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This journal, now in its
 32nd year of publication,
 has since inception been
 sponsored by Corobrik.



Hendrik Auret, winner of the coveted title **Corobrik Architectural Student of the Year 2006**, with (at left) Peter du Treu, Corobrik Managing Director.

2006 Corobrik Architectural Student of the Year

At a function held in Sandton on Wednesday, 18th April, Hendrik Auret of Free State University was announced winner of this prestigious competition, and collected the R35 000 prize-money for his project 'The Poetics of Architecture – A house of Culture for the Khomani San'. The project 'City as a Convention Centre' by Avi Dagan of Nelson Mandela Metropolitan University in Port Elizabeth was deemed to have made best use of face-brick and received an award of R6 000.

Judges were Ms Tricia Emmett, Ms Deborah Preller and Winner of 1994 title, Braam de Villiers. As this event marked two decades of sponsorship, previous winners were invited and twelve attended.

KZ-NIA Committee 2007/08

The regional committee has elected two Vice-Presidents, Miles Pennington and Chris Clark, and co-opted Brian Johnson.



UKZN School of Architecture

■ Graduation 2007

At a ceremony of the Faculty of Humanities, Development and Social Sciences, held on Westville campus on Tuesday, 24th April, three students graduated with M.Arch degrees, six with B.Arch (Advanced), and 28 with BAS degrees. Of the last, the degree of Rosalie Bloem was awarded *cum laude*.

■ School of Architecture, University of KwaZulu-Natal 2007 Prize-giving ceremony

At the ceremony held in Shepstone Building on

Thursday, 3rd May, KZ-NIA Vice-President Chris Clark presented the following prizes for academic achievements during 2006:

Bachelor of Architectural Studies

Year 1 Barrie Biermann

Prize: **Dimitar Dobrev**

Year 2 Gordon Small

Prize: **Grant Prestedge**

Year 3 Calvert McDonald

Prize: **Rosalie Bloem**

Master of Architecture

Year 1 (4th) Clement

Fridjhon Prize: **Nicole Sammons**

Year 2 (5th) SN Tomkin

Prize: **Miriam Adebayo**

Ms Tricia Emmett, immediate SAIA Past-President, presented the **SAIA Best Student Award** for the highest achievement in the professional degree to **Angela Forbes**; and the **David Haddon Prize** for the best student in the subject Professional Practice, available to students of Architecture and Quantity Surveying, to **Terisha Sewcharan** (QS).



Neo-Art Deco hotel at the Suncoast Casino & Entertainment World.

The **Sherwood-Bond Bursary** was awarded to final year student **Dumisani Mdakane**; and the **Garth Moyes Award**, which acknowledges the Yr4-student who contributed most to good fellowship in the class of 2006, also to **Dumisani Mdakane**.

ICCD

On 21st March 2007, Human Rights Day, the R460 million Arena extension to the International Convention Centre was opened (see KZ-NIAJ 1/2006). In the meanwhile, Durban's eThekweni Municipality

has announced that the venue will henceforth be known as **Inkosi Albert Luthuli International Convention Centre**.

Neo-Art Deco hotel

Durban's **Suncoast Casino and Entertainment World** has grown the neo-Art Deco hotel provided for in its master-plan, see KZ-NIAJ 1/2003. Suncoast Hotel and Towers opened in time for the demand at the turn of 2006/07. Architects: **MDS Architecture** and **Enenela Architects**.

ICCD Arena extensions along Dr Alfred Bitini Xuma Street, formerly Commercial Road. Roy Reed Photography



Editorial

Environments for Education

EDUCATION IS THE PROCESS by which people acquire knowledge. The most common way to become educated is to attend school, which in an ideal case, also helps learners develop an appreciation of their cultural heritage. However, much education takes place outside the classroom eg in libraries, which holdings serve as an important resource in the education of millions of people. A major goal of a public library is to make its services available to everyone, and a well-developed library service uses branch libraries to spread its services.

Universities are schools for higher education whose core functions are teaching, research and community service. At some universities, research has assumed such proportions that a specialized office is required for the management and nurturing of research, for encouraging collaborations, and for providing administrative support.

The architect's task is to create environments with conditions that will encourage and stimulate education, both for teachers and for learners. This issue covers a few recent contributions to education by KZ-NIA members, which environments I trust prove will prove conducive to the acquisition of knowledge.

Walter Peters— Editor



COVER: Research Office, University of KwaZulu-Natal, Westville Campus, 2005. See page 8.

Letters to the Editor



KZ-NIAJ 3/2006

New Durban Stadium:

Since publication in KZ-NIAJ 3/06, the eThekweni Council has announced that the new Durban stadium will be named **Moses Mabhida Stadium**, after a South African struggle leader who died in exile in Mozambique in 1986, and whose remains were re-interred in Pietermaritzburg in 2006. —Editor

Moses Mabhida Stadium
King-Senzangakhona Stadium

Reply by eThekweni Strategic Projects Unit & 2010 Programme:

From a purely structural engineering point of view, the points you raise are valid. However, with limited space, time and finances, bifurcating the arch and providing two separate foundations at the northern end, would not have been as simple or as cost effective as the single leg. In addition, this would have consumed additional precinct space.

The single leg on the northern end also provides future potential for the development of a tourist attraction by allowing for the installation of a cable car, and this would not be possible had the end been bifurcated

The single bifurcation also represents the design of the South African flag, and gives a direction to the building and creates the image of a gateway – a landmark entry point to the Kings Park sporting precinct.

Symbolism and logic

The article on the new stadium in Durban was very interesting, both in terms of design and structure.

With regard to the design, the supporting arch appears to have an echo of the arch at the new Wembley stadium, London, designed by Norman Foster. The arch in Durban, with its bifurcated form and asymmetric configuration is also interesting. The Y-shaped plan is possibly evocative of the 'Y' in the current South African flag. The northern section of the arch, together with its enormous base, is much more massive than the southern forks of the arch.

Would it not have been better and simpler, had the southern bifurcated portion of the Durban stadium arch been repeated on the northern side? In this manner, the structure would have been much lighter, much more stable laterally, as well as being symmetrical about the east-west, central axis?

Dr Peter Hancock
 Lesotho

Impact and Transparency

My main concern is how my view is going to be affected and how this will impact on my property value. I also want to know if an EIA (Environmental Impact Assessment) was ever done.

Rumour has it that since the land use has not changed, an EIA report does not have to be done leaving my question on how my view and property value will be affected unanswered.

I also have a few questions regarding the new stadium:

- Why were the six competition entries never made public? We have two schools of Architecture in our city, yet no one has been allowed to see these entries – Why? I had the good fortune of seeing one other entry and I can assure you it was by far a better



design, cheaper to build and far more iconic than the ‘winning’ entry.

- If we rate-payers are expected to pay for this “white elephant”, then why were we not allowed to have a say in the winning design? What is so iconic and African about a Wembley Stadium replica?
- How sustainable, in ecological and financial terms is this stadium? Make all documentation public.
- Was the Stadium design competition a fair procedure or was it a farce? I ask this question as a member on the winning entry consortium was telling various people in April, long before the presentation of the various schemes, that they had won, a done deal?

I think it is time for the powers involved to become ‘transparent’.

Janine Caramanus,
Morningside,
Durban

Reply by eThekweni Strategic Projects Unit & 2010 Programme:

Without knowing where your property is located, the impact of the new stadium on your property value and view is a difficult issue to address. However, it is the city’s view that the new stadium will regenerate the urban environment in the Kings Park precinct and will attract a larger number of visitors to the area, making it a safer and improved place to visit. It will also provide a useful social, recreational and economic resource to all the citizens of Durban as well as its visitors. Although the height of the arch is significant, it is a fairly narrow element, and we believe it should not negatively impact on residents views.

Secondly, we did not perform an EIA for the re-development of the stadium as none was required: the site where the new stadium is being constructed was already zoned as a stadium site

and, in terms of the environmental legislation that was in force when work started on site, there was no requirement for an EIA to be undertaken. An Environmental Management Plan (EMP) is being undertaken to mitigate any adverse affects of the construction on the environment.

Thirdly, it is surprising that you assume the stadium to be a white elephant, where by your own admission you have no details on its economic sustainability. In planning the new stadium, the City and the stadium designers have undertaken every measure possible to ensure that the stadium is not a drain on public resources, but is a self-sustaining venture. These measures include ensuring that the stadium can accommodate a range of sporting, economic and social activities which will ensure that the structure is well used and is at the very least financially sustainable. In addition, we believe that the stadium will have a positive benefit on the entire city, and it is important to remember that the financial viability of public investments in sporting and other infrastructure cannot be measured on the structure itself, but must be seen in the context of its ability to add to the economy of the city as a whole. The City of Durban’s emphasis on 2010 and other sporting events is based on our “2010 and beyond” strategy, which promotes event-led development and seeks to ensure that Durban becomes the sporting and event capital of Africa.

Whilst the City of Durban acknowledges that it has not been possible to fully engage the citizens of the city in the competition process, in a project of this magnitude and with tight time constraints, this is very rarely possible. However, the City is actively seeking ways to involve citizens in the 2010 preparation process, and is considering a number of ways of doing this. We would also welcome suggestions from the public in this regard.

Finally, we find your comments regarding the

fairness of the competition procedure unwarranted and unjustifiable: The evaluation and adjudication of the competition entries was done in complete accordance with Council procedures and legislative requirements. The evaluation team worked tirelessly and gave up many evenings and weekends to ensure that the process was undertaken rigorously and with a fine attention to detail. The final decision was not easily or lightly made, a key issue being the buildability of the structure within the time and budget constraints. Whilst there were, what some would see as more “glamorous” designs, we did not have confidence that these could be built within our pressing constraints. The evaluation team consisted of staff from a range of council departments and the decision was made by consensus. If one of the winning consortium members announced their success before a decision was made, it could only have been done on the basis of extreme optimism, and not on fact.



Travel Diary...

ATLANTA: I am writing this short note as I thought it may be of interest to you that I attended the School of Architecture at Georgia Tech in 1958–59 as a recipient of a scholarship. It was my great privilege to have been taught by Paul Heffernan – an understated (I thought) designer and teacher trained in the Beaux-Arts tradition. Another gifted teacher was James Grady whose lectures in the history of architecture were an inspiration and attended by outsiders.

Your photographs of the Ponce apartment building and the Fox Theatre brought back memories. What wonderful skylines. I am glad they have been preserved.

Keith MacMullen,
Bryanston,
Johannesburg

Pleased to have brought you up to date, almost half-a-century later. —Editor

Obituaries

■ Patrick Gibson (1938 — 2006)

On 30th December 2006 Patrick Alan Gibson lost the battle to cancer he fought for over a year.

On graduating in Architecture at Natal in 1961, Pat won a scholarship of the SA Brick Association and was able to pursue an M.Arch degree by research. Thereupon he joined the practice of Franklin & Garland, and subsequently became a partner of Franklin, Garland & Gibson.

In 1971 he participated in a Rotary Group Study Exchange tour to USA and Israel. His interest and involvement in many aspects outside architecture saw him serve as Chairman in 1973 of Round Table Natalia No.118; and as Chairman of the *Daily News* Learn Fund, 1974–76. Following

■ Dennis Radford (1942 — 2007)

On 3rd of March, architectural educators lost an outstanding colleague when Dennis Radford died unexpectedly at his home in Leicester at the untimely age of 64.

Among the fraternity, Dennis occupied a unique position, having served as Head of four Departments of Architecture on three continents: Witwatersrand (1988–90); Louisiana Tech (1990–94); Natal (1994–2001); and De Montfort, Leicester (2002). Indicative of his leadership qualities, he also served as Dean of the former Faculties of Architecture at both the South African universities.

Dennis John Charles Radford was born near Liverpool. As his father had experienced the African sun in Egypt during WWII, the family migrated to South Africa in 1947 and settled in Durban where Dennis was educated. On matriculating in 1959, Dennis commenced a naval career at Britannia Royal Naval College in Dartmouth, but opted for Architecture and

■ The following are extracts from some of the tributes read at a commemorative gathering of family, friends and colleagues in Durban:

“A few people are blessed that their life’s work will survive them. Dennis is one of these. From his student days until his final months he was characterized by optimism, a generous spirit and a dedication to both his work and to helping others.

He was always glad to see others do well, and took pleasure in

praising their accomplishments. Above all, he was a devoted family man – and a great friend. Dennis we will miss you.”

Ron Lewcock,
Atlanta, USA

■

“I will remember Dennis with affection. As Head of School he welcomed me into the academic family and was generous with guidance and advice. As leader of the School he showed strength in his calm approach to management, always

his participation in 1983 in a *People-to-People* tour of USA visiting many architectural firms, Pat served as Chairman of SA Property Owners Association in 1984.

He also spent several years on committees of KZNIA; 1992–93 as President; and latterly as one of the ‘three wise men’.

Pat was always supportive of his colleagues and as Senior Partner of FGG Architects for many years he saw the practice grow extensively, including being appointed Principal Agents for the Durban Academic Hospital, known as Inkosi Albert Luthuli Central Hospital.

The world of Architecture is often a place of experiment and our own occupancy of it is a short-term tenancy.

Norbert Elias hoped for humans “to work their way out of several blind alleys and to learn how to make their life together more pleasant, more meaningful and worthwhile”. Pat achieved this in many ways. —Don Perks

registered at the University of Natal in 1962, to qualify at Cape Town in 1968. He worked in Durban in the offices of Hallen & Theron and Interarc; and in Pietermaritzburg with Small & Pettit. Hans Hallen found Dennis to be “bright and capable with a gentle character” and remembers his excellent drawings and models.

But Dennis sought a specialization and opted for an MSc degree in Environmental Conservation at Heriot-Watt University, Edinburgh (1976). On his return to South Africa, he embarked upon his academic career and joined the staff at the University of the Witwatersrand. He simultaneously earned his PhD degree, awarded 1980 by that University, on *The Architecture of the Western Cape, 1838–1901*. In 1986, he was appointed Professor.

On the attainment of democracy, Dennis returned from Louisiana to his hometown, Durban, to assume headship at the University of Natal. Dennis proved to be a well-organised administrator, diplomat, scholar and intellectual who contributed significantly to Natal’s

imbued with a wry sense of humour, a most essential commodity, as I have subsequently learnt, if one is to navigate a career in academe”.

Paul Sanders,
Brisbane, Australia

■

“I’ve known Dennis since 1960 ... at the University of Natal. ...we both worked at Hallen and Dibb, I recall weekends doing measured drawings: Ganesha Temple, Jug-gernath Puri, Riverside Soofie Sahib...

As Head of the Department of Architecture his office door was always open and his colleagues fondly recall how major decisions were shared in a crowded tea room.

We celebrate the research, teaching and leadership of a memorable colleague.”

Rodney Harber,
currently in
Darmstadt, Germany

■

“I would expect that everything will be said about Dennis that ought to be: the

■ **Keith Nurcombe (1936 — 2007)**

A great friend of the architectural profession has died. Though long retired, Keith Nurcombe had while National Marketing Director of *Toncoro*, initiated sponsorship for this Journal and, a decade on in 1986, for the annual Architectural Student of the Year competition, the most prestigious available to architectural graduates, now marking its twentieth year.

Keith was admirable. When we visited him in connection with this Journal, he had alongside his desk a suitcase packed and ready for Cape Town to undergo a kidney transplant at any time. The operation was a success and Keith soldiered on, and in retirement continued his involvement in the *Clay Brick Association of SA*.

After suffering two strokes in 1999, which left him without the capabilities of speech and writing, Keith died in January 2007. Our condolences go to his wife Vidian, and to his family.

—WP

reputation. In turn, staff appreciated his quietly supportive manner, the time he made available for everyone, his wit at meetings, and his roaring laughter that occasionally drowned conversation at tea times. He was a committed teacher with a keen perception expressed at crits and discussions. Dennis was disciplined, perhaps pronounced due to his stint in the navy, and would dispense with administrative and teaching duties to dedicate afternoons to research pursuits. Thus he authored numerous articles, including his *Guide to the Architecture of Durban and Pietermaritzburg* (2002), aimed at a broad audience. And, with his term as Head at De Montfort over, Dennis again immersed himself in what he loved most, teaching and researching in the history of architecture.

After a memorial service attended by numerous students and colleagues at Leicester, Dennis’s ashes were interred in the family grave in Samford Peverell, Devon. Our thoughts are with his family, especially his mother Marguerite (85) who too traveled from Durban for the funeral. —WP

teacher, the post-graduate, the scholar, the architect, the writer, the administrator, the person etc.

I recall his wonderful ability to look at and touch buildings and in that process to begin to enquire.”

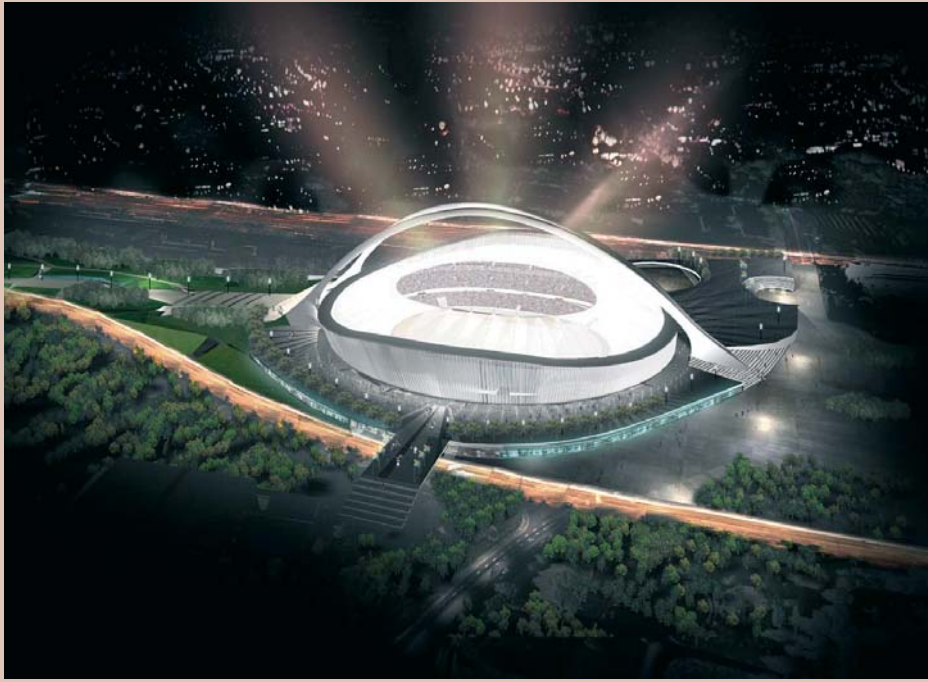
Brian Kearney, Durban

■

“Kia Oro Tena koutou. The last time I saw Dennis was in New Zealand attending a conference, and he stayed with us. I was reminded at that time

by two things – his long and distinguished career in architectural education, spanning a number of Schools on many continents, and his scholarship in articulating the architecture history of the place he probably knew best – South Africa. He will be remembered by colleagues and the many students who have had the privilege of being taught and supervised by him.

Arohanui e hoa”
Errol Haarhoff,
Auckland, New Zealand



Environments for Education

Deutsche Schule Durban, Cowie's Hill



Open air theatre in the foreground of this north-easterly view.

Deutsche Schule Durban (DSD) was established in 1971 as a junior school to cater for children of the German-speaking community from kindergarten and pre-primary classes to Class Seven. From 1977 onward DSD operated from the cloistered environment of a former convent school in Stamford Hill Road (St Agnes) in Greyville (see below). But, due to the constraints of the site and the fact that the feeder area was primarily westward of the city, DSD had long been on the look-out for a more appropriate site.

Eventually DSD found "lost space" in Cowie's Hill, owned by the municipality and, to boot, zoned for Educational purposes. Only problem, the site falls eastward from the road to a stream just across its boundary, by a deceptive 18m (or 6 storeys).

In acknowledgement of the fall, the access road with two drop-off areas is sunk to the level of the terrace of the school, from which covered access-way, the sports fields are



View from west.

overlooked. Within the banks was created an open-air theatre, which focal point is echoed in the bend of the L-shaped plan of the complex.

As a gesture to the suburban location, the massing consists of steeply pitched gabled roofs separated by flat roofs (which contain the utility spaces) and landscaped courtyards, the latter perhaps also to remind of the endeared former cloistered surround.

The hall at the heart of the school, was conceived as a concourse to enter through, with to one side the music space and to the other a venue for adult language education. Traversing the hall, access is given to the north past the staff room to the kindergarden and pre-primary section, opening to a dedicated playground yet separated by a courtyard from Class One. To the south lie the senior primary classrooms, and in parallel across courtyards, the computer room, multi-purpose room, and the library.

Being accessed off the walkway, the walls of the classrooms are more solid on that side,

while the north and west sides open via large sliding doors to external teaching spaces defined by wing walls and greenery, replete with canopies in the case of the latter orientation. The interior spaces are smaller than the norm with 5m width and 7.6m length, yet spacious due to the raked ceilings, defined by steel lattice ridge beams and rafters. Provision was made for a possible extension on the south.

Interestingly, the project was built for less than the Provincial budgetary norms, primarily due to the economic choice of materials and construction technique to maximise space. The new premises became operational in 2006, the 35th year of the DSD.

— WP

Architects: Frencken Associate Architects
Engineers: Moore Spence Jones (Pty) Ltd
Quantity Surveyors: ZAI Consultants CC
Contractors: F Verbaan Builders CC
Photographer: Craig Hudson



Environments for Education

Rural Libraries

Libraries rank as one of society's most useful service institutions and provide resources for the education of millions of people. With this objective, KZ-N Library Services set out to promote education and learning for communities with limited resources. To reach the largest user numbers and facilitate interaction amongst communities, sites were selected proximate to existing schools. These should either be owned by a municipality or be available with a PTO (permission to occupy) certificate. Level sites were favoured as planning is easier and results in lower construction costs.

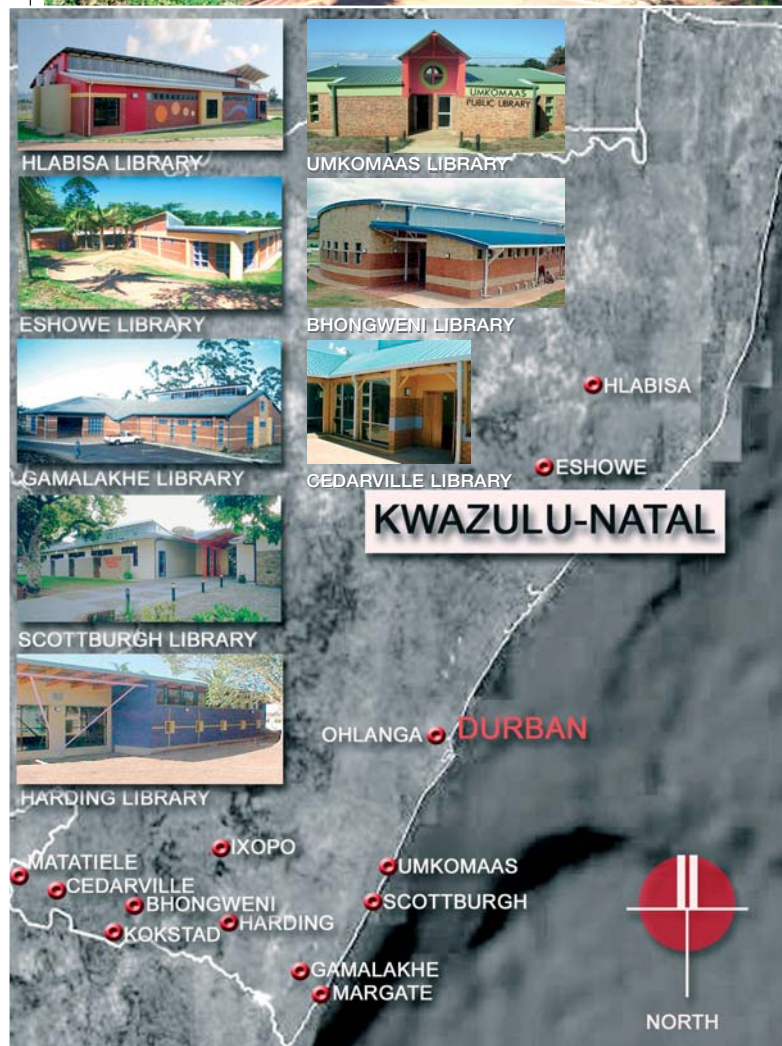
The brief

The libraries were to be approximately 500 sqm large, and positioned on the sites to allow for future expansion. Universal design principles were to be adhered to; the issue-counter should provide for control at the entrance and give oversight of the stacks; and group activities rooms are to be accessible at night without compromising the security of the holdings. The use of natural light should be maximized yet security of windows is a priority, and users should not be able to remove materials from within the library via the windows. Concrete

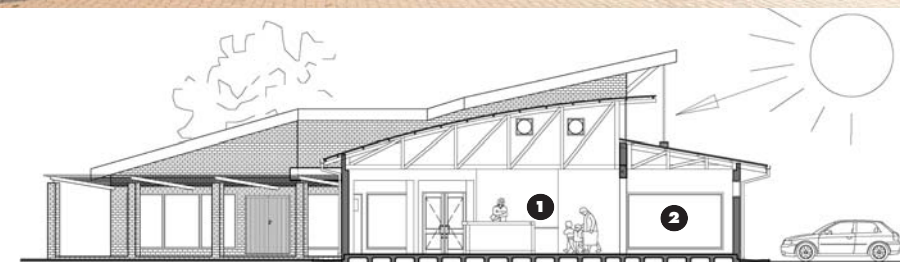
flat roofs were unacceptable, and exteriors were to consist of materials that require low maintenance.

Design approach

A 'standard design approach' was used for all the libraries as they respond to a common brief with the same objectives. These designs are adjusted to the different site conditions, prevailing weather, and contextual parameters. The aesthetic and expression of each library was left to the respective designer subject to the approval of the local municipality.

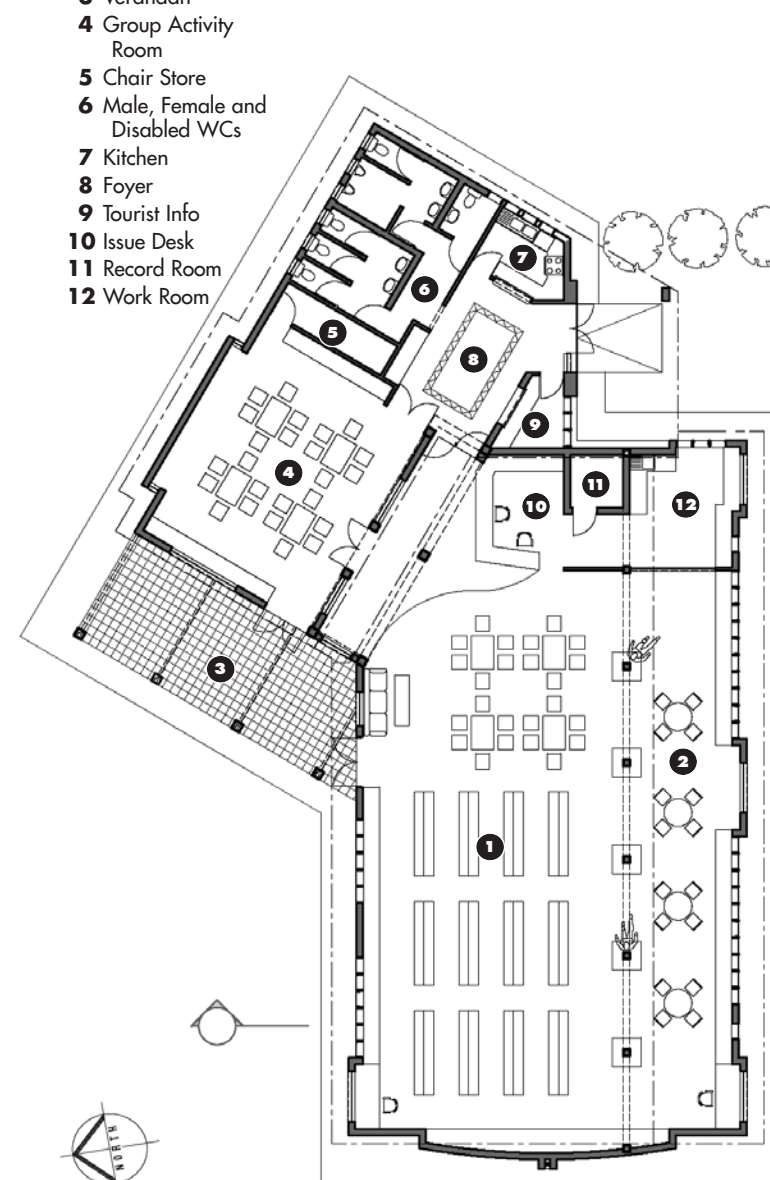


A composite of recent libraries along the many bye-ways of KwaZulu-Natal by TJ Architects.



- 1 Book Stacks
- 2 Reading Area
- 3 Verandah
- 4 Group Activity Room
- 5 Chair Store
- 6 Male, Female and Disabled WCs
- 7 Kitchen
- 8 Foyer
- 9 Tourist Info
- 10 Issue Desk
- 11 Record Room
- 12 Work Room

Hlabisa library, north-west of the Hluhluwe-Umfolozi Park: a plan shaped around functional requirements. The naturally lit book-stack area lends itself to easy supervision from the issue desk located at the fulcrum of the two rectangular spaces.



0 2 4 6 8 10 12m

Design execution —

The example of Hlabisa Library

The Hlabisa Library is positioned adjacent to the Hlabisa municipal offices. The brief required that the building should reflect its environment and context, and should be an icon to the surrounding community. The building was positioned on a north-south axis in order to maximize the natural filter of south light into the building.

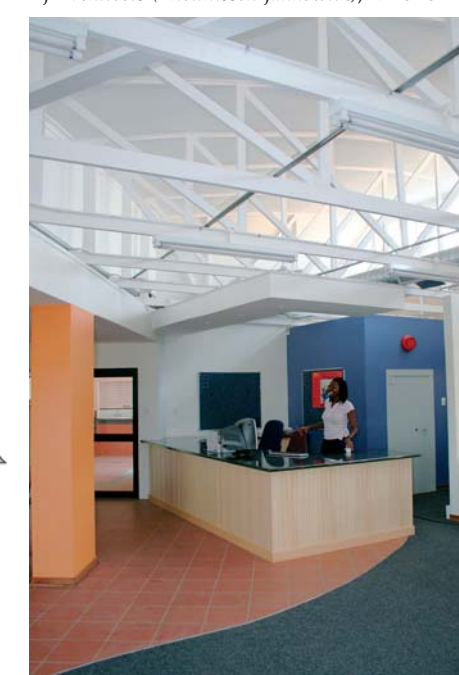
Entry is through the foyer which is a dramatic step down in scale from the covered entrance. Access to the book stacks, group activities hall, ablutions and kitchen is via the foyer. One enters from a low ceiling in the foyer to a double-volume with exposed trusses that is maximizes clerestory south light. The double-volume aids in reducing the heat build up in the roof space as the conditions are extremely hot in the warmer months. The group activity room is strategically positioned in order for easier surveillance from the issue desk.

External aesthetics

The building makes use of vibrant colours which are intended to stimulate young students as well as adding playfulness to education. The coloured plaster work on the face-brick was a cost-effective way of achieving this effect with out inflating the budget, and symbolizes growth and movement in the community. Intersecting roofs and angled timber trusses at the entrance add interest to the rectangular form of the building. The building can be viewed from all directions as it is sited near the newly-built traffic intersection that connects Nongoma and Hlabisa.

Gregory Hendricks

TJ Architects (Theunissen Jankowitz), Mkuze



Environments for Education

Research Office, UKZN, Westville Campus



BEFORE AND AFTER —
Above, an underused courtyard;
and right, its transformation into an
“outdoor” Boardroom at the heart
of the Research Office.

Below: View on entering. The
position of the Boardroom table is
defined by the baldachin.



Right: The protected
entrance on the
south-west.



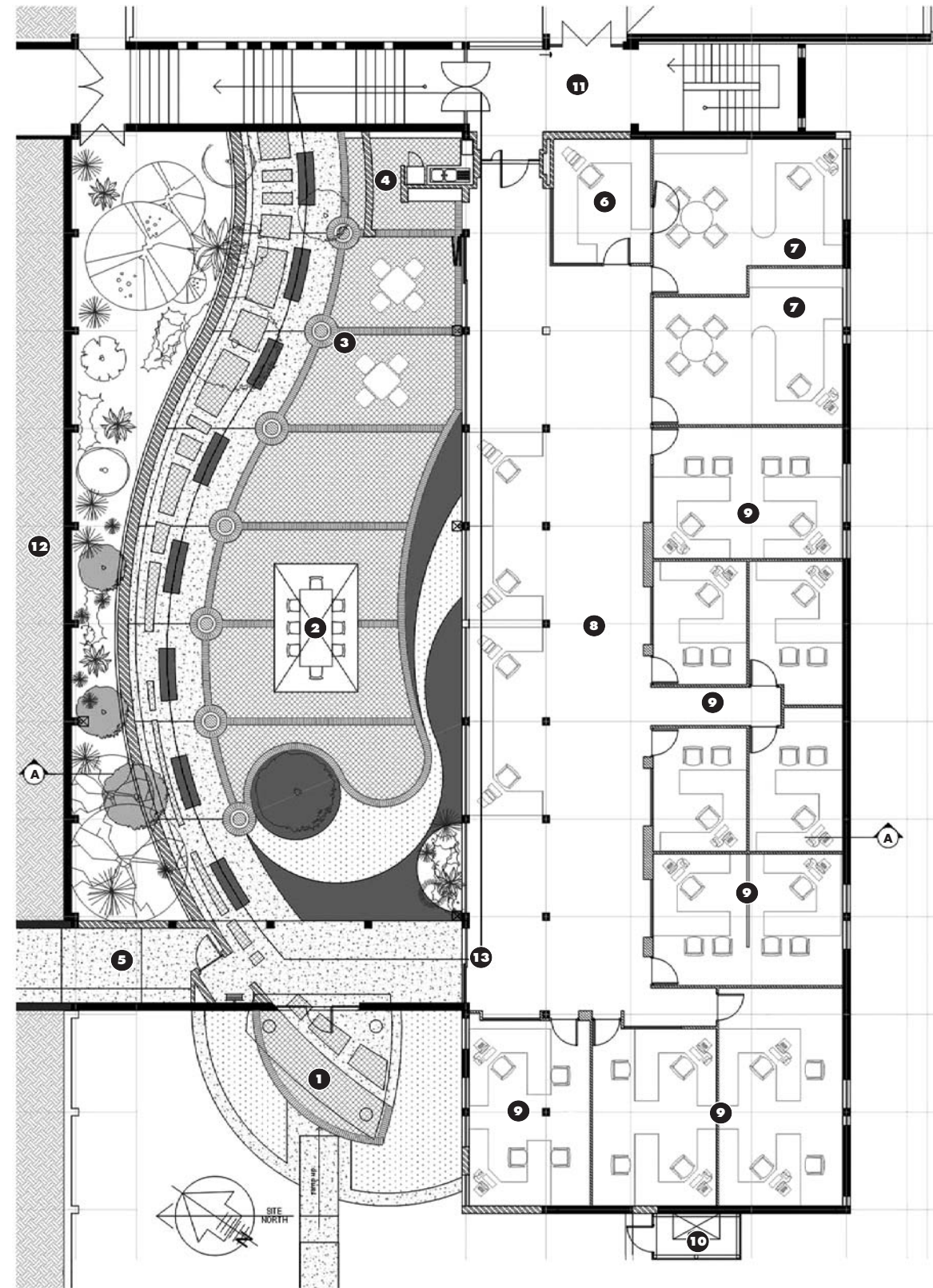
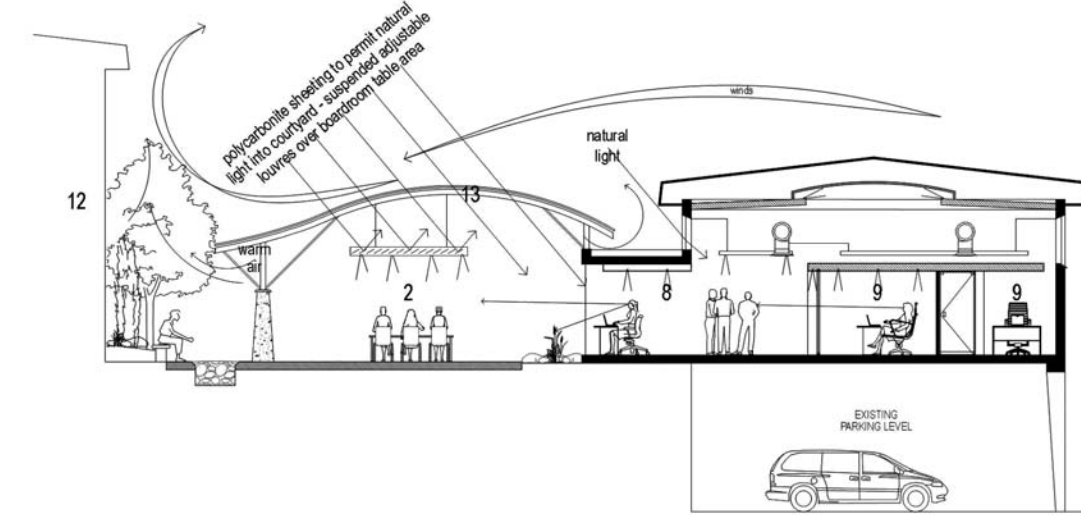
Academic research is about the development of ideas borne through interaction and debate in an atmosphere of freedom and openness. The notion of a researcher confined to a private fiefdom is untenable in a digital world, where research embraces knowledge and ideas, developed in real time through global collaboration.

This is what we understood to be the basis of the brief to us by UKZN Deputy Vice-Chancellor (Research & Development), Professor AS Abdool Karim. We were to convert the former Fine Arts studios and facilities into a home for the UKZN Research Office, an entity now known as Research, Knowledge Production & Partnerships. The regimentation of offices with a defined hierarchy, so prevalent in academic institutions, was to be avoided.

As far as possible offices were to be open; where it was necessary to have closed-off offices, these were to be visually connected, through the use of glazing.

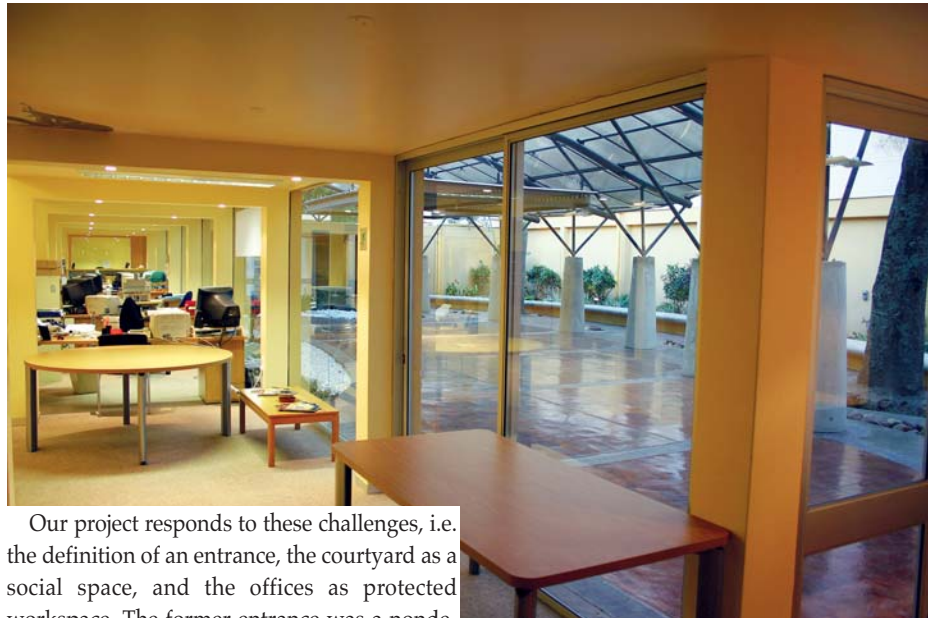
The courtyard was to be used as a boardroom and was to be the focal space where people meet, talk, debate and relax. In addition the hole-in-the-wall entrance was to be better defined as a point of entry, and to be inviting.

The Research Office facilitates funding for research and is often visited by representatives from donors such as the Ford Foundation. Professor Karim was keen to present the facility as one befitting of such donor bodies.



- 1 Covered entrance
- 2 “Outdoor” Boardroom court
- 3 Staff pause area
- 4 Tea kitchen
- 5 Archive
- 6 Receptionist
- 7 Offices—Heads
- 8 Open plan office cells
- 9 Offices—Staff
- 10 Airconditioning plant
- 11 Existing circulation passage
- 12 Existing two-storey building
- 13 Translucent roof over existing courtyard space





Our project responds to these challenges, i.e. the definition of an entrance, the courtyard as a social space, and the offices as protected workspace. The former entrance was a non-descript single door in a wall, which opening was enlarged with a portico, and allows for a peek into the courtyard beyond. The courtyard presented an opportunity to create a verandah with a curvilinear translucent membrane over. The existing garden and trees were maintained and enhanced. The edge of the planter became a concrete seat and the lush garden in the north softens the hard two-storeyed wall of the building enclosing the courtyard. The verandah roof is light and supported on conical off-shutter concrete columns mimicking the trunks of the existing trees. Stormwater is collected in sumps filled with boulders. The debating area is served with floor points containing plugs, internet connections etc, with an adjustable louvre system below the roof to control glare and sunlight when a screen is used for presentations. The courtyard is also served with a beverage counter and a kitchenette.

The office space consists of an open area off which lie defined spaces. The offices are fully air-conditioned. The open and defined offices are strongly connected visually through the generous use of glass. The walls to the enclosed offices are generally 2,3m high and are open to the higher level ceiling. During construction we found that the roof was supported on laminated timber beams in the ceiling voids. These beams were exposed and the ceilings reconfigured to reveal the beams.

Lighting is critical to the success of this project. There is a mixture of direct and diffuse lighting. At night the spaces glow warmly in the light and are enhanced by the warm colours.

Mohideen Abdul Gafoor

Architects: MA Gafoor Architect cc

Civil & Structural Engineer: Young & Satharia

Electrical Engineer: S Naidoo & Associates

Mechanical Engineer: M Khoosal & Assoc

Quantity Surveyors: Bham Tayob Khan Matunda

Contractors: F Verbaan Builders CC

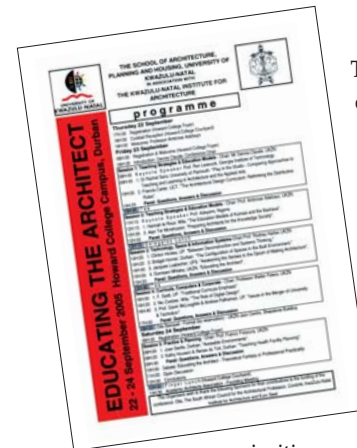
Photography: Jon Ivin's Photography



Stormwater sumps were covered with boulders to visually elevate their inclusion in this "outdoor" Boardroom.

Top left: View from the office space toward the "outdoor" Boardroom.

Top right: The formerly concealed laminated beams were exposed and integrated in the design.



This is a further contribution from the conference "Educating the Architect" held on Howard College campus, UKZN, 22-24 September 2005. –Editor

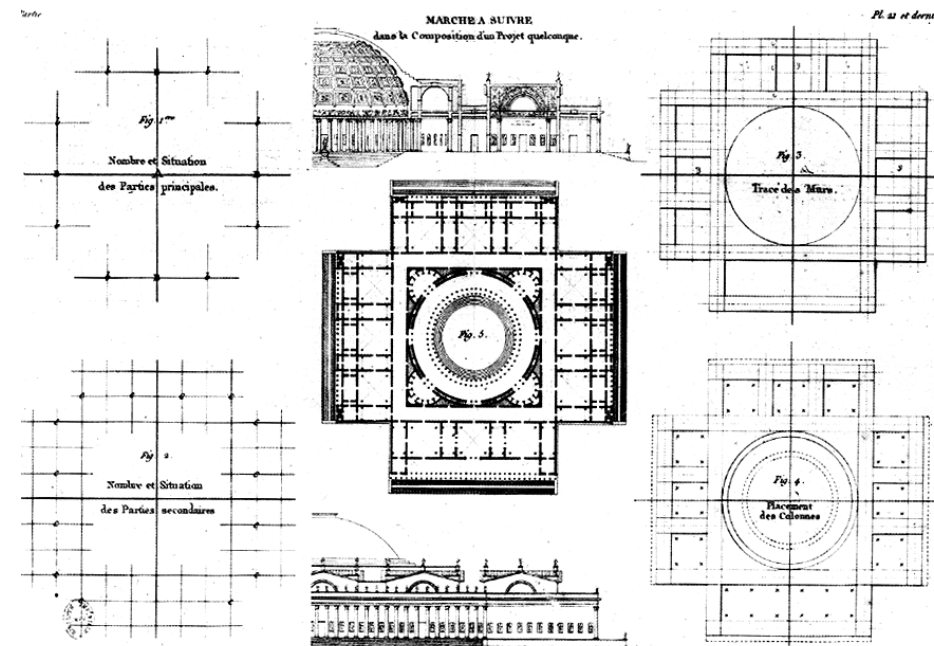
Have we got our priorities wrong in education? Are we allowing a concern with the computation of function to cloud our concern about the need to train architects who enhance our experience and our lives?

There is a need for education to begin actively countering two contemporary trends: one, growing reaction among even the educated public that there is nothing architects do that engineers and contractors can't do better, the second, the growing "accountant" and business investment attitude to architecture that its only valid criterion is to judge it by square foot per monetary unit at prime cost.

We would like to begin by looking at three famous systems of architectural education, two from the nineteenth century and the third from the twentieth.

Durand and the École Polytechnique

First, a system developed by Jean-Nicolas-Louis Durand (1760-1834) in the École Polytechnique in Paris c.1800, and which had widespread influence on the continent. It was



1 Jean-Nicolas-Louis Durand's, *Précis des Leçons d'architecture données à l'École Polytechnique*, 1802-5, illustrates the sequence of steps for generating an architectural plan on grid sections directed and organized by axes. Source: Kostof, S *Settings and Rituals*.

Educating the Architect

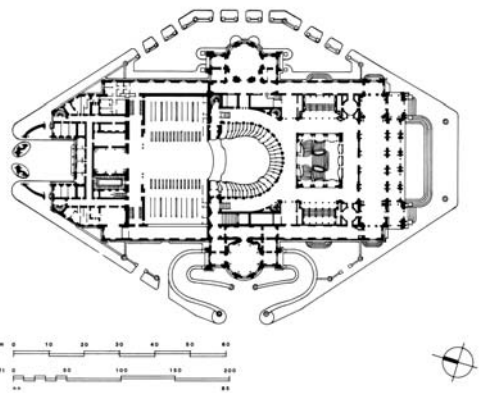
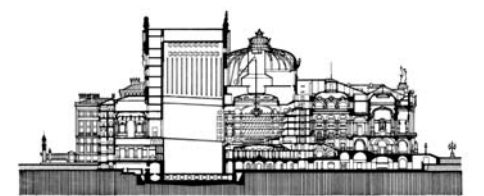
Patterns of Architectural Education

intended to be a clear, efficient, modular system of architectural design. Emphasis was placed on the ability of the public to respond sympathetically to the buildings through the use of the familiar classical orders. They were to be combined with the utmost simplicity of form, and a repetition of elements to create pleasing rhythms, symmetry and balance (Illustration 1).

The École des Beaux-Arts

Second, evolving out of Durand's system, came that of the École des Beaux-Arts, which in its essentials persisted into the twentieth century. The Beaux-Arts system was based, first, on the process of *analytique*, in which each of the basic elements of architecture was studied in a series of exercises. It embraced parts of a building and of its structure – achieving quality and style was an issue. It included the proper disposition of the elements into an integrated design, which led on naturally to the second principle of the Beaux-Arts method, the practice of the *esquisse*, a preliminary sketch defining a *parti* (design orientation) with all the issues of composition which that entailed. To say that a *parti* was well achieved was to praise a design for the integration of the whole. The *esquisse* involved a movement from simple diagrammatic lines to detailed form, a process that was called figuration – and the complementary skill of drawing simple lines with a generative idea in mind – the capacity for abstraction.

In the Beaux-Arts, the academic discipline demanded that the project be more than just



2 Paris Opéra, 1862-75, an example of Beaux-Arts planning which sought the simplest possible circulation into and through a building, and the clear expression of the various functions through separate volumes. Architect Charles Garnier.



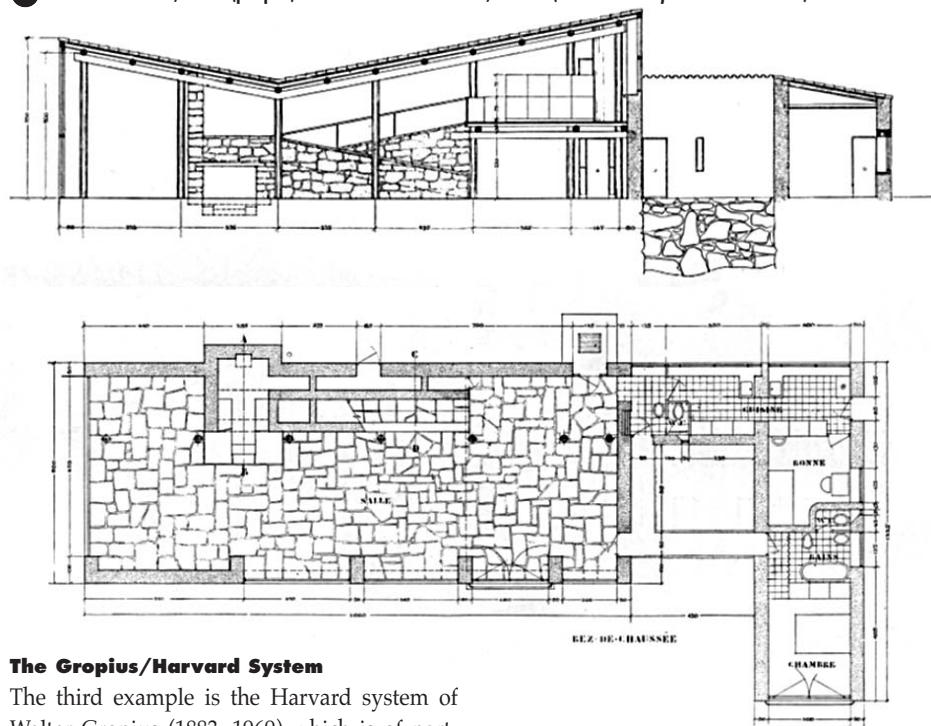
The exterior was designed to accomplish several public functions, including expressing each of the three major functions of the building; providing a fitting terminus to the newly cut Avenue de l'Opéra; and celebrating the act of going to the opera.

Source: Roth, L *Understanding Architecture*.

the fulfillment of its quantitative and technical requirements, that is, that the architectural form would not simply emanate from the programme. Rather, the Beaux-Arts architect had to deck out the different ways in which the programme could be staged. There were good and bad designs, as in mathematics. One solution could be more elegant than another: there was no mention that "one best solution" necessarily followed from the requirements of the programme.

To the importance of the *parti*, the Beaux-Arts added weight given to the point, the dominant volume, and to *transparaître*, the principle that the interior spaces of a building should coincide with its exterior masses. (Illustration 2)

3 Errazuris House, Chile (project). Architect: Le Corbusier, 1930. (*Oeuvre Complete 1929–1934*)



The Gropius/Harvard System

The third example is the Harvard system of Walter Gropius (1883–1969) which is of particular interest, because the system indicates a dislocation between programme (interior) and design elements (exterior). In the Beaux-Arts system, an *esquisse* or a *parti* was embedded with dense architectural experience and relevance to history that stems from the training by *analytique*. Although a *parti* is a tool to organize the overall programme and character of the building, it still maintains relevance to visual details via the architect's primary knowledge in the *analytique*. A complement between *esquisse*, *parti* and *analytique* is therefore crucial in maintaining the link between the programme and the design elements. However, in the Gropius / Harvard System, in moving from the bubble diagram to the plan, the lines of the diagram, without any implication of *analytique*-like density, result in hollow programmatic space with little relevance to visual and tactile form. Klaus Herdeg's 1983 book, *The Decorated Diagram: Harvard Architecture and the Failure of the Bauhaus Legacy* (Cambridge: MIT Press) provides

an insightful critique on this post-war American architectural phenomenon, which he summarized as the "unmitigated dichotomy between plan and appearance." (Herdeg, 1983: 48)

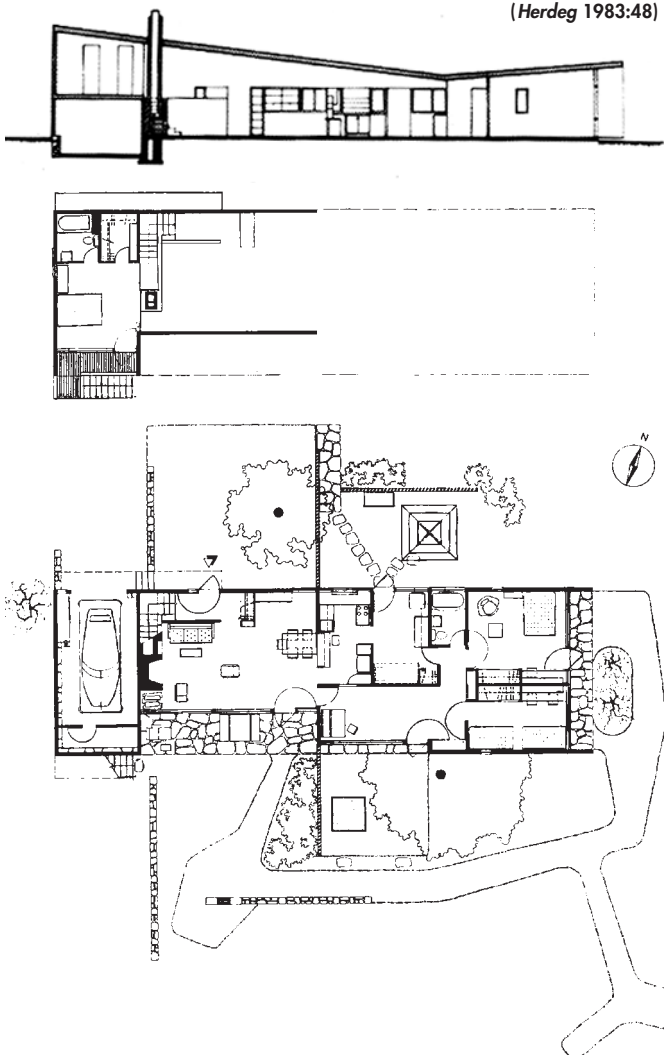
Here, and in the rest of this assessment of the Gropius / Harvard system, we have used Herdeg's own authoritative criticisms: Herdeg observes that the Bauhaus legacy at the Gropius / Harvard system has produced a type of modern building that has become "an attention-seeking object." The plan is diagrammatic – a literal expression of functional relationships – and the "non-shelter aspects of the exterior of the building appear to be reduced to one purpose: to excite the eye (in a purely physiological sense)." Therefore, "visual cues incor-

porated in the design of the building defy intellectual and often emotional resolution because they appear to have no meaning beyond their own existence". The building "becomes a haphazard record of random events as program, legal restrictions or inducements, materials, plastic expression, building process, and icon quality, rather than a manifestation of its considered coexistence, or better, their resolution into a coherent whole." (Herdeg, 1983: 2)

To illustrate the point, Herdeg compares the Errazuris house, Chile, a project by Le Corbusier, 1930 (*Illustration 3*), with the MoMA exhibition house, designed by Marcel Breuer, 1949 (*Illustration 4*). Breuer's MoMA house, a product of Gropius / Bauhaus system, appeared as a response to high public interest in suburban houses in post-war America. In Herdeg's critical comparison, his examination of the "butterfly roof," which is common to both houses, most clearly illustrates the point.

In the Errazuris house, Herdeg observes that the inherent spatial and symbolic qualities of the "butterfly roof" are resolved within the various architectural aspects, such as site, orientation, entrance, space, and methods and materials of construction. For example, in the Errazuris house, the two slanted sides of the roof interlock, and thus enhance "the meaning of several other aspects of the house," such as the internal ramp. "The slopes of the ramp to

4 An example of a Bauhaus-legacy building reduced to two criteria: the derivation of a functional plan and the creation of visual interest. (Herdeg 1983:48)



the mezzanine inside coincide with the slopes of the roof and thus... bind the two elements together". However, in the MoMA house, the valley of the roof, "instead of being placed in a spatially and symbolically meaningful position... happens to coincide with the wall between bathroom and utility room." Therefore, "it is difficult to detect any structuring of space other than the purely functional," and the spatial structure has little relevance to the parts and the whole of the building. (Herdeg, 1983:6&10)

Herdeg states: "In much of Gropius / Harvard-influenced architecture, it is the lack of control over apparent [formal] analogies, intended or unintended, which makes one doubt whether the formal characteristics of a given building (as representable in drawing form) were ever recognized, much less employed to ends beyond the diagram and some retinal stimulation. Between lofty and often worthy ideals of social improvement and their physical expression there appears to be a large zone of poorly supported formal decisions." (Herdeg, 1983:26)

Teaching: A Critique of the Gropius / Harvard Method

A way to understand the dislocation of the modern diagram and the architectural elements in the Gropius/Bauhaus system is to examine the underlying pedagogical method. Herdeg looks into the details of the Harvard course requirements and descriptions, and the formulations of studio problems, and finds that the design issues fail to encourage students to interrelate the various architectural aspects. In a typical Gropius design problem, for example, an instructor may ask students to design by using a list of predetermined objects and surface treatments, but provide no opportunities for investigation in relating these elements with more profound design issues. "There is no reason for the student, following these instructions, to go beyond achieving a nice arrangement of objects and surface elements in the service of 'visual variety,' for he is asked to provide optical stimulation, almost as if an end in itself". "It is in a student problem like this one that we can perceive the seeds of formalism... connoting the employment of forms for purely literal and superficial reasons such as visual variety. Formalism in this sense implies a total non-recognition of the multiplicity of meanings a form may have..." (Herdeg, 1983:79)

Herdeg noticed that the Gropius/Harvard pedagogical system, by deliberately encouraging "a search for fresh solutions derived from an analysis of given facts" on one hand, and also claiming a "direct and creative" design approach on the other, created an unsolvable conflict between design method and perception. (Herdeg, 1983:92&84) As

Herdeg argued, the opposition between impersonal research and implementation on the one hand, and the promotion of a personal approach to design on the other, naturally results in irrelevance between neutral programmatic planning, "presumably immunized against personal interpretation" and subjective observation and decision in architectural design of appearance (Herdeg, 1983:84).

Herdeg concludes: "It is embodied in the tendency of the Bauhaus-inspired curriculum to discourage self-awareness on the part of the designer. The design process being taken to be objective, there is naturally little motivation for personal engagement on the conceptual level. But without articulated self-awareness, there can be no self-criticism, a requisite of any creative process that is not to resort to such utterly subjective short-circuit judgements as 'what I like is good' and 'what feels good is good.' On the architectural level, something rather curious happens when such subjectivity is combined with its polar opposite, the attitude implied by 'the plan calculates itself,' as apparently happens with so many Bauhaus-legacy buildings." As Herdeg points out, architecture then becomes a vehicle for conflicting values of objectivity and subjectivity, which evade criticism. (Herdeg, 1983:95)

What other alternatives to architectural training are there?

What is it that distinguishes true architecture? There is widespread evidence that in our society there is a constant rejection, in practice, of mere rational determinism in architecture – in favour of the need to accommodate human preferences. That is, to create a satisfactory or even a rarified experience in a work of architecture. The consequence for educational programmes of accepting this fact is that architects need a type of cognitive training that is quite different from that of scientists and engineers – or contractors! It has to embrace many aspects. Where should the focus be? On scientific or technological basic training? On purely applied aspects of these? On professional issues? Certainly it has to be on the first, with a partial focus on the second. But, above all, it has to be concerned with the true life-enhancing essentials of architecture. It has to be

a training to develop the ability to make spontaneous associations across many ideas and areas, and to develop the imagination. Such an educational programme involves breadth as well as focus.

Let us take the case of a celebrated building in order to examine the different aspects of architecture: that of the Sydney Opera House (*Illustration 5*). There, the attitude of the architect was confronted by the government clients, guided by the accountants, head-on. This tells us something about what a work of architecture involves – imaginative vision and, at the same time, dedication to achieving quality in elements individually and in *toto*.

For the former, imaginative vision, students need training in an amazing breadth of awareness, through education in the culture of the age and its philosophical and ideological grounding, its relation to other cultures and to the past, involving all the arts, society, politics, economics and so on. And familiarization with the achievements and visions of others.

For the latter – the achievement of quality – students need, first, a good understanding of the principles of science, physics, chemistry, geology etc; and second, training and experience in making and joining, in measuring, mathematics and geometry. Then there is the issue of maintenance against prime cost. And of sustainability and social responsibility.

Finally, there is the issue of communicating ideas to the clients. Students need experience in visualizing and presenting. Some of these can be taught in an institution, some can't. And architectural training has to focus on structured, ordered thinking.

Universities are about breadth and depth in education, not mere training of useful assistants, whether in law, engineering, medicine – or architecture. And they are certainly not about training vendors of pastiche – or of "decorated diagrams."

Ron Lewcock and Myung Hyung

Ron Lewcock who retired from Georgia Tech in May 2007 is now an Honorary Adjunct Professor at the University of Queensland in Brisbane. He is a member of Clare Hall, Cambridge, where he was a Foundation Fellow.

Myung Hyun is currently completing his doctorate in Architecture at Georgia Tech. He is a graduate of University of Seoul, South Korea.



5 Sydney Opera House. Architect Jørn Utzon, 1957–73.



Architects a decade into independent practice

Office Units, 2 Corobrik Road, Riverhorse Valley



The Editorial Committee of KZNIA Journal has decided to promote the work of emerging practices by featuring a project by a practice in operation for less than a decade in every issue. KZNIA members who meet with this criteria, are encouraged to contact the KZNIA Executive Officer that coverage can be planned for. —Editor



Two on Corobrik is part of the Riverhorse Valley Business Estate and therefore needed to comply with Morelands design guidelines while fulfilling the requirements of the client's brief. The intention was to create a contemporary warehouse development comprising eleven units. The client, Maponya Developments, with their vast experience in developments of this nature, was forward thinking, in that they chose not to sacrifice valuable yard and vehicle manoeuvring space in order to maximise on bulk, a common occurrence in similar developments. The primary motivation for the site layout was therefore to create large yard areas for ease of access, and turning circles for vehicles commonly utilised in a development of this nature, while providing an appropriate amount of building area. In keeping with the Morelands guidelines, it was also essential to provide at least 15 per cent of the site area as landscaped zones. The landscaping effectively assists in softening the large expanses of hardened yard surfaces.

The site is positioned below the road level and it was thus important to create a building which was easily identifiable. The roof was

therefore an important aspect of the building as this would be the most visible component. Ridge ventilators were introduced to provide both practical and aesthetic functions in a cost-effective manner. In keeping with the Morelands ethos, the office and warehouse components needed to be integral with each other rather than two obviously distinguishable elements. In order to achieve this, the offices were recessed into the warehouse space allowing for one main roof structure.

The building is predominantly west facing, positioned lengthwise in an attempt to reduce the impact of the vast cliff running along the eastern boundary. In order to deal with solar control effectively, a combination of varying types of solar glazing were introduced to the office facades. This has proven to work successfully and has reduced the air-conditioning load of the building.

Louvers were used in the ablutions to maximise natural ventilation and daylighting to these areas. This assists in providing flexibility too, and balancing the facades, as well as providing a practical, secure and energy-efficient alternative to the conventional openable window.

Each unit has a small office module with a large warehouse attachment. The office components are framed with a concrete structure and are distinguished by a play of elements in a structural-geometric grid. This allows for flexibility within the office layout which is critical to this type of development where each end-users have their own specific planning requirements. The concrete-framed element is repeated in the roller shutter door surrounds. This provides continuity in the

design as well as the practical aspect of protecting the roller shutter doors. In addition these frames provide structural support for the canopies allowing for weather protection.

The construction materials used in the facades are reflective of its contemporary industrial nature. The intention was to create an interesting variation of textures and tones resulting in a cost-effective building without compromising on aesthetics. The primary elements comprise concrete, glass, aluminium louvers, face-brickwork and corrugated sheeting. The landscaping in front of these facades provides an effective visual contrast between the hard and soft elements.

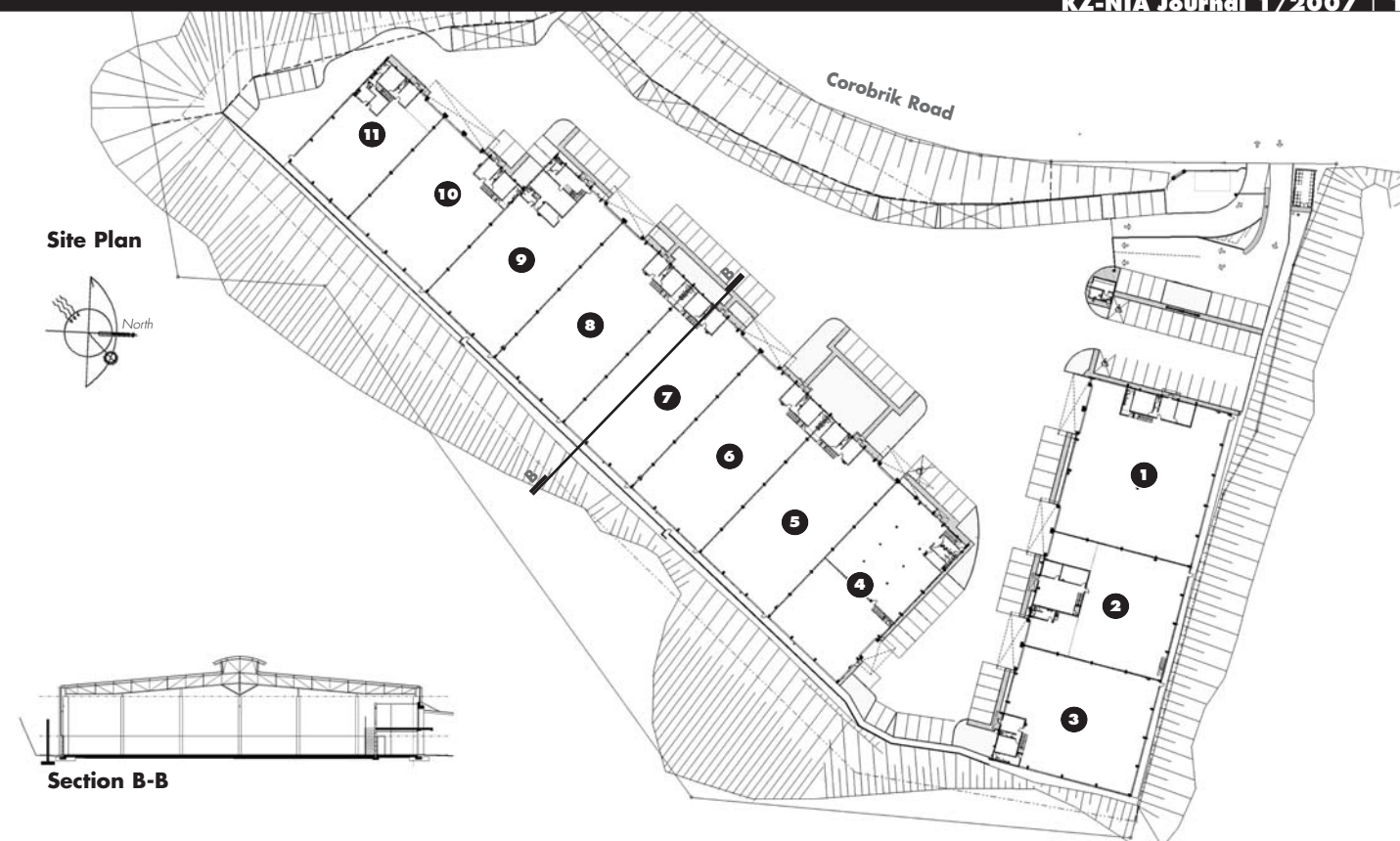
The success of this development can be attributed to the combination of the sensible brief to create the correct ratio of building to yard areas. This has resulted in a practical, functional and aesthetically pleasing environment for the end-users.

Raewyn Gower

Raewyn Gower graduated at Natal in 1994 and worked with Michael Tod Architects until setting up her own practice together with Natal Technikon graduate, Andrea van Dam, in Durban North in November 2005 under the title Archi Angels Architects. The practice is involved in industrial, retail and commercial projects as well as community buildings in residential estates and individual homes, and currently has a staff complement of six.

—Editor

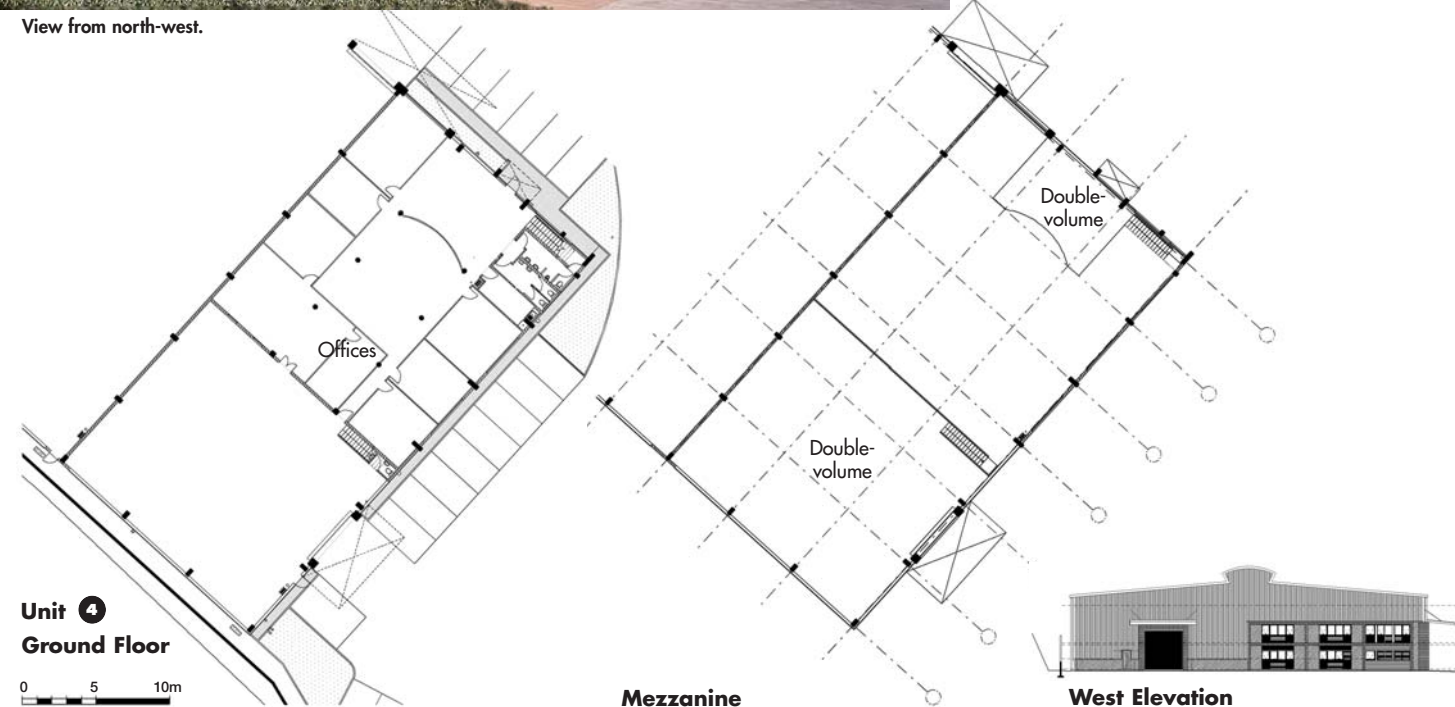
Client: Maponya Developments
Architects: Archi Angels Architects
Structural Engineers: WSP Africa
Geotechnical Engineers: Drennan Maud
Electrical Engineers: BFBA
Contractor: Grid Construction
Photographer: Craig Hudson



View from north-west.



Characteristic of this development, the ridge is capped with a continuous monitor and the entrances are framed.



For a long time, my wife Hanlie and I considered traveling to Hungary, Romania and the Ukraine. We are both architects, interested in travel and experiencing various cultures of the world, and eventually we decided to plan a trip to these countries with a number of goals in mind. Hanlie had an added interest in that she, through her work in the church, had been involved in evangelism into countries deprived of the Christian faith. We planned to see an "orphan", we help sponsor though the Christian organization *Mission without Borders*. This proved to be very special and was the highlight of the tour.

Our trip began in the middle of December 2006 and we flew via Frankfurt to Budapest, Hungary. Four days were spent enjoying and exploring the parks, castles, pedestrian streets, Europe's oldest underground system, markets, and food and wine of the twin cities of Buda and Pest.

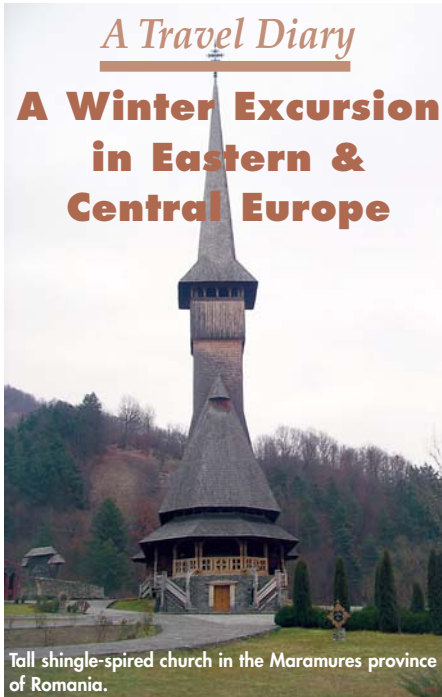
We left by train for Brasov in Romania. Our early morning arrival was a bit of a cultural shock as the environment suddenly became very third world and a bit in decay. Well, it all changed for the better and in fact our first impression could not have been more incorrect. We collected our hired car and stayed the night in Brasov, the capital of the province of Transylvania, set in a valley surrounded by the Carpathian Mountains, and famous for its 'Black church' and the pedestrian-friendly city centre.

We then headed out for the Transylvanian countryside to explore the walled Saxon religious centres, timber farmhouses and tall-spire wooden churches. It had begun to snow which made the countryside all that more picturesque. The Transylvanian countryside is one of the most beautiful in the world with forested mountains, hedged and walled rolling fields, timber house villages and fortified churches. It has an amazing medieval, rural feel.

The timber houses are brightly painted with lots of patterns externally. I was fascinated by the way the houses grow from house to barn, to outbuilding, to animal shelter. There were various different configurations but the same



View of Brasov city from the road to Poiana Brasov, Romania.



Tall shingle-spined church in the Maramures province of Romania.

type was used in one village, and then another in the other village.

We stayed in local hotels, tourist hotels, resort hotels, pensions, and bed and breakfast venues. In all, the people were friendly, and could speak a bit of English, and were just very pleased to have foreigners visiting their country, interested in the culture and history

and not just in Dracula. Cities and towns visited included: Toplita, Vatra Dornei, Bors, Signetu Marmatiei, Baia Mare, Cluj Napoca, and Sighisoara. Some of these are truly still like fortified medieval towns.

We spent Christmas in one little town, and Christmas eve in a road-side diner by default, as everything else was closed. This is a big family occasion and all celebrations are shared with friends in private homes.

The last week was spent at the ski resort town of Poiana Brasov. This was a real highlight as New Year festivities are celebrated with much vigour, and co-incided with Romania's entry into the European Union.

Bucharest is a modern, vibrant, trendy city with lots of contemporary architecture and interiors. Unfortunately we had not planned to spend much time here and flew out of the Romanian capital via Vienna. There was no direct flight or train to Kiev!

The arrival in the Ukraine was another big shock. We never imagined the scale and size of the capital, Kiev. We again decided to hire a car and attempt to read the road signs in the Cyrillic alphabet. That was the most daunting challenge of our trip. We had a map in the accustomed alphabet with only occasional Cyrillic names. We survived, just, and eventually got used to it. My advice to travelers, get a GPS (Global Position System)!

Kiev is a city on the move, full of new residential tower blocks in multi-use areas, but it still has the suburbs of faceless, impersonal social housing blocks. The city has soviet socialist institutional buildings in the grand squares and avenues, and there is still a bit of the old tsarist architecture left. The city is bisected by the wide Dnieper River with beaches and parks all along the banks of the river.

It is a city of beautiful woman, and trendy, very upwardly mobile, image-conscious youngsters. There is no shortage of grand cars



New bank building on Mitskevycha Square in Lviv, Ukraine.

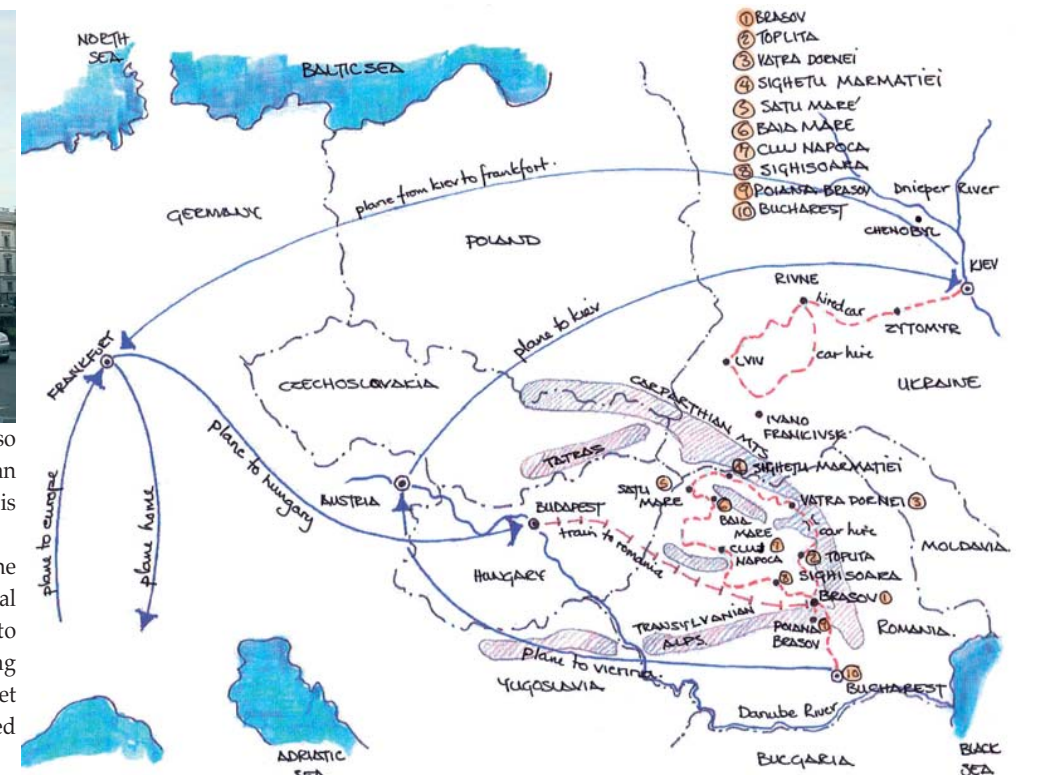
and the city is expensive. However you also see lots of normal people struggle to eke out an existence in the new capitalist society. Life is still very hard for many.

We left for the city of Zytomyr and the orphanage. This was where we saw the real effect of the change from communism to capitalism with the shells of decaying industrial buildings. This was the bread basket of the USSR and the agricultural industries fed the entire USSR

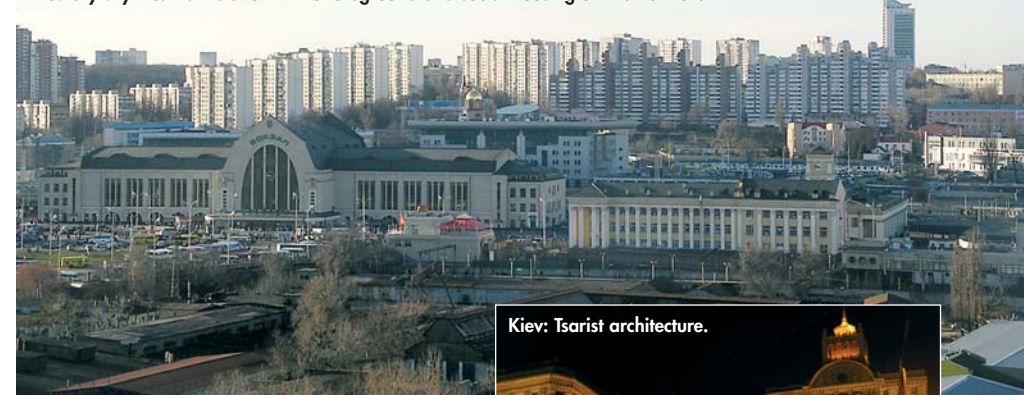
With the secure market gone and the advent of a competitive world market, the rural areas have suffered most. Add to this the Chernobyl disaster in the area, and you have hard working, good people, struggling to come to terms with the side-effects of the western lifestyle. We were housed and taken on a tour of the entire operation of the *Mission without Borders*, and met Volodymyr, the young boy we help sponsor. It was a very special and moving two days. The people are truly grateful for all the help they are given.

The city of Lviv, a university and cultural centre close to the Polish border, is one of the best preserved cities in the old USSR. It escaped the ravages of the Second World War and has an amazing number of churches from all the different periods and cultures of people who lived and controlled this area. We experienced the second Christmas here as the Ukraine celebrates this festival on 6th of January. This city is a gem and really worth a visit on its own.

It was four weeks of adventure, relatively unplanned other than one or two prior accom-



Kiev city skyline. Train station in the foreground and social housing on the horizon.



Kiev: Tsarist architecture.

modation bookings required for visas applications. The travel excursion was not expensive and we ate, drank, slept and traveled well. We met many people and took in the vibrancy and culture of these countries steeped in history emerging into the brash new hectic capitalist world. The only downside was the road etiquette. We moan about our taxis and drivers, but they are angels compared to Romanians.

Kevin Lloyd

Brasov, main town square, with the Black Church at the left.



Painted timber farmhouses in Transylvania, Romania.



Orphanage, Zytomyr, Ukraine.
RIGHT: Old town, Lviv, Ukraine.

