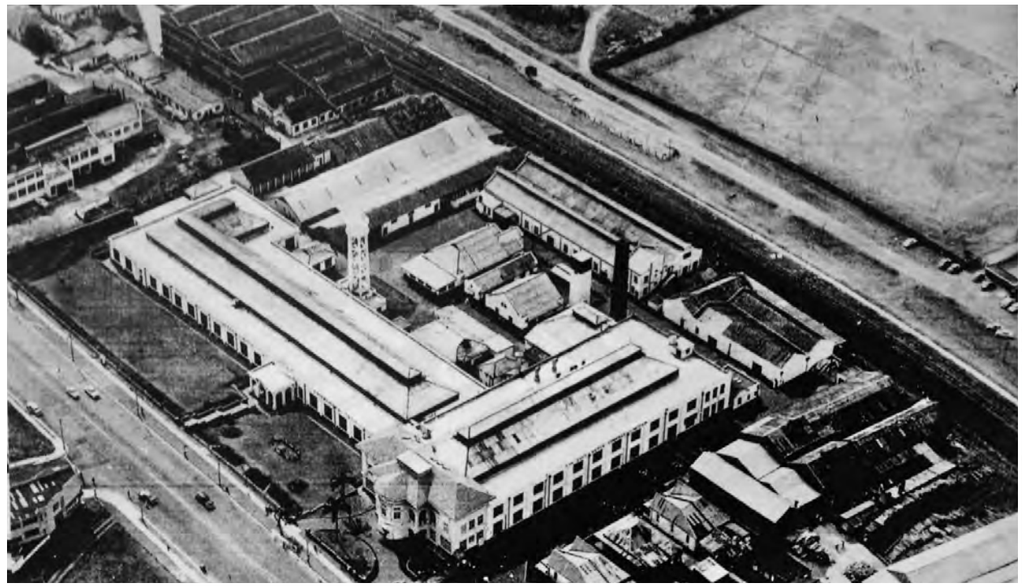
THIRD FLOOR

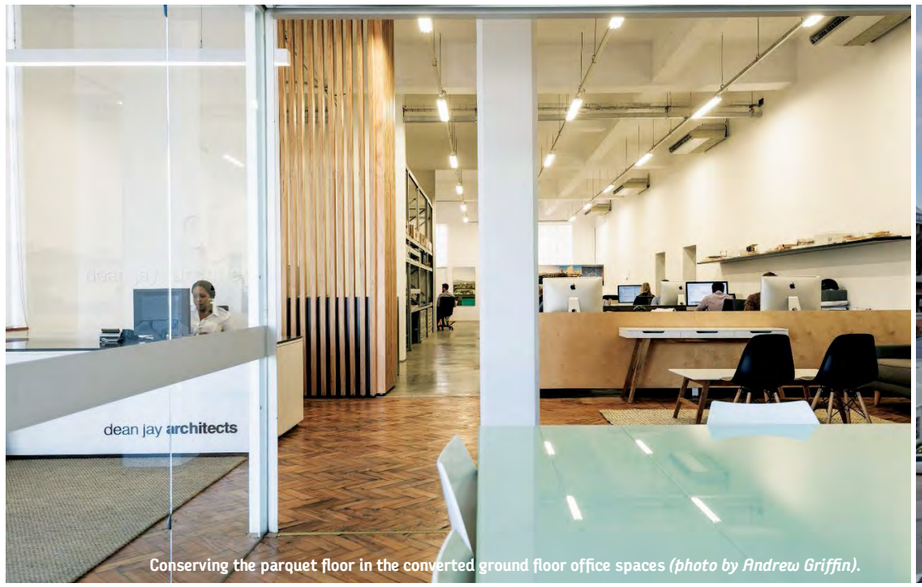
ABOVE: Prow of the Denis Hurley Centre
BELOW: The juxtaposition of the dome of Grey Street Juma Musjid and the north façade of the Denis Hurley Centre on Denis Hurley Street *(photo by Kim Thunder).*



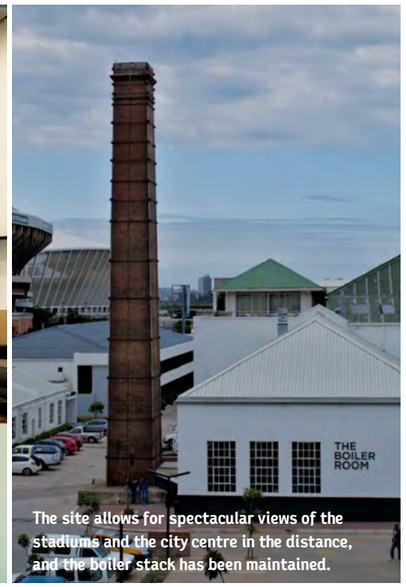
LION MATCH FACTORY: INVITING REJUVENATION

UMGENI ROAD, DURBAN



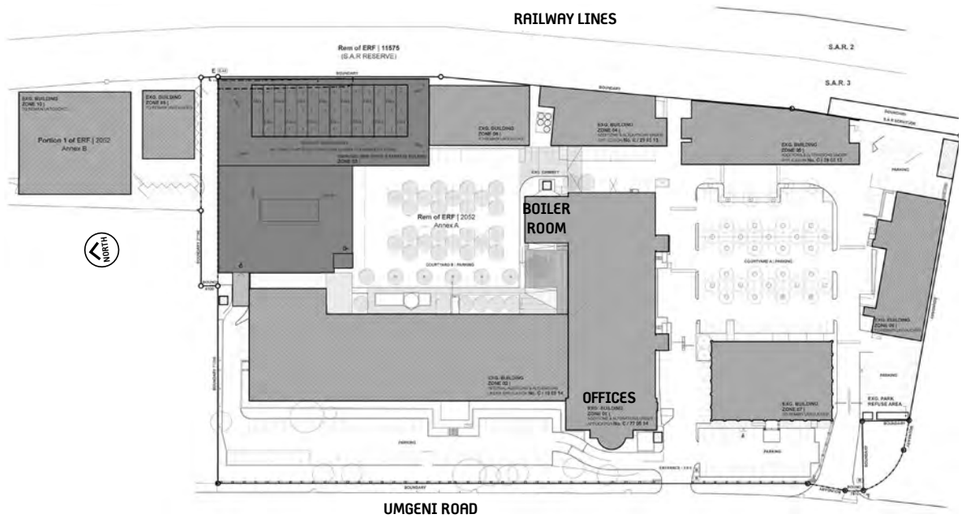


Conserving the parquet floor in the converted ground floor office spaces *(photo by Andrew Griffin).*



The site allows for spectacular views of the stadiums and the city centre in the distance, and the boiler stack has been maintained.

TOP: Aerial view from the 1940s.
ABOVE AND RIGHT: In the current rejuvenation, the projection of the lift tower and the conical roof to the bay were disposed of.



With the finishing touches having been added to the rejuvenation of this 90 year-old Durban landmark, the original match factory premises will now contain 24 000 sq m of office space amongst other amenities, including the headquarters for the client company, and offices for prominent local, national and international companies.

The site was originally designed by Ing & Jackson Architects in the Union period style, but has undergone numerous changes since the original factory was built in 1925. The most notable changes include the addition of floor space on the roof level of the main building in the 1960s by Fridjhon, Fulford and Partners. Over the last 13 years, the architects of this latest rejuvenation, Dean Jay Architects, have been involved with other alterations on the site. For the most part, though, the pitched roof and white exterior, with rusticated pilasters and string courses atop the arcaded and rusticated base, have remained intact.

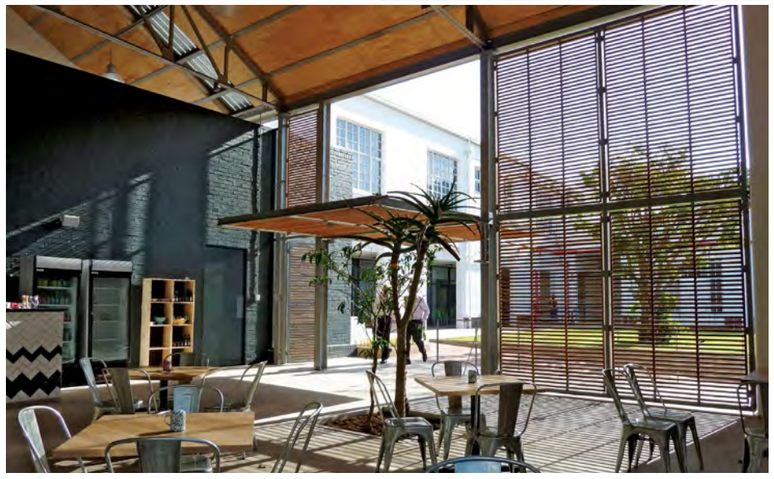
The design approach to this latest of changes to the site of 'red-brick re-generation' enables new life to be breathed into the site while restoring much of the overall original integrity of the fabric. The delicate matter of achieving this has required flexibility throughout the design process and subsequent construction phases.

One of the prominent design concepts employed was of 'park continuity'. This is achieved through the introduction of green pockets which echoes the past where the building once sat in a sub-tropical garden setting. This is also linked with the notion of visual harmony, achieved through the use of a uniform white palette, echoing of established roof profiles and the sensitive articulation of the new with the old.

The restoration of the integrity of the built fabric was achieved mainly through the decluttering of façades of buildings throughout the site, by removing subsequent service installations in addition to refinishing the main building's roof. New elements are clipped onto the existing fabric and though visually harmonious with their surrounds, have a distinctive contemporary feel. In addition to the 'adaptive reuse' of the main structures, other buildings on the site were upgraded and house additional amenities (social, retail, and a restaurant) to add to the vibrancy of the activity on the site. Subsidiary structures which had fallen into disrepair and were of insignificant historical value were removed to add value to the scheme as a whole, most notably the structures that have made way for the courtyards, which are intrinsic to the application of the 'park continuity' concept. The buildings still echo the charm of the former working facility with the retention of industrial finishes and large open truss configurations.

This project exemplifies sustainability of the historical built landscape through adaptive re-use and sensitive removal of elements of the built fabric, extending the commercial viability and thereby the life of the existing infrastructure through added amenities, and restoring parts of the natural habitat.

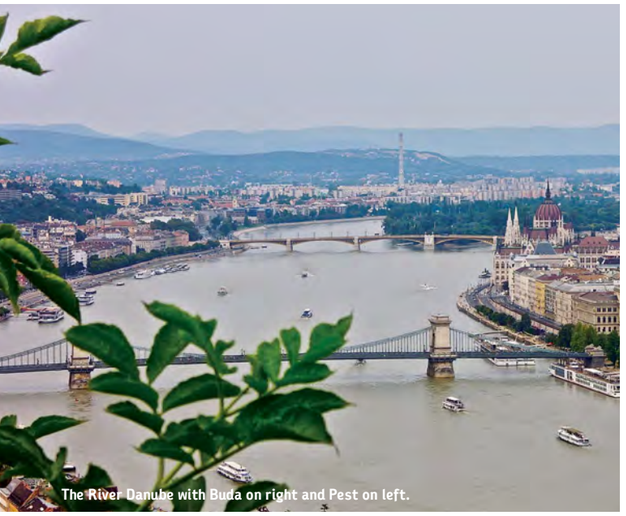
Louis du Plessis



ABOVE: Inside the Boiler Room restaurant looking out *(photo by Fathima Kathrada).*

Client: ***J.T. Ross***
Architects: ***Dean Jay Architects (Dean Jay, Mark Bellingan, Cameron Finnie, Marc Oswell, George Shambamuto, Sarah Fourie, Nokuthula Msomi, Dalena van der Walt, Duncan Fraser).***
Structural engineers: ***May Houseman Associates (Justin Butler)***
Electrical engineers: ***BFBA (Michael Mitchley)***
Mechanical engineers: ***AECON (Richard Humphrey); BD&O (Clive Donnelly)***

TRAVEL DIARY: EASTERN EUROPE



The River Danube with Buda on right and Pest on left.

IN ORDER TO TRAVEL TO Eastern Europe, you will need an EU Visa. Hungary and Romania, although part of the EU are not EURO-countries. They have their own currency. I found a cheap air-ticket to Vienna; it's a four hour train trip to Budapest from there.

BUDAPEST

The capital of Hungary, Budapest is a city on show; full of hipsters, sophisticats and very little urban grime. On the Danube, it's a scenic, friendly and easy city to visit. Neat and organised, it has grand boulevards and a collection of classical architecture built in the early 1900s to compensate for the fact that the Austro-Hungarian Empire had shrunk to the size of KZN; a large capital celebrating a bygone empire.

A highlight of modern architecture is the new Metro stations, designed with simple and durable materials, relying on structural expression and volume for evocative quality. Finishes are robust although sometimes used expressively to the point of being completely psychedelic, innovative lighting designs; lessons in simple, elegant, low maintenance, durable architecture that serves the people with dignity and identity.

CLUJ

Cluj is a vibrant University town, active 24/7. The third biggest city in Romania it is fortunate to have avoided tourist pressure. The people who live there make it work. Citizens walk, ride bikes and enjoy a successful public transport system of trams and busses. Streets are narrow and the old city is dense, gothic and quaint.

The socialist suburbs on the periphery are an anthology of communist urbanization. Early housing is 5 to 10 storey apartment blocks in park settings. Think Corb. Buildings are sensitive to the space between them, with elevations designed for light and shade. The buildings were populated by farmers, relocated to work the factories of communism. The spaces between the buildings were immediately farmed and planted. This is all these people knew. Now they are beautiful, almost utopian housing estates. The suburbs built towards the end of the communist era are cold, denser and less inviting – although pragmatic.

Mosaic bands applied to the barrel vault of a Metro station in Budapest.

ABOVE: View into a street confluence in Sibiu, now pedestrianised with outdoor markets.

ABOVE: Germanic street scenes with hipped gables facing the road in Biertan.
LEFT: Communist-period housing blocks in Cluj surrounded by dense landscaping.

SIBIU

Well restored small city, Sibiu was the European cultural capital in 2009 – and the associated budgets were put to good use. The heart of the city is pedestrianised; it has large public squares with quaint eastern European architecture surrounding. The walled city is structured and gothic in plan, streets wind, get really narrow in places and is very dense.

It's a bit like being in a Barbie movie with quaint ornate 'castles' overlooking large public squares populated by busy citizens.

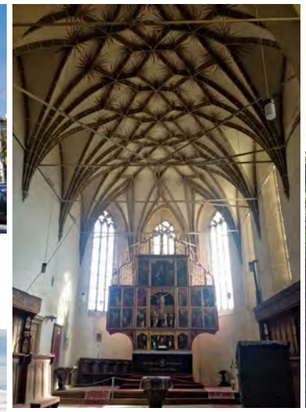
BUT...

Eastern Europe has become a bit of a Eurotrash playground. To accommodate these 'cultural tourists', neighbourhoods are pedestrianised and buildings are commercialised. Interestingly this has a contrary effect on the public space of streets and squares. Without the imposition of cars, and the removal of residents, the public realm gets taken over by commerce. The pedestrians/ citizens now pick their way between tables and temporary publicity installations – public space moves beyond the reach of the public. This is a lesson in urban management of public space and pedestrianised streets. Keep them accessible to the public.

BIERTAN

Saxons (Germans) colonised a large swathe of rural southern Transylvania. Villages have a distinctive charm and look. Most properties in these villages have an agricultural and residential function. Blocks are therefore large, developed on the street edge, streets are lively and the rear of the plot is productive. Plots on the edge of town stretch onto the meadow where livestock is communally grazed. Food security is sustained. Community is cohesive. Public space (the street) is active.

Recent depopulation of these areas has lead to properties being taken over by gypsies. Infrastructure is repurposed. Nothing goes to waste.



ABOVE, LEFT TO RIGHT: Interior of a fortified church in Biertan; View from up high overlooking the dense housing development of Brasov.

Security in these ancient villages was provided by a walled citadel or fortified church. Biertan offers one of the finest of these. The church itself has a remarkable altarpiece and gothic nave.

BRASOV

My favourite city visited. The second largest in Romania it has a beautifully restored city centre focused around a main square with residential neighbourhoods only a couple of blocks away. The city centre by comparison to Cluj is not too commercial; somehow the public space is not overly invaded.

One of the challenges of the post-communist era is the repurposing of the now redundant industrial complexes which are often within the city. Urbanisation is leading to some sprawl in the larger cities and the possibilities these old industrial sites offer is not always being taken advantage of. The tractor factory close to the train station – both great examples of soviet modernist architecture – has been converted into an office park very successfully and is worth a visit. The ruins on the edge of the development reveal the desolation that must have been 30 years ago at the end of communist era.

BUCHAREST

The capital, and much bigger by far than any other city in Romania. A large organic city plan – you will get lost – is formed by an amazing collection of 'urban Art Deco' (thanks Andrew Makin for that term). Gritty, functional, dark monochrome, Gothic buildings mould the edge of the public realm with relief, scale and proportion. No tropical hue. Somewhere in the Polish district (I was lost) there is this modern insertion. Sympathetic and respectful it slips into its neighbourhood, edged with gypsy squats. It shows the possibilities of modern architecture in a heritage environment and offers massive value.

IN SUMMARY

Eastern Europe is affordable and people are friendly. It is very easy to holiday there. Moreover there is an urban sophistication, art and culture that makes the holiday more meaningful. I stumbled upon a Dali exhibition in Sibiu; most cities have orchestras and opera regularly, and bands tour through summer. There are cheap flights to major centres and most architects I met had popped over to Venice for the Biennale. Streets are very safe, but for pickpockets. The greatest threat to safety is the fat cats in large cars driving too fast – but that's a global problem.

- Highlights: Soviet Modernism, good cities, organic food network, beer.
- Lowlights: typical northern European food, Communist Neo Classicism.

My travels took me from north to south – I would like to visit Timisoara in the west – home to Brancusi and the arts capital of Romania, and Constanta in the east on the Black Sea where the communist resorts are. Better visited in winter when the tourists are out and the buildings stand free of the clutter of temporary commerce.

Richard Stretton, Koop Design

This visit took place over 10 days in September 2014, using trains (slow), busses and a rented car to Biertan. Hungary is bordered by seven states in Central Europe. Romania on the Black Sea overthrew its communist regime in 1989. –Editor.

ABOVE: Repurposed tractor factory as an office park, Brasov.
RIGHT: Example of 'urban Art Deco' in Bucharest.
BELOW: Modern insertion in an older neighbourhood of Bucharest.
BOTTOM: The route travelled.