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**SCHOOL OF ARCHITECTURE AT 50
UMGENI BUSINESS PARK**



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Obituary

Brian Bernstein 1939-1999

The Natal Architectural Community and particularly graduates of the Natal School of Architecture of the year 1961 will be saddened to learn of the untimely death of Brian in Los Angeles on 15th April 1999. He will be well remembered by all who knew him for his infectious smile, the great warmth of his personality and the generosity of his spirit.

Brian was born in Zimbabwe from where his family relocated to South Africa in the early 1940's. After his primary schooling at Clifton he went on to DHS where his matriculation was distinguished by the award of the Natal School's Art Prize. His years at University too, were marked by merit awards in Design and Construction and included the Architecture Year prizes for 1958 and 1959 as well as the Calvert McDonald Scholarship. His practical year was served with Pius Pahl, a graduate of the Bauhaus under Mies van der Rohe: it was this rare experience that forged a life-long friendship between them and their families.

After graduating, Brian joined Campbell Bernstein and Irving, a multi-disciplinary practice of engineers, architects and quantity surveyors of which his father was one of the founding partners. He rose from the position of staff architect in 1962 to his appointment as senior partner in 1980. During the period 1980-1994, as executive and managing partner, he was responsible for several innovations which included a staff profit-sharing scheme and the establishment of branch offices in Cape Town and Johannesburg. His output as design partner and project leader was prolific embracing major industrial,

School of Architecture at 50 Umgeni Business Park

Editorial

The teaching of Architecture at the University of Natal began in 1949 when the Department of Architecture and Quantity Surveying was established in a 'pre-fab' hut on the Durban campus under Paul Connell (1915-1997), the inaugural Professor of Architecture. The Department relocated to the Memorial Tower Building in 1952 and in 1959 into the competition-winning Centenary Building by Hamlin & Park-Ross, a facility shared with the Department of Civil Engineering. In 1973, on the completion of the Denis Shepstone Building, designed by 2nd Professor of Architecture, Leslie Croft, the Department of Architecture became one of four Departments comprising the Faculty of Architecture and Allied Disciplines, established in 1975, and accommodated within that building. Since then Chairs in Architecture have been held by Don Dyke-Wells, graduates Errol Haarhoff, Brian Kearney and Walter Peters and by Dennis Radford, Head since 1994.

With the demise of the Faculty of Architecture and the simultaneous abolition of all Departments within the University in 1999, the Programme in Architecture was established within the School of Architecture, Planning & Housing, and placed within the newly constituted Faculty of Community & Development Disciplines. It is from this vantage point that Architecture at Natal will launch itself into the new millennium.

Featured in this issue are articles by staff that emphasise special aspects within the Programme of Architecture with examples of work in Umgeni Business Park by graduates of this University.

Walter Peters, Editor

commercial, educational and low-income housing schemes. These included the Mondi Paper Company, Saiccor, the KwaZulu-Natal Government, the Department of Water Affairs, the Orange River project as well as Club Mykonos and the Durban Turf Club amongst a host of others.

Brian gave generously of his time to the Natal School of Architecture both as invited critic on 3rd year projects and as 'developer' critic in the school's final year simulated office programme. The students warmed to his incisive appraisal and his balanced judgment.

Brian and his wife Andrea were closely concerned with those less fortunate than themselves; through their Charitable and Educational Trust they supported many community projects, the one closest to their hearts was the construction of two rural schools which they have maintained over the past 18 years.

Brian and Andy left South Africa in 1994 in order to join their children in the USA and settled in Los Angeles. Brian joined the firm of Rochlin Baran and Balbona Inc., specialists in hospital design, as Director of Marketing. In this capacity he secured major hospital commissions in India and Indonesia as well as initiating potential markets in Hong Kong, Turkmenistan and Saudi Arabia.

Paraphrasing Brian's own words on the seminal influences on his life and work he acknowledged

- My father Mark Bernstein for his innovative technical and entrepreneurial skills in the engineering field and his deep and abiding interest in the world of Art.
- My mentor and friend Pius Pahl who significantly influenced my personal approach to architecture.
- My wife Andrea whose dedicated sense of social concern and prominent intellectual and literary

skills expanded my experience of community and cultural issues.

Our heartfelt thoughts go out to Brian's parents Mark and May, to his wife and best friend, Andrea and to his children, Jeremy, Ingrid and Simon. To Brian, who still holds the world record for the heaviest shark landed by a junior angler from a beach, we say *hamba kahla* dear friend.

Ted Tollman

Sadly Brian's parents, Mark and May Bernstein passed away shortly after his own death.

Family and friends have established a memorial scholarship at the School of Architecture in celebration of Brian's life and work. Colleagues wanting to participate in this tribute may address their gifts to the Natal University Development Foundation - Brian Bernstein Memorial Scholarship Account.

Editor

Amendments: Issue 1/99, Steel Architecture

International Convention Centre, Durban. Project Management for the ICC was provided by Andrew & Boule (Pty) Ltd.

After winning the 1998 Excellence Award of the Project Management Institute, South Africa, the company was placed runner-up in the international 1998 Project of the Year Award.

Congratulations!

COVER

Front: Abstract Design by Bryan Lee, First Year 1960. Sketch of site (centre) and the Music Hall which would be inserted (back) by Nikola Gradinski, First Year 1999, (see pages 2 and 3).

Letter

Umgeni Business Park

Dear Walter

Thank you for asking me to make a two page contribution to your learned journal. I hope you will like the picture I drew for you. [see p 8/9] Unfortunately I couldn't get anybody to referee it for me, even Dennis Claude, so you will not be able to quote from it in your papers. It is called BARGAIN HUNTING FOR 160 YEARS and encapsulated within it, you will find many amazing objects although space did not allow me to draw the world's longest and ugliest bridge, amongst other vile things.

Most of the information within it has been collected first hand by me and shows the history and development of the area and how it evolved from the peace ☺ to the Mercedes ☹ era. Nay even before then, when it used to be the refuge for Durban's floating (literally) population and when there were real bargains to be had in the grass line (Lesotho and Swazi cut to mention but a few). My children's ancestors tell me that even before my time the good Burgers and Citizens used to be able to obtain a seacow here for 99 Farthings against at least a Guinea at the Bay, You had to have good transport though!

Of course on a sadder note, another thing which must be noted here, is that many members of society have plunged themselves to certain death from the dreadful cliffs and buildings which form the very rim of these wetlands.

For professional reasons I will not attempt to pass judgements on the buildings; noting only the great care which has been taken with addressing the climate, comfort, good neighbourliness, staff facilities, durability, maintenance, placemaking and so forth. I can feel the very vibrations of Africa when I look at the many circular glass drums which will beat us into the new millennium. Oh Africa!

But enough of this. My forthcoming book will deal more thoroughly with Post Winblock, Microwave, Sunstroke, Pressure /Steamcooker, and Braaivleis (gratefully spared at this stage) Architecture.

Remember this little wisdom: always look on the dark side. You'll be the first to see the light, if it comes!

And thank god for airconditioning (AC).

I better go now, there's a special offer on camcorders at Macvideos today.

Regards
Paul

Paul Mikula
Architects Collaborative

School of Architecture at 50 Past and Future

Fifty years is not a very long time especially for an institution such as a university but it is certainly long enough for attitudes to form and traditions to develop. Such is the case for the Department of Architecture here at the University of Natal. In this issue it is hoped that some of the more interesting aspects of the Programme (as it is now known) will be illustrated in the following articles, all written by members of staff (past and present).

The teaching of architecture in Durban predates the founding of the Department in 1948. However all the previous courses were part-time under the tutelage of architects Sonny Tomkin and Calvert McDonald and it is only with the appointment of Paul Connell as the first Professor of Architecture, and the institution of a full-time degree course, that one can say that architectural education had come of age locally. Connell himself was a Wits graduate of the celebrated 'Martienssen era' at that school. He rapidly established the new Department with a band of dedicated teachers and scholars, some of whom are still very much with us and, some like Connell himself, have passed on. They soon established the distinct character of the 'School' as it is familiarly known. It is also no exaggeration to say that the majority of architects practising in KwaZulu-Natal today are graduates of the Department and therefore that much of the recent architecture of the Province must in large measure bear the mark of the School - good and bad. Fortunately it is not now my brief to enter such a contentious area but rather to sketch out the future direction of the programme from the perspective of the person presently charged with giving it that direction, always in conjunction with my colleagues.

The task for the near future will remain serving our communities principally by educating a diverse student body for entry into the profession but also by opening up as many post graduate options after the completion of the three year Bachelor of Architectural studies degree as is consistent with the number of students and our resources. For the foreseeable future both these tasks are liable to be limited.

To this end we must maintain and refine the advances in teaching that we have made, Problem Based and Small Group learning have proved their worth but we have still some way to go until our students become as self reliant as they should be. The emphasis on group work should remain but always with individual responsibility.

The change of emphasis from

product orientation to process must continue. The object fixation which is part of our modernist heritage must be replaced by question-asking in an open, error-embracing way. Problems should always be contextualised and students must be encouraged to see that there are no 'right' solutions but only appropriate ones.

As young professionals our graduates must be equipped to deal with change which is likely to be the only constant which they will experience in their lives. To use the now cliched expression, we must help them to become lifelong learners.

The curriculum is also almost certain to be a process of continual flux as it responds to, and hopefully, is even pro-active in responding to the evolving needs of the profession and the University.

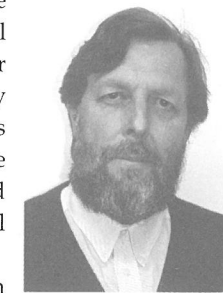
Maintaining our accreditation both nationally and internationally is obviously vitally important for the School's reputation as are our links to overseas Architecture programmes and these must be strengthened and developed further. A richer milieu for the staff and students will be the inevitable result. Nevertheless we must not neglect our links to the other Schools in South Africa and in particular the English-speaking Schools in the rest of Africa.

The impact of the computer and computer-aided design in particular on the curriculum has been profound and will continue to demand our attention as we absorb these changes. The always delicate balance between retaining the old skills and developing the new will tax our ingenuity.

Growing ourselves, the staff, both as teachers and scholars is something vitally important. Many of the recent changes we have made need to be written in as part of the reflective phase through which we all need to pass if we are to be proper role-models to each other and, very importantly, our students.

Lastly we need to avail ourselves of all the possible opportunities inherent in the new Faculty of Community & Development Disciplines of which we are now part. We have a great deal to offer and a lot to learn.

The next fifty years will certainly be as challenging as the first fifty. Nevertheless I am convinced that as things stand at the moment the 'School' will continue to grow stronger and maintain its position as one of the leading Programmes in South Africa.
Dennis Radford,
Head of the School of Architecture,
Planning & Housing and
Programme Director: Architecture



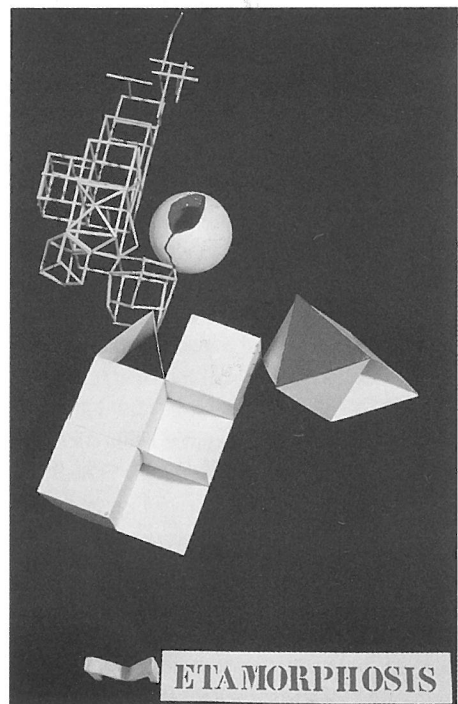
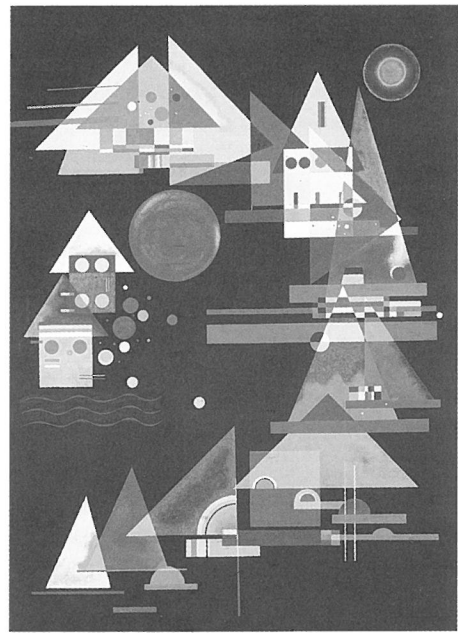
School of Architecture at 50

Teaching First Year

A Memoir

From the beginning Paul Connell was not bound by the conventional first year curricula as practiced by most Schools of the British tradition. Therefore, although there were long familiar programmes like rendering classical motifs in Chinese ink and the odd design for 'A Monument' the influence of the Bauhaus soon made itself felt. Workshops were scheduled as teaching spaces alongside the studios.

A significant development occurred in the late fifties with the arrival, from Miami, Florida, of 'Doc' Calloway. He brought a refreshing new compendium of teaching ideas which represented the most up-to-date theories then current in the United States. Chief



among these was the concept of 'Basic Design' as an educational medium (1). This meant, in simple terms, the use of non-specific, sometimes abstract procedures as a method of investigating a topic and developing a broad understanding of a concept. The results, whether in two- or three-dimensions, solid or spatial, were striking and certainly made a significant contribution to the development of design skills in the full sense of the words.

Thus the School developed what Barrie Biermann referred to as 'The Design Spine'. It was not without criticism or debate but in essence it meant that the School subscribed to the principal motivating forces of the Modern Movement. There was a strong emphasis on 'functional design' and therefore a close link between Design and Technology with somewhat less attention being paid to back-up subjects.

The teaching of architectural Theory was mainly woven into the Design course and also manifested itself in what emerged as one of the School's great strengths, History of Architecture and Related Arts. It was sometimes informally referred to as the History of Theories of Architecture and has become one of the disciplines for which the School has an international reputation.

This is substantially the core around which the first year programme developed, being naturally modified to accommodate international changes in emphasis and approach – like the advent of Archigram or the Philadelphia school amongst others.

The next phase was the emergence in the early eighties of a concept of rigorous basic training together with the larger awareness of involvement in a world where change was radical, inevitable and happening. Where architects need to be involved in the needs of soci-

CLOCKWISE FROM TOP:
Geometry of a Pine Cone. Ashleigh Woodland, 1986. (2)
Design for a shopping street in Umlazi. 1985. (5)
Technical Study. Valley Trust Project, 1988. (4)
Study of Change: Metamorphosis, 1983. (3)
Abstract Design. Bryan Lee, 1960. (1)

ety at all levels.

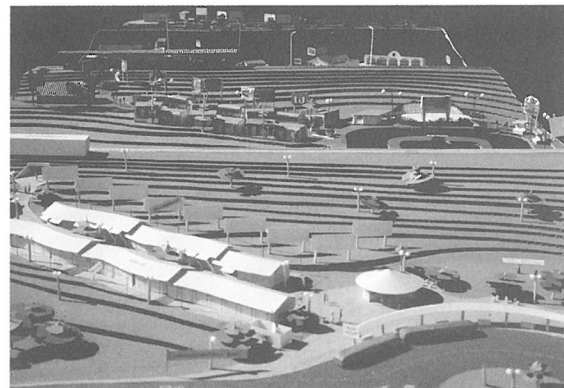
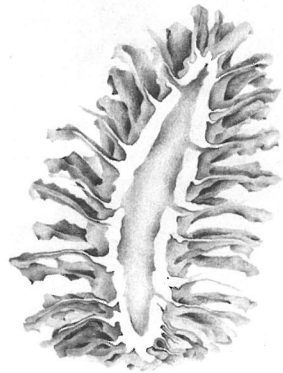
Strong emphasis was laid upon the study of natural forms (2) and the development of drawing skills as a method of observing, documenting and understanding the relationship between shape, process and meaning.

Abstract studies of space (3), movement and materials, related to the Basic Design programmes of the sixties, were linked to understanding a changing society. Student intake was, increasingly, from a wider background of opportunity therefore marks were not allocated for project work in the first semester, but indicators as the direction of progress and this was followed as far as possible for the rest of the year.

After the foundation courses students became more and more keen to design buildings and they often found themselves involved in situations with realistic briefs at the Valley Trust (4), in KwaMashu, Umlazi (5) or amongst the hawkers at the commuter interchanges in town.

Over the years there has been a consistent notion that intellectual growth and holistic development of the student is the product of the creative application of discipline, curiosity and debate, exercised with humour and compassion.

Dennis Claude
(Mr Claude taught First Year 1983–1994)



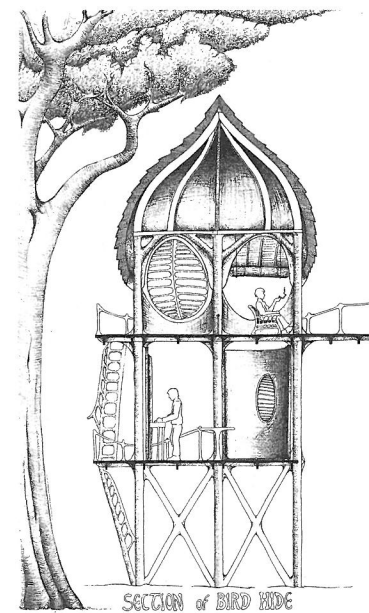
School of Architecture at 50

Teaching First Year

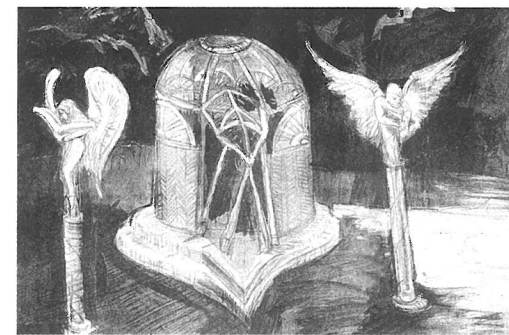
The following are some current examples of the first year design programmes:



1. The Icebreaker – a temporary shelter. In this first programme, the students are given limited materials and are required to erect a temporary structure in which to sleep overnight. The learning experience is to develop group ethos, communication skills, group integration and creative problem solving.



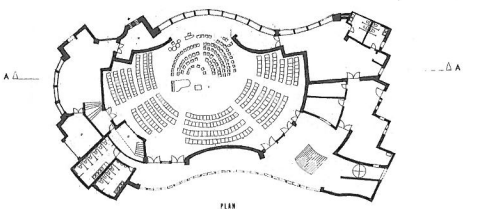
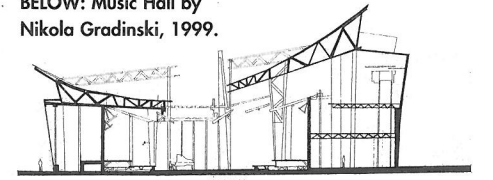
2. A Bird Hide for Pigeon Valley. The focus of this programme is to develop exploratory conceptual work, application of precedent and design development. The integration of Technology is demonstrated with the use of low-technology such as gum poles, timber framing, thatch or roof sheeting.



3. The Reading Chamber – a one day design test. The student's development is assessed in terms of the use of a framework of ideas, conceptual development and the application of precedent.

Shelter of Melanie Grant; Mark Webster; David Dent and Marco Oliveira, 1999.

BELOW: Music Hall by Nikola Gradinski, 1999.



4. A Place of Social Productivity in Umbilo – in this programme the learners are not given a set design brief. Through a process of facilitation and research, they develop their own appropriate site utilisation proposal. In this project, they are exposed to social responsibilities and urban issues in a changing context. The learning outcomes of this studio demonstrate a diverse range of exploration and creativity. This is evident in the various building types proposed by the learners. The outcomes of this programme reveal, that in the first year of study, learners want and need to explore the real world of architecture.

The emphasis of the first year programme is on the integrated design process, so that the learner can gain confidence in their approach to design. This is achieved by setting out the design programme with weekly submissions for peer evaluation. Participation, performance and progress are the main criteria whereby the work is assessed. Continuous assessment results in a high level of applied skills, conceptual thinking and design resolution. Transfer of knowledge is brought about through application of the principles of design, linking theory to practice and testing skills of problem solving. The integration of Design and Technology as the core subject in the architecture programme has meant that the aims of IPBL are being realised. With this approach to teaching and learning, the School acknowledges the diverse backgrounds of its learners and their expectations.

Alethea Duncan-Brown

ABOVE LEFT: Bird Hide. Bevis Martin, 1999.
LEFT: Reading Chamber. Yusuf Vahed, 1999.

Introduction of Integrated Problem Based Learning in 1995

The new curriculum was developed from research prepared by the staff at the School of Architecture at Newcastle University, NSW, Australia who had introduced Integrated Problem Based Learning (IPBL) about 10 years previously.

The major aspects of IPBL are: Apriori Knowledge; Context Learning; Student-Centred Learning; Integrated Curriculum; and Process Emphasis.

To elaborate broadly, it is accepted that education grows from the learners' (students') cultural and economic background and that it is more effective if related to the learners' understanding of the context in which it is applied. All new learning is built upon old learning. When a problem is framed or addressed, learners (and teachers) determine what they already know about a problem.

There is an emphasis on student-centred learning where assessment of submissions is student driven and is carried out by students themselves or by peer groups so that the assessment is owned by them. The studio is divided into groups, of about 8–10 students who work continuously for a 'Quarter' or a Semester with a specific group facilitator – typically a full-time member of staff but often a part-timer from the profession. All work is reviewed and criticised within the group.

Care is taken to integrate design projects with other aspects of learning and greater emphasis is given to the process rather than the product.

The implementation of the new curriculum for the design studio was based on the notion of context-learning. This meant that the learners engage with real architectural problems or scenarios immediately upon entering the first year programme. Therefore, longer design programmes are necessary for in-depth learning experiences, set up as "deep-end architectural scenarios".

Derek van Heerden

The Fusion of Architectural Design & Technology

In 1998, a further change was implemented in the architectural curriculum, Design and Technology were combined to become the core subject of the course curriculum. The overall objective course is to empower learners to engage with all aspects of the discipline of Architecture and to expose them to those skills necessary to articulate their ideas both orally and graphically.

School of Architecture at 50

Environmental Concerns in Architectural Design

As we celebrate the fiftieth anniversary of the founding of the School of Architecture at the University of Natal it has occurred to me with some surprise that I have been teaching at the School for nearly half of its existence.

A profound concern for the effects of the environment on buildings and vice versa has been evident in the School from its founding, having been of some interest to the first Head of Department, Professor Paul Connell. This interest was taken up by Brian Kearney as a young lecturer in the School (alongside his dominant concern with Architectural History) and was no doubt one of the reasons why Architectural Students were receiving a dedicated introductory course in Physics and courses in thermal comfort, lighting and ventilation from Brian Kearney during the nineteen seventies. During this period, I was a graduate student in Physics, and the lectures in Architecture were assigned to me as part of my duties as a graduate assistant. I took to the Architecture students, but they had traditionally not taken well to Physics, and, under the aegis of Professor Leslie Croft, Brian Kearney and myself began to formulate the curriculum of a course which became known as Building Science which was to combine issues of principle with design applications and was to be given to students of architecture (and allied disciplines) in their first and second years of study.

As the preparation of this curriculum came to completion, so did my graduate studies, so that, by the time the course was due to be mounted for the first time in 1977, I would no longer be available as a graduate student in physics. This encouraged Professor Croft to suggest that I apply for the post of lecturer in

In this design (below) for an Aquatic Club on Lake Nyasa (now Lake Malawi) presented by Barry Doel for his Design Thesis in 1962, a concern for orientation is evident in the differing treatment applied to the different elevations of the building – although the elevations do not really face the cardinal directions for which they are named. This bears out a concern for orientation to be found in the accompanying document, and is typical of good environmental design of the period.

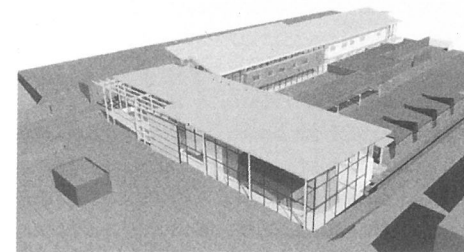
Architecture which I took up in July 1977, midway through the first year of presentation of Building Science.

The main concern of the course from that time to this has been the response of architectural designers to the effects of climate on buildings and of buildings on the environment. Many of the more technical aspects of architectural design which might have been expected to have found a home in a course named "Building Science" were dealt with elsewhere, with separate courses in Theory and Design of Structures, Acoustics and Artificial Illumination. In the first year of study, Building Science was at first directed toward presenting the building as intervening between the needs of the occupants and the conditions of the external climate and students were introduced to the physiology and description of human comfort (with particular emphasis on thermal comfort), a sweeping introduction to climate from global systems to microclimatic variation and the illustration of architectural response to climate taken from Brian Kearney's extensive collection of slides of traditional buildings from around the world. As the years passed, what began as a tutorial on solar movement expanded to constitute the first semester of the first year of study which included solar geometry, solar prediction, skiagraphy and orientation studies. In the second year of study students were introduced to the details of the response of buildings to the thermal environment, including the concept and significance of thermal mass, thermal conductivity and thermal transients. Illustrations were taken from what was then the young field of so-called "passive solar design" in which attempts were begun at designing buildings which operated in concert with the environment. Daylighting and daylight prediction were presented as well as ventilation studies. Although the content of the course varies from year to year, the curriculum has changed little except that a brief course in electricity has been introduced and ventilation and passive solar design have been moved into the second semester of the third year of study.

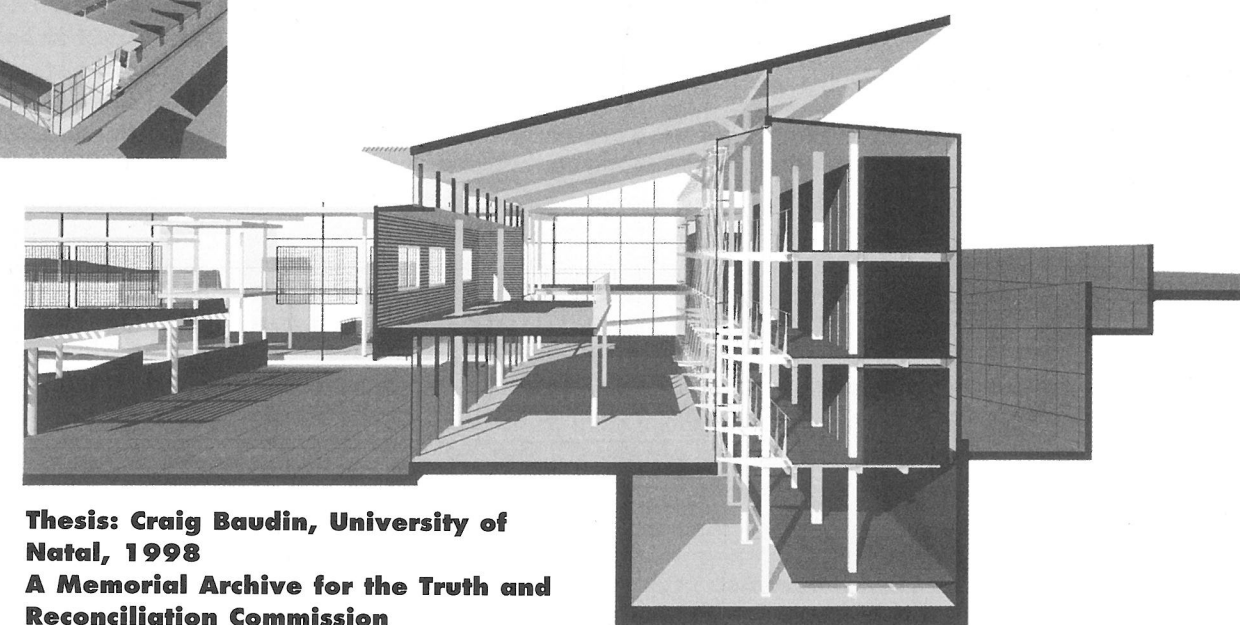
The formal lecture course has survived the change to Problem Based Learning in the subjects Architectural Design & Technology, and Theory of Architecture because of the necessity for a sequential presentation of technical detail, and the short-sightedness of teaching only application without principle in science. Nevertheless, the changes in the teaching of studio-based subjects has had a profound effect on the way in which environmental concerns are perceived by staff and students in the School.

When I began lecturing at the School in the mid-seventies, the dominant design philosophy can be characterised as "modernist rationalist" (here it is not difficult for me to imagine a chorus of protest from my older colleagues and former colleagues, but I will ignore it and press on). A commitment to rationalism assured that the concerns which Brian and I espoused were viewed as significant. Nevertheless, there seemed to be some sort of difficulty in persuading students (and, significantly, my colleagues) that they constitute a significant constraint on the design of buildings. There was a tendency to restrict the consideration of such issues to a phase of analysis ("site analysis") which took place prior to actual designing. Thereafter, armed, if possible, with the result of these and other analyses, the designer was supposed to make the ineffable and mystical leap into the design process, the success of which was to be decided on purely "architectural" criteria, in which such things as orientation and fenestration played an almost incidental part. With hindsight, I see that this attitude was influenced to a considerable extent by the concern that the particular genius of the architect may be reduced to some sort of rational algorithm to the detriment of architecture and architects alike.

Over the intervening decades, the decay of scientific authority and the advent of less restrictive conceptions of "reality" and "truth" have allowed a less mutually fearful relationship between the Sciences and the Arts to begin to emerge in architecture. Under the Modern regime of a corpus of knowledge disastrously



The Memorial Archive for the Truth and Reconciliation Commission presented as a Design Thesis by Craig Baudin in 1998 demonstrates a thoroughgoing commitment to orientation to be found in the massing of the building elements, the slope of the roof and the arrangement of the fenestration that could only arise from a deep understanding of the effect of sun on buildings.



Thesis: Craig Baudin, University of Natal, 1998
A Memorial Archive for the Truth and Reconciliation Commission

This thesis on Joubert Street, Johannesburg, would be situated across a square from the Constitutional Court. It would serve not only as a depository for the work of the TRC, but also "to record the contemporary era of change and transformation".

The TRC was founded "to uncover and excavate the truth after decades of misinformation and falsehood". The archive should thus in its structural and functional approach, be "an honest container for the truth held within".

Whilst being a depository for the work of the TRC, the thesis also aimed at providing a document of a complete period of South Africa's social history, including a celebration of the unique example of a peacefully negotiated revolution.

Archives buildings are a typology that combines aspects of warehouse, library and museum functions. This archive should also strive to contribute to the debate over what democratic architecture in South Africa should be.

There was the functional problem of the highly public nature of the memorial/museum and the private, hermetically sealed, nature of the archive. If one sees the building as broadly composed of a public zone and a private, climate controlled archived zone, there is possibility for an interstitial zone in which the two can mix, possibly in a very dramatic and visual way.

The structure is essentially a lightweight steel frame atop a concrete basement accommodating services, parking and some archival holdings. The main archive space is designed to be naturally cross-ventilation through the use of clerestory openings.

fractured between the mystique of the arts and the certain rational authority of the sciences, Architecture was in perpetual danger of falling into the resulting abyss which the application of scientific method to social, political and even literary concerns did little to bridge. The weakening of scientific certainty and the rehabilitation of metaphor have allowed architecture to begin to recover from being an uncomfortable hybrid and place it at the centre of a more holistic view of the world.

Against this background there has been a change in the role of environmental response in architectural design. Instead of being a somewhat peripheral concern of rather eccentric staff, the role of orientation, fenestration, choice of materials and choice of appropriate forms in architectural and urban

design have come to be of increasing interest to staff and students alike, not as an additional concern, but as a central constraint of architectural design.

This change has borne fruit in the success of our students in the application of these principles as can be seen in the designs themselves, but also in their success in competitions. After years of concerted effort toward this end, it is gratifying to see environmentally responsive and responsible design become common-place in the studios, but it is humbling to recall this success is not as a result of the efforts of myself and my colleagues directly but of the beginning of a resolution of some of the contradictions of the Modern view of the world and inspiring to consider that architecture may play a leading role in the movement away from the follies of high modernism and its enlightenment project.



Derek Wang by unknown cartoonist. First Year, 1999.

Derek Wang
Associate Professor of Architecture

School of Architecture at 50

The School and its Community

Over the years the Department, or School of Architecture, as it is more commonly termed, has gathered a reputation for its strong regional base. This article substantiates that reputation by examining principally past student involvement in work undertaken outside of the normal confines of academe.

The seeds of the School's involvement with community projects can almost certainly be traced back to the influence of Barrie Biermann and Ron Lewcock. Both men completed their doctorates on South African architecture when this was unusual and both were avid recorders of our architectural heritage, colonial and indigenous. As their publications are well known they will not be listed here.

The direct influence of these two scholars on the School is easy to discern. It resulted, among others, in Brian Kearney's well known study of *Early Natal Architecture* and the book on *Hindu Temples* by Paul Mikula, Rodney Harber and Brian Kearney. Many other examples of this great interest in our local diverse, architectural heritage could be quoted if space allowed, however a couple of statistics might bring home more clearly the School's involvement with recording examples of local historic buildings. In the Barrie Biermann Library there is a collection of measured drawings of some 312 different buildings carried out by our students over the years. In the historic drawings collection there are over 800 separate entries, mostly on Durban. Both these collections are, and will continue to be, an invaluable resource to scholars and the profession. In addition there are smaller individual collections of prominent local architects such as Alan Woodrow.

The teaching of South African architecture is, needless to say, part of the Bachelor of Architectural Studies curriculum.

It is not surprising therefore against this background that the School, its lecturers and students have shown a deep concern for protecting the historic built environment. The work of Brian Kearney especially his monumental *Revised Listing of Important Places and Buildings in Durban* (1984), is probably the most well known local example of this concern, but at the student level this has led to the tradition of undertaking conservation studies as part of the normal curriculum and publishing

them in the form of substantial reports. Inevitably the group has been led by a member of staff and just as inevitably that member of staff has been Wally Peters. The first of these was that carried out in Lüderitz in 1979. This has been followed by a whole string, seven in total, which are listed below. The latest of these is *Rhodes Re-assessed* published in 1998. All of these studies, usually carried on thin budgets, often during vacations and occupying an enormous amount of student's and lecturer's time, have had a considerable impact on the communities that were visited and studied. For example, the study on De Bult, a Coloured community which is in the Karoo, has resulted in them receiving the 1998 *Sanlam Award for Conservation* worth R100 000. This is aside from the almost immeasurable impact the individual studies have had on the student groups concerned in sensitising them to the value of historic buildings and hopefully giving them the skills as young professionals to deal sensitively with conservation in their future work.

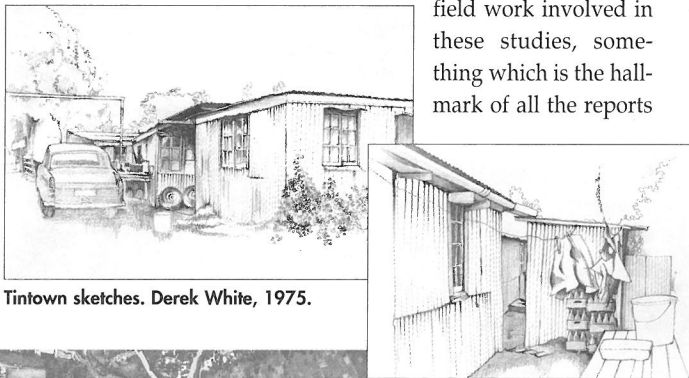
The list will also show that this conservation expertise was often carried into small communities which lacked access to professional help at this level.

Somewhat different are a number of studies carried out closer to home.

These are the ones that concerned themselves with those communities suffering from the twin effects of poverty and apartheid. Less numerous than the conservation studies for reasons advanced below, they are scarcely less important in developing and demonstrating a concern which still runs through the School. This is for the housing of the rapidly urbanising population in and around our cities, Durban in particular.

Among the earliest, if not the earliest, of these is a study of Tintown. This was a temporary Indian settlement established in 1960 on the Springfield Flats where the industrial estate is now. Unusually perhaps it was not published as a report although all the material still exists in the Library. It was however the subject of a fairly lengthy article (Tintown 75) by Derek White then a second year student in the journal *Plan* of July 1975. The article, which is obviously a synopsis of the very detailed work carried out by the second year group of students, demonstrated the very thorough

field work involved in these studies, something which is the hallmark of all the reports



Tintown sketches. Derek White, 1975.



Umgeni Business Park

Low-lying and under-utilised railway land on the south bank of the Umgeni River (between the N2 Outer Ring Road and Connaught Bridge) has been reintegrated into the economy. Unlike the industrial development on the north bank (refer *Industrial Architecture, NIAJ* 4/1991, at Springfield Park) this development is mixed with light industrial, mini-factories and commercial uses, hence its name Umgeni Business Park. The explanation by the developers, Intersite Property Management Services, puts it this way

"Rapid organisational changes currently experienced by South African companies are necessitating the design of flexible working environments which integrate A-grade office accommodation with production operations in a single hi-tech facility.

The architectural response to these new design requirements is not simply to provide production space with an upmarket finish, nor is it to downgrade the office accommodation to "warehouses-with-desks". Equally so, the solution is not to design two separate entities built adjacent to each other but rather to evolve a new industrial architecture which is flexible, hi-tech, upmarket and cost effective.

These new buildings don't only merge the various working environments but facilitate integration between white collar and blue collar workers thus helping to promote unity of vision within a company".

Umgeni Business Park boasts a concentration of such new integrated industrial facilities, and three designed by recent graduates of the University of Natal follow.

Editor

Opposite left and right: Aerial photographs 1979 and 1999, showing the area between the N2 Outer Ring Road and Alpine Road (bottom right hand side). Both aerial photographs supplied by the Chief Photogrammetrist, Survey Section, City Engineer's, Durban.

Key:

1. Hirsch
2. Hyundai
3. Steers
4. Barrows
5. Hirt & Carter
6. Siltek

including the conservation ones. As an historic document, the Tintown study must now have some value, however for the School, it marks the beginning of a pioneering involvement with the process of understanding the real needs and concerns of local low-cost housing. This was to be taken up at a professional level by members of staff including Errol Haarhoff and Rodney Harber who undertook an enormous amount of valuable work from the late 1970s onwards.

Student work ran parallel and was inevitably informed by this. Two examples are Clairwood, yet another Indian area under threat and Kwasanti, near Mariannhill. Both reports were edited by Peter Schwerzel, a student at the time. Both reports are lengthy – some 65 pages a piece – and very detailed. Yet again the fieldwork carried out was exhaustive and meticulous, indicative of the high level of commitment from the fourth year class who undertook the studies. In the Clairwood study, respect for the positive aspects of the existing but rundown environment are very evident. Interestingly, the modernist tendency to treat 'redevelopment' as a blank sheet onto which a new chunk of the 'Radiant City' could be plonked, was entirely avoided and both studies evince a strong desire to understand and work with the cultures of the inhabitants, Indian and African. Nevertheless very specific and detailed physical proposals were made including the stilt house in KwaSanti.

In some senses the student projects were overtaken by subsequent events and at the School this was the founding of the Built Environment Support Group (BESG) and the University of Natal Alternate Housing

Technology Unit (UNAHTU) in 1986 by Errol Haarhoff, Rodney Harber and others.

While UNAHTU presently lies dormant, BESG has gone on from strength to strength and now exists as an NGO but is still formally linked to the School while operating across the entire Province.

It would be arrogant to claim for the Department any pre-eminence in the field of community involvement as all the Schools of Architecture in South Africa participate in this activity, more or less. However what can surely be said is that in conservation and housing, the Department has every reason to be proud of its considerable record of achievement.

Dennis Radford

URBAN CONSERVATION PROJECTS

Lüderitz and its Environs – A Study in Conservation, 1979

Philipstown, Princess of the Middleveld, B E Biermann (Ed), 1987

Rhodes: Towards the Conservation of a Unique South African Town, 1987

Victoria West: A Conservation Study, 1991

De Bult: Conserving the Karoo Vernacular in Carnarvon, 1991

Wakkerstroom: A Conservation Study, 1995

Rhodes Re-assessed: Towards the Conservation of a Unique South African Town, 1998

UPGRADING PROJECTS

Tintown 75. D White in *Plan*, July 1975

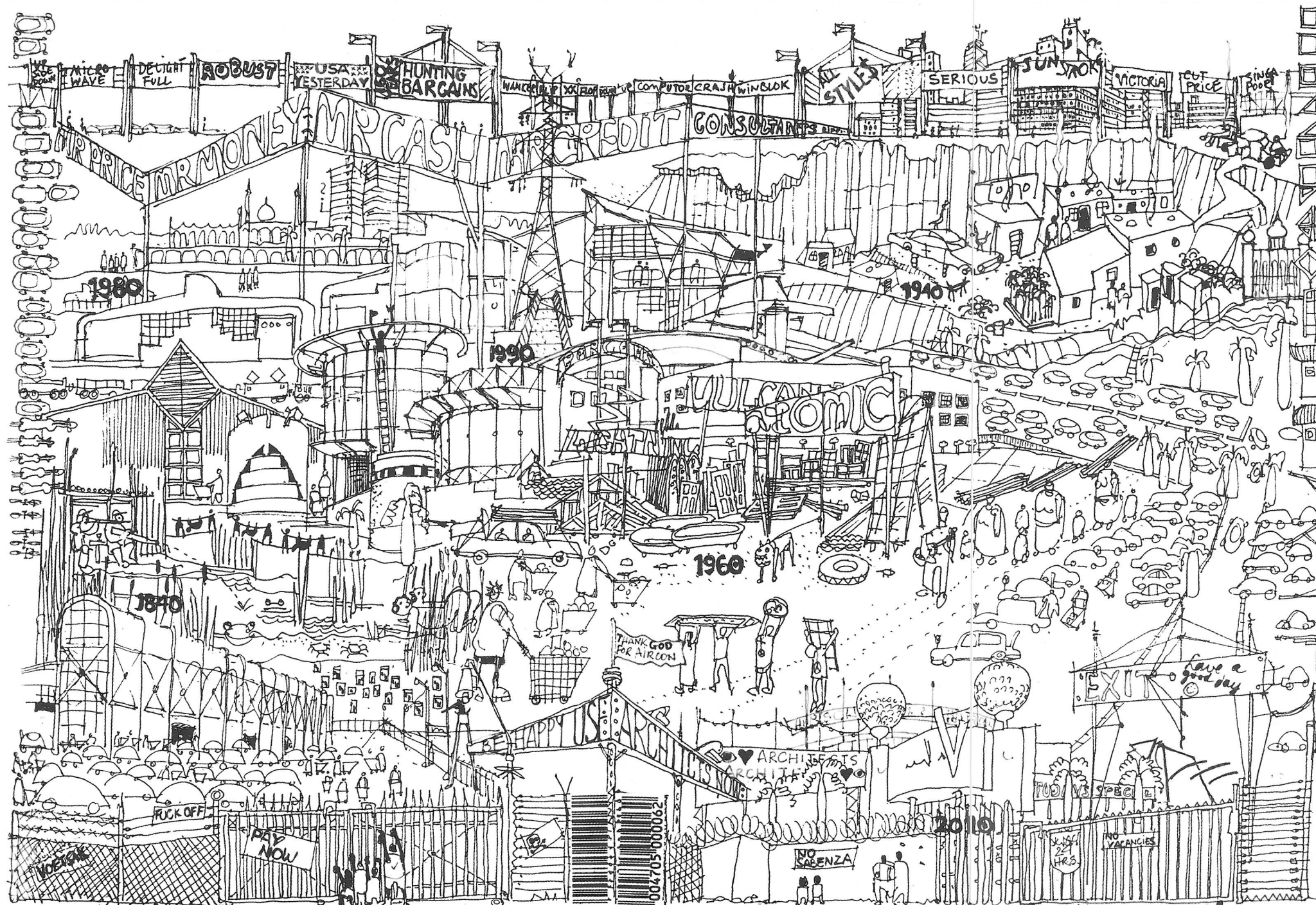
Clairwood: Redevelopment and Upgrading proposals, P J Schwerzel (Ed), 1988

KwaSanti: An upgrading proposal for St. Wendolinsl, P J Schwerzel (Ed), 1988

KwaMgaga – Upgrading, P Stewart (Ed), 1991

Umgeni Business Park

"Bargain Hunting for 160 Years"



A visual critique and history by Paul Mikula. (See Letter to the Editor, page 1)



LEFT TO RIGHT: Hirsh's - Elphick Proome Architects; Steers; Hyundai - Michael Tod Architects; Hirt & Carter - Clark & Thomas Architects.

Umgeni Business Park

Siltek



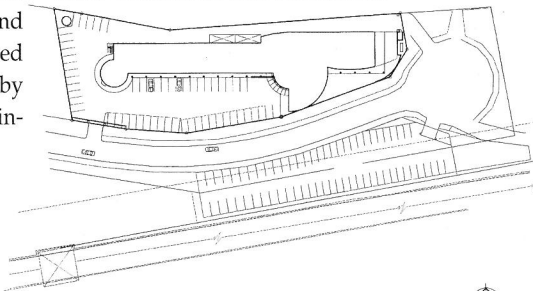
The attenuated nature of the site, and the need to accommodate 3 different tenants determined the massing of the building.

Two glass cylinders of double and triple volume respectively, announce the reception areas and provide for vertical circulation. The transparency provided for both viewer and user by the glass curtain-walling, is contrasted with areas of solidity either in face-brick or by walls punctured with framed or ribbon windows.

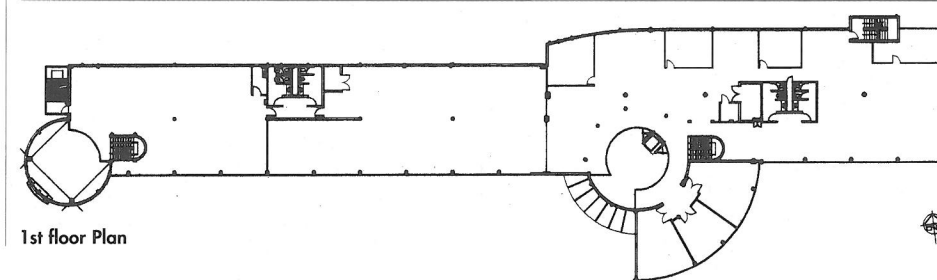
Raewyn Gowar (Slack), Project Architect

Architects: Michael Tod Architects
Project Managers: Borthwick & Assocs;
Lurie Group

Quantity Surveyors: Edgcombe Hayes-Hill
Electrical Engineers: BFBA Consultants (Pty) Ltd
Structural Engineers: Lawrence & Boorsma
Geotechnical Engineers:
Knight Hall Hendry & Associates
Main Contractor: Grid Construction



Site Plan



1st floor Plan

Umgeni Business Park

Hirt & Carter



This project, conceived by the client in 1992, was intended to reduce operational costs by incorporating all subsidiaries under one roof. Following on from a value management workshop conducted by the Quantity Surveyors, and an analysis by a German consultant of the production flow of the various factories to be integrated, the design phase could finally commence in February 1997. Site preparation involved the re-routing of major underground municipal services and the demolition of a portion of an existing pedestrian bridge. Besides, a power interference analysis had to be conducted to obviate potential computer interference from the power lines which traverse the south end of the site.

The contextual integration of the 10 000 sq m large building on its city edge site together with the fast-changing client requirements presented a major challenge. Something different was sought.

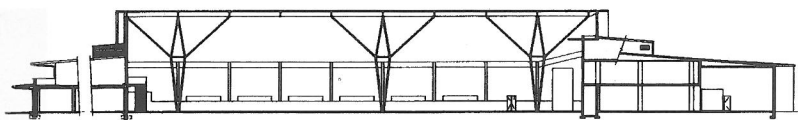
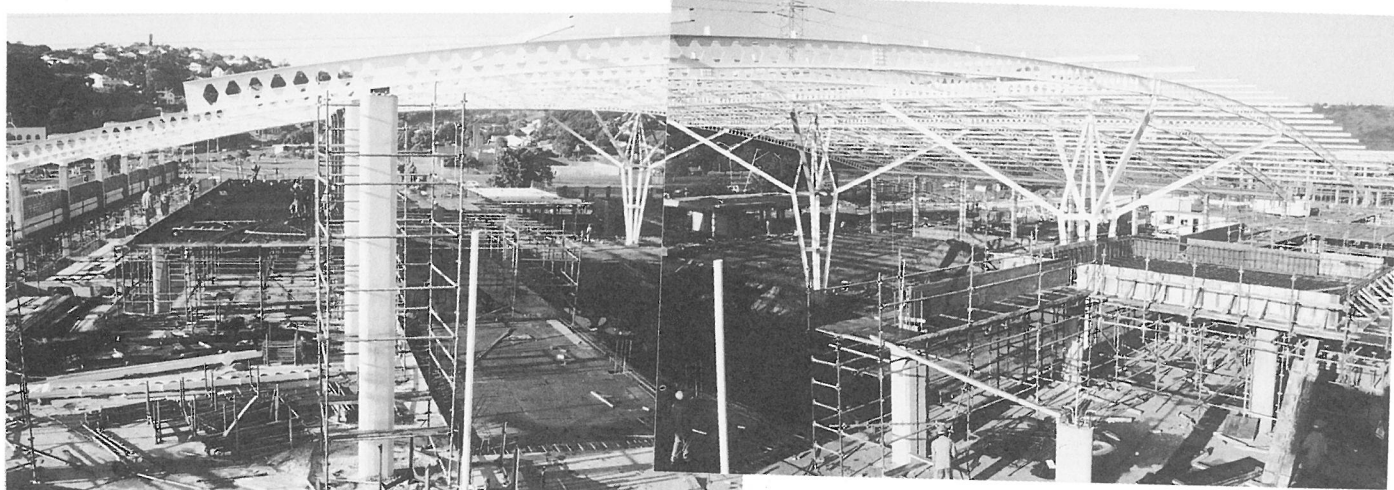
"The result is a functional building that responds to Durban and its immediate environment, not only climatically but architec-

turally. Subtle 'indicators' of architectural input, although not deliberately sought, manifest themselves throughout the building's structural and cladding design. These 'indicators' stretch far into the region's varied past and are 'blended' into the design process. Their use hopefully integrates the presence of this building far into Durban's unique future".

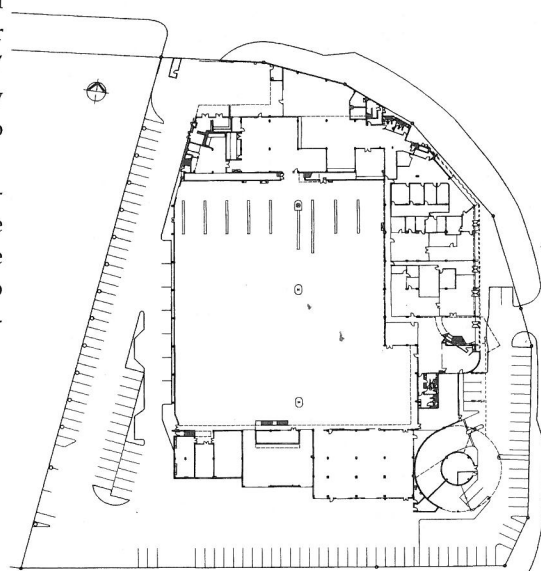
The construction programme had to be flexible and attuned to the "shifting core" of the client's business. That the building could be completed in 10 months bears testimony to flexibility in what is usually considered a conservative industry.

Tom Steer, Project Architect

Architects: Clark & Thomas Architects CC
Quantity Surveyors: Scott & Schou
Structural & Civil Engineers: Vawda Thornton
Electrical Engineers: Ramble Malone
Mechanical Engineers: Alan Milne
Contractors: Group 5 East (Pty) Ltd



Longitudinal Section



Ground Floor Plan

Umgeni Business Park

Barrows

This retail display and manufacturing facility incorporates a 2 700 sqm mild steel division, a 3 600 sqm corrugated cardboard and printing division, and 1 900 sqm of design administrative and exhibition space. Designed to project the company's integrated production approach and open management style into built-form, the role of the architecture was to be iconic. Like Barrows itself, the building had to exude confidence, stealth, and a hint of youthful aggression...

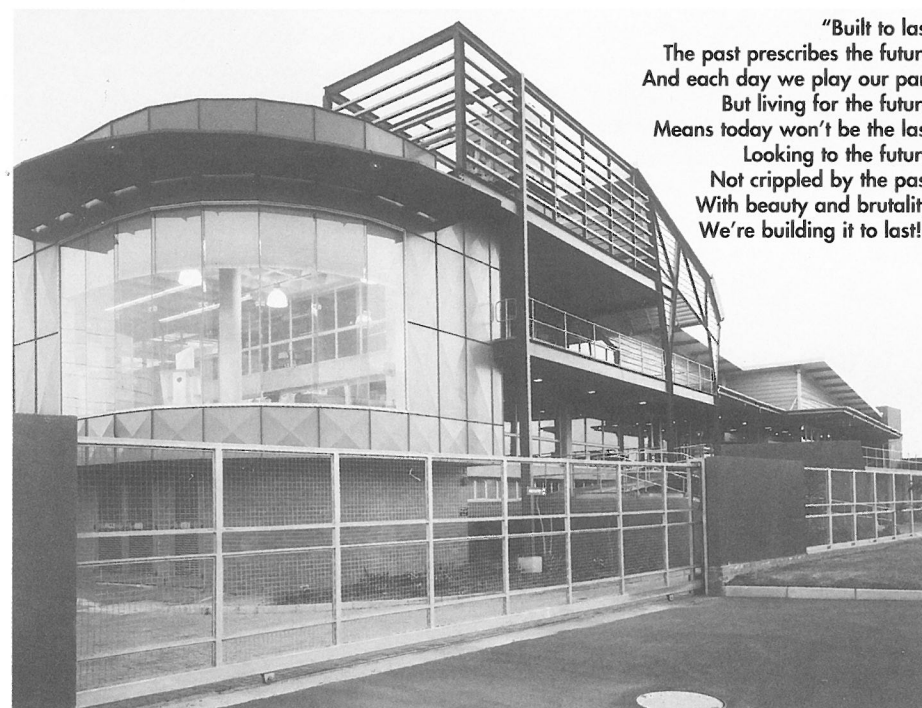
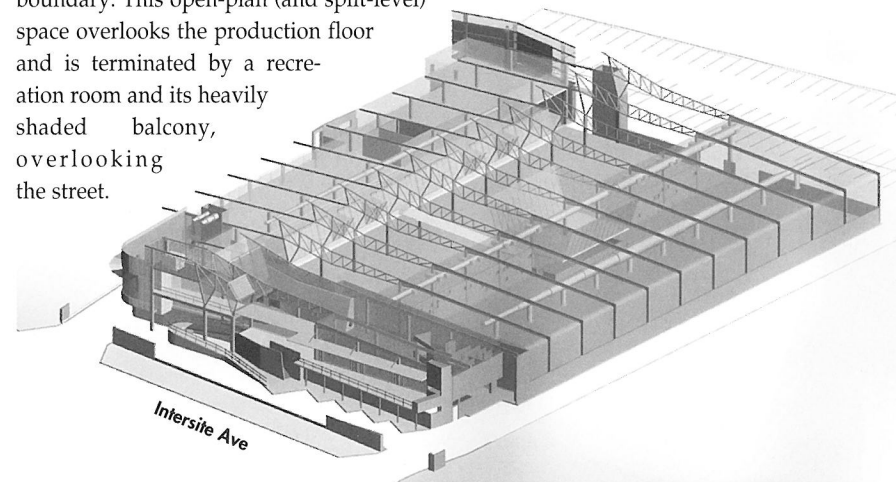
While access is limited to Intersite Avenue, the site has two road frontages, the other to Umgeni Road. This circumstance prompted different architectural responses to the traffic patterns of each road: a billboard aesthetic to the fast-moving Umgeni Road, and a more articulated presence to Intersite Ave, the business park's slower internal street.

From the outset, Barrows was conceived as part of a "Print Park" in conjunction with Hirt & Carter, and particular emphasis was placed on creating an urbane portal to the factory that would contribute to the public realm. Indeed, as the brief developed, the building became defined as semi-public, with flexible "event spaces" that could host various industry-related functions e.g. fashion shows, art exhibitions, and environmental design installations.

A meandering entrance sequence winds up along the Intersite Avenue face of the building; starting from a small pool of visitor parking into the public "interzone" area on the first floor (at an intermediate level between design and production). At the right lies the staff canteen, (a semi-public diner, aimed to reduce cor-

porate hierarchy within Barrows) which opens to a terrace extending to the building line, animating the streetscape. To the left, access is given past visitor facilities to a double volume "think tank" presentation room that marks the factory's most prominent corner. Designed to accommodate a two-lane supermarket layout for clients to view their "point of purchase" products within their intended context, this space also holds multi-media presentations.

The backdrop to the exhibition space is an odd-shaped three dimensional wall named "the Lung" that acts as the valve between the public realm and the inner sanctum of the factory. The warping framework behind this surface is designed to accommodate a variety of installations from ethnic craft to electronic ones. Behind the "Lung" an open stair within the production space leads up to the administration and design studios on the eastern site boundary. This open-plan (and split-level) space overlooks the production floor and is terminated by a recreation room and its heavily shaded balcony, overlooking the street.

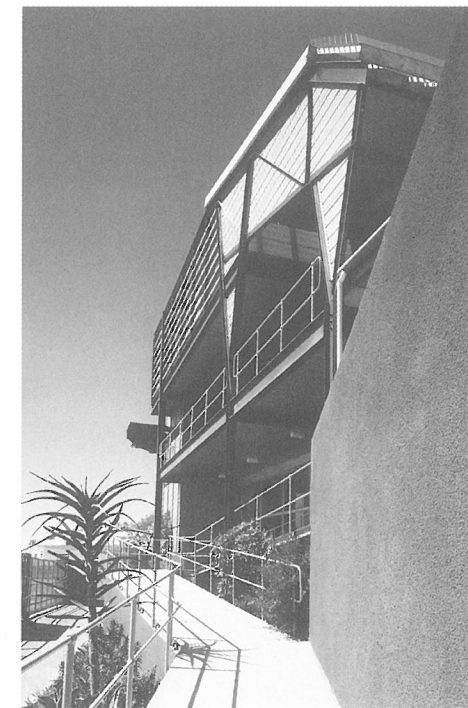


"Built to last
The past prescribes the future
And each day we play our part
But living for the future
Means today won't be the last
Looking to the future
Not crippled by the past
With beauty and brutality
We're building it to last!"

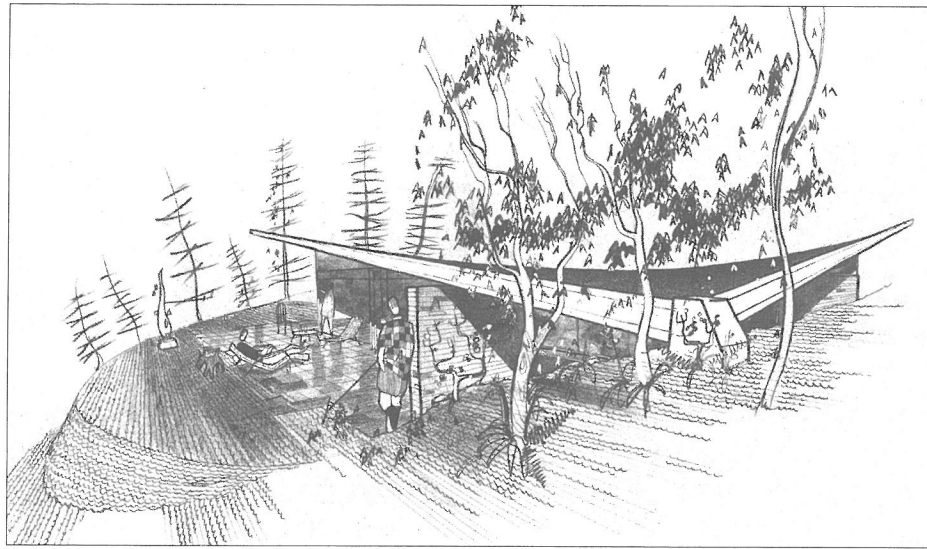
The glass wall to the design studio is canted at 105 degrees with projecting bay windows to promote visual contact between the designers and the production process. A bridge leads to the pre-production "satellite-office" symbolically poised between the cardboard printing and steel divisions, wherein designs are formally handed over for production.

Don Albert

Architect: Don Albert (soundspace design CC)
Architects of Record: Ing Jackson Architects
(Project Architect: Robin Herbert)
Quantity Surveyors & Project Managers:
CP de Leeuw
Electrical Engineers:
Shepstone Krause & Hayes CC
Structural & Civil Engineers: Vawda Thornton
Contractors: Group 5 / Stevenson (Pty) Ltd



School of Architecture at 50 Selected "Star Drawings"



From the "Star Drawings" Collection of the Barrie Biermann Architecture Library, University of Natal.

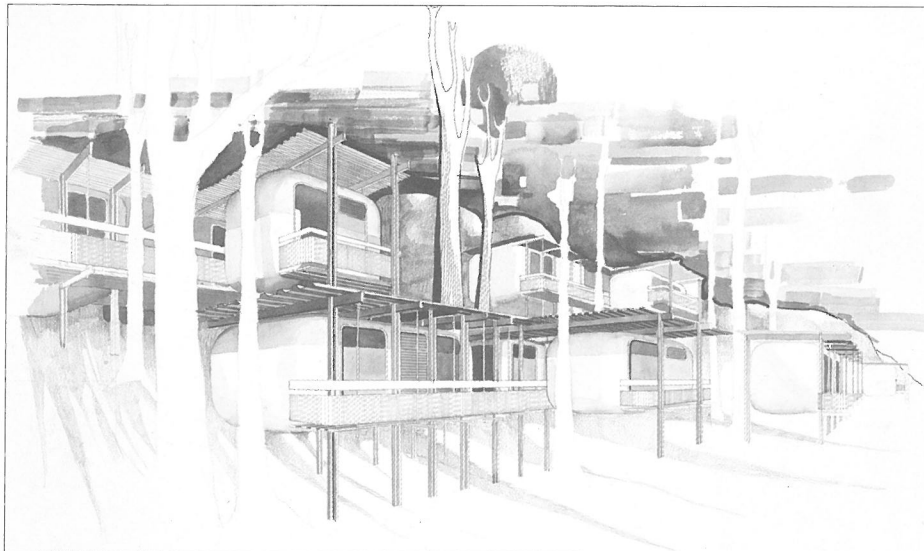
FROM TOP:
University Staff Housing project by Keith Alcock, 1956.

A Public Telephone opposite the City Hall, Durban by CWB Green, 1956.
Holiday Bungalows by Peter Engelbrecht, 1967.

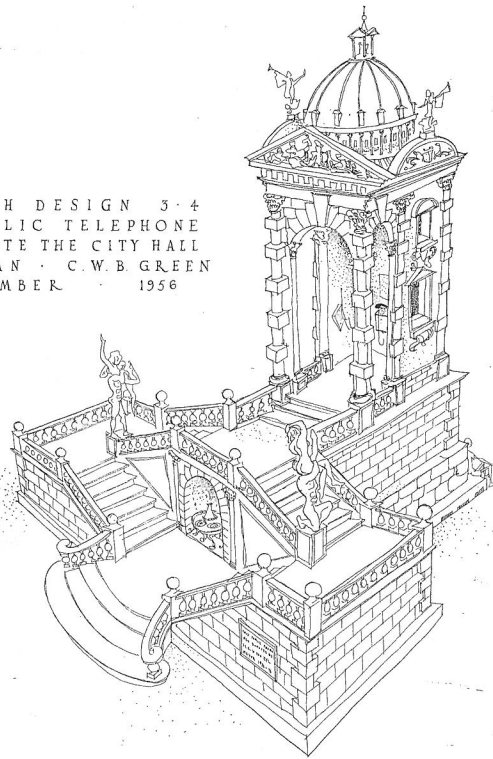
CMDA Competition Results

The design competition for the Administrative Support Centre in Cato Manor has been won by East Coast Architects (D. van Heerden, S. Kinsler, D. Barrow and C. Dlamini). Second prize went to Kooblal & Steyn Architects; and Third to Sarkin & Jain.

Congratulations



SKETCH DESIGN 3-4
A PUBLIC TELEPHONE
OPPOSITE THE CITY HALL
DURBAN - C.W.B. GREEN
SEPTEMBER 1956



Two Architectural Libraries in Mumbai

India is about extremes, vastness, intensity, and paradox - all qualities that describe this ancient culture. (Slesin, S. Indian Style, p.5)

I travelled to India recently, a country characterised by different cultures and contrasts. A short sojourn in Mumbai provided the opportunity to visit the city's architecture schools, and more particularly their architectural libraries. Being a staff member of the Barrie Biermann Architecture Library at the University of Natal, Durban campus (UND), I thought it would be of considerable value to observe the manner in which the local libraries operate, to ascertain whether specialised facilities similar to that at the UND exist, and to assess the quality of service delivered. Also of value would be the collection of data with regard to library infrastructure, and nature of relationships with relevant professional bodies, to facilitate a comparison with our own facilities. To fulfill such aims I thus visited two local Colleges: the Sir Jay Jay College of Architecture, a government subsidised college, and the Rizvi College, a private counterpart.

Sir Jay Jay College

My initial visit was to the Sir Jay Jay College of Architecture, headed by Professor Sharad Gad, an institution which has operated since 1913.

The College building is a fine example of Edwardian architecture but is in a sad state of dilapidation with financial constraints precluding any thought of restoration. While waiting in his antechamber to gain entrance, I was afforded the opportunity of observing the system of access to students, operated by Professor Gad. Access to his inner sanctum was via a pair of swing doors, which were in almost constant motion due to the very great volume of student movement. On entering the Professor's office I observed a student gaining access to the internet on his personal computer, another was enjoying a critique an assignment, while a third patiently waited for help. The scene proved to be the norm rather than exception, and I wondered how the learned academic found time to pursue his duties.

Comparisons between Sir Jay Jay College and the UND reveal a vast difference in Information Technology facilities. Their computer LAN is a mere shadow of that in our



Sir Jay Jay College

school comprising a mere 17 PC's, one printer and a video slide projector. This facility is maintained under lock and key and is housed in the only air conditioned room in the College. There is a strong emphasis on computer design applications and software including Autocad, 3D Studio Mag and Corel Draw.

Professor Gad escorted me to the architectural library and introduced me to Mrs A. Borkar who has headed the facility there since 1979. She is one of two qualified librarians of a staff complement of six with the remaining four members being para-professionals. Their library was of very modest size being housed in an area of approximately 15 x 20 metres and their collection, while limited had all the necessary books like Sir Banister Fletcher, Mitchell's construction books, Design of Cities and all the relevant theory books including those by Charles Jencks. The books are classified under the Dewey system and housed in lockable cabinets, maintaining them in perfect

order. Books are catalogued by the staff, as the College does not enjoy a central library. There is no computerised bibliography or issue system and staff work off a card catalogue system, but are in the process of compiling a data base of the books, with computer access through the LAN. All their books are subject to open access and they do not have reserve or reference collections, but have a very small audio visual collection which is accessible only to lecturing staff. The library has a very limited periodical collection.

The College enjoys a government subsidy which includes a library budget. The Library's annual allocation is 1 Lack (100 000 Rupees) for books (R15 000) and 50 000 Rupees (R7 500) for journals. This in comparison to the Barrie Biermann Library which receives approximately R105 000 per year for books and R77 000 for journals, could explain their limited collection.

I observed that the library had no photocopy facilities which results in students having to make notes, with the minimum of noise. There is in fact only one photocopy machine on campus. I also noticed the absence of any security system at the library entrance/exit. The librarians informed me that they do not have a problem with theft, although the library has a bag kiosk facility supervised by a member of staff. Another interesting difference in their system compared to UND, is that they have no fining system, but students are punished by having borrowing privileges withdrawn for a period of time depending on the seriousness of the offence.

Basilica De Bom Jesus, Old Goa, built 1594-1605, to house the remains of St Francis Xavier.



Rizvi College

My next visit was to the Rizvi College of Architecture which is headed by Professor Akhtar Chauhan. This College is a private facility and fairly new, being seven years old.

An aspect I found interesting is that the students have lectures 6 days a week, Monday to Saturday, 9 to 5, and their thesis students do not have to build their own models, but can have professionals build them. I was then shown around the architectural studios where drawing boards were arranged in a classroom-like manner with no personal studio space. Students' work is pinned up around the studio walls and along the corridors. The College has a small computer LAN with 11 computers, 2 printers and 1 scanner. They use CAD and Autocad software, as do our students. In the computer LAN students have access to the internet.

The College library is housed in a small 10 x 10 metre area, and has a staff complement of two qualified librarians, who manage a very

limited collection. Most of their books are new, in good condition and are also kept in glass cabinets. The books are not classified under the Dewey system, but are filed according to subject using a subject catalogue. The librarian has compiled a subject list which is accessed through the computers in the LAN. The library does not have a computerised bibliography.

The Librarian explained that they are in the process of classifying their books under the Dewey system. The library has a very limited journal collection of only four international titles. The library book budget is 2 Lack for books and for journals 50 000 Rupees. There are no photocopy facilities in the library, but photocopiers are available at the College. Once again I noticed the absence of a security system in the library, no bag storage facility and students bags lay around the studios unattended. This led me to believe that they do not have a theft problem, unlike UND.

Conclusions

My overall impressions of both Colleges was that students made the most of the limited information resources, technology and infrastructure. There would have to be co-operation, sharing and an unselfish attitude amongst students for them to achieve as much as they do. They showed pride and gratitude at having the opportunity to study at a College and it was quite obvious to me that it was a privilege and not an entitlement to be a student at a tertiary institution. The students and staff with whom I had contact, were extremely helpful and enthusiastic in showing a stranger around their Schools of Architecture. I left feeling that our students are fortunate with their more than adequate facilities and information resources.

Jeanine Rodney

Victoria Railway Terminus, Mumbai, by Frederick William Stevens, built 1887.

