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Group Editors



BUILDINGS FOR SPORT AND RECREATION



## 3-1985 BUILDINGS FOR SPORT AND RECREATION

COVER: Waterworld Photo by Craig Hudson

Kings Park Rugby Photo by Nick Proome

Kingsmead Cricket Stadium Photo by Eric Stephenson

## EDITORIAL COMMENT

In this issue *NPIA* focusses on three recently completed projects for sport and recreation. Kings Park and Kingsmead are spectator buildings for rugby and cricket respectively. Waterworld is a family fun-o-rama. Both the former are expansions to existing facilities, the latter a wholly new venture. All three are outdoor centres.

Stadia are of necessity large and therefore expensive structures. Standards are rising as are spectator demands, bars and private suites/boxes have become standard features and, what is more, every larger city in South Africa seems to feel the upgrading of its existing facility to be something which it cannot exist without.

Stadia are considered utilitarian and hence have seldom received the attention given other public buildings, e.g. theatres. In fact some have barely crossed the threshold between building and architecture. What is more, stadia are in their very nature isolated and introspective; rendering them potentially arid and harsh in appearance. The problem is simply that these strictly utilitarian buildings need an architectural commitment.

In formulating an approach to a design, architects often analyse precedents. The earliest example of a stadium is the Colosseum in Rome, a building using Grecian, i.e. eclectic vocabulary. Floors are separately expressed, it has rhythm, scale, articulation etc. Even in our post-modern era, a classicist building is not being suggested as a paradigm, just an acknowledgement of the conventional architectural design considerations.

These have been acknowledged, how else would one explain the visual dominance of the ramp on the northern elevation of Kingsmead, or the spiral ramps at Kings Park stadium? These offer more than simply a solution to the problems of mass circulation. They add form and movement to the monumental structures they serve. And this does indeed matter.

By contrast, Waterworld is a non-building: it can be considered as an exercise in artificial landscape (see the drawing showing the section). It concentrates on the "happenings" rather than on architecture in the traditional sense. Leisure has become more significant in life's interests and Waterworld is a leisure centre designed primarily for recreational use.

All three projects demonstrate that architectural concerns can enhance the enjoyment of being spectator or participant.

Walter Peters, Editor

## NEW BUILDING ADVICE BUREAU FOR NATAL

A new building advice bureau has been established by Corobrik at their offices at Briardene in Durban.

The bureau, manned by highly qualified technical staff, provides guidance and advice on the appropriate design concepts, performance and use of the wide range of Corobrik products.

The service is available to architects and engineers to ensure that initial design detailing and product choice related to severe or unusual applications is within the performance limits of the product selected.

For contractors the bureau provides an on-site service to solve product related problems during construction so that Corobrik products are correctly used and achieve optimum performance.

Bureau staff are also involved in the following:

- evaluation of existing structures where performance failures have occurred
- assistance in drawing up specifications relating to the use of Corobrik products
- lecturing and providing technical information to universities and technicians. Factory tours are also arranged for students
- regular calling on architects, engineers and quantity surveyors to ensure they are kept up to date with technical information.

The combined knowledge of staff together with extensive library and research laboratory facilities are aimed at ensuring that any enquiries related to Corobrik products and their application can be answered authoritatively and accurately. This service is available by telephoning (031) 839-650.

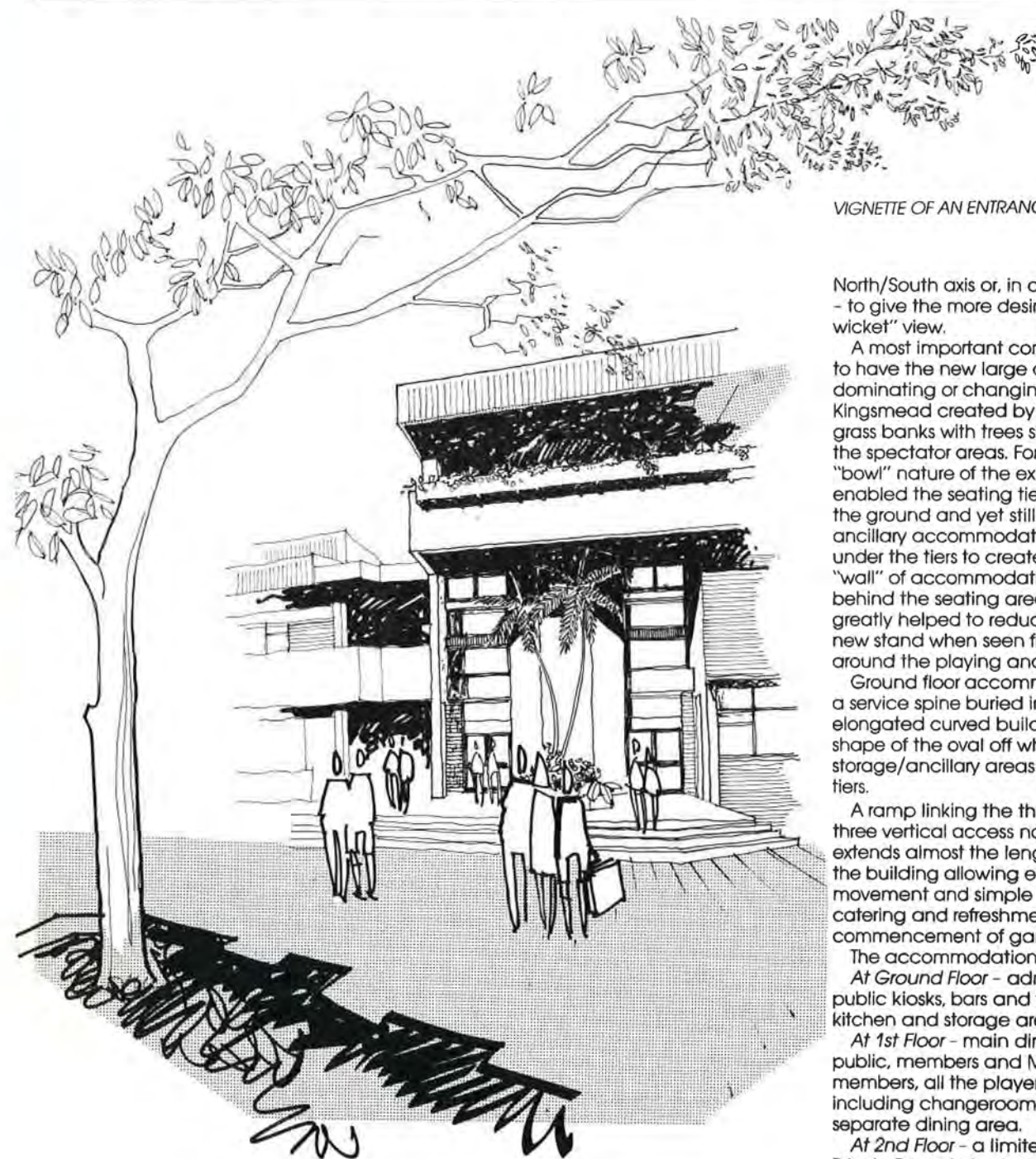
## BEST BRICK BUILDING AWARDS

Following the successful competition for Natal architects in 1983, Corobrik and the *Natal Mercury* would like to acknowledge once more the contributions of those who help to improve the quality of the environment.

Consequently buildings in three categories completed in Natal with clay or calcium silicate bricks during the period January 1983 to December 1984 are eligible for these prestige awards. Judges are Professor Don Dyke-Wells, Architect Jack Barnett and the Marketing Manager of Corobrik Natal, Mr Tony Poole.

Details have been circulated to all Natal architects. The closing date for entries is Saturday, 31 August 1985.

## KINGSMEAD CRICKET STADIUM McLAREN ALCOCK BEDFORD + PARTNERS



VIGNETTE OF AN ENTRANCE

North/South axis or, in cricketing parlance - to give the more desirable "down the wicket" view.

A most important consideration was not to have the new large and covered stand dominating or changing the character of Kingsmead created by gently sloping grass banks with trees shading much of the spectator areas. Fortunately the "bowl" nature of the existing banks enabled the seating tiers to grow out of the ground and yet still allow much of the ancillary accommodation to be zoned under the tiers to create a three storey "wall" of accommodation under and behind the seating area. This in turn greatly helped to reduce the scale of the new stand when seen from any position around the playing and viewing areas.

Ground floor accommodation includes a service spine buried in the centre of the elongated curved building following the shape of the oval off which are all the storage/ancillary areas under the seating tiers.

A ramp linking the three levels and the three vertical access nodes together extends almost the length of the back of the building allowing easy spectator movement and simple servicing of catering and refreshment areas prior to commencement of games.

The accommodation includes:

At Ground Floor - administration offices, public kiosks, bars and toilets, main kitchen and storage areas.

At 1st Floor - main dining areas for public, members and Mynah's Club members, all the players' accommodation including changerooms, ablutions and separate dining area.

At 2nd Floor - a limited number of Private Boxes to be leased to companies, Members' Bars and ablutions, Official Functions Rooms and Mynahs Club Bar and all Press, Radio and TV Facilities.

The final stages of development include the removal of numerous turnstile blocks, ablution blocks and kiosks scattered around the periphery and to include these in two major access areas. One of these will be located directly behind the main stand at the north end of the ground and the other at the south end adjacent to the SABC complex entrance in Old Fort Road. In addition, the Private Boxes will be extended along the back of the grass terraces towards the scoreboard thus encircling the ground. Kiosks, toilets and other facilities will be accommodated under these boxes.

After lengthy negotiations between the Durban City Council and the governing bodies of cricket in Durban and Natal, the historic old ground Kingsmead was, in 1980 finally secured as the "home" for cricket in Natal until at least the year 2010.

At the same time as the lease for Kingsmead was being renewed the City Council made it known that a portion of the Kingsmead ground leased site would have to be expropriated to make way for extensive road widening along the NMR Road frontage resulting in the main access to the ground and also much of the ancillary accommodation having to

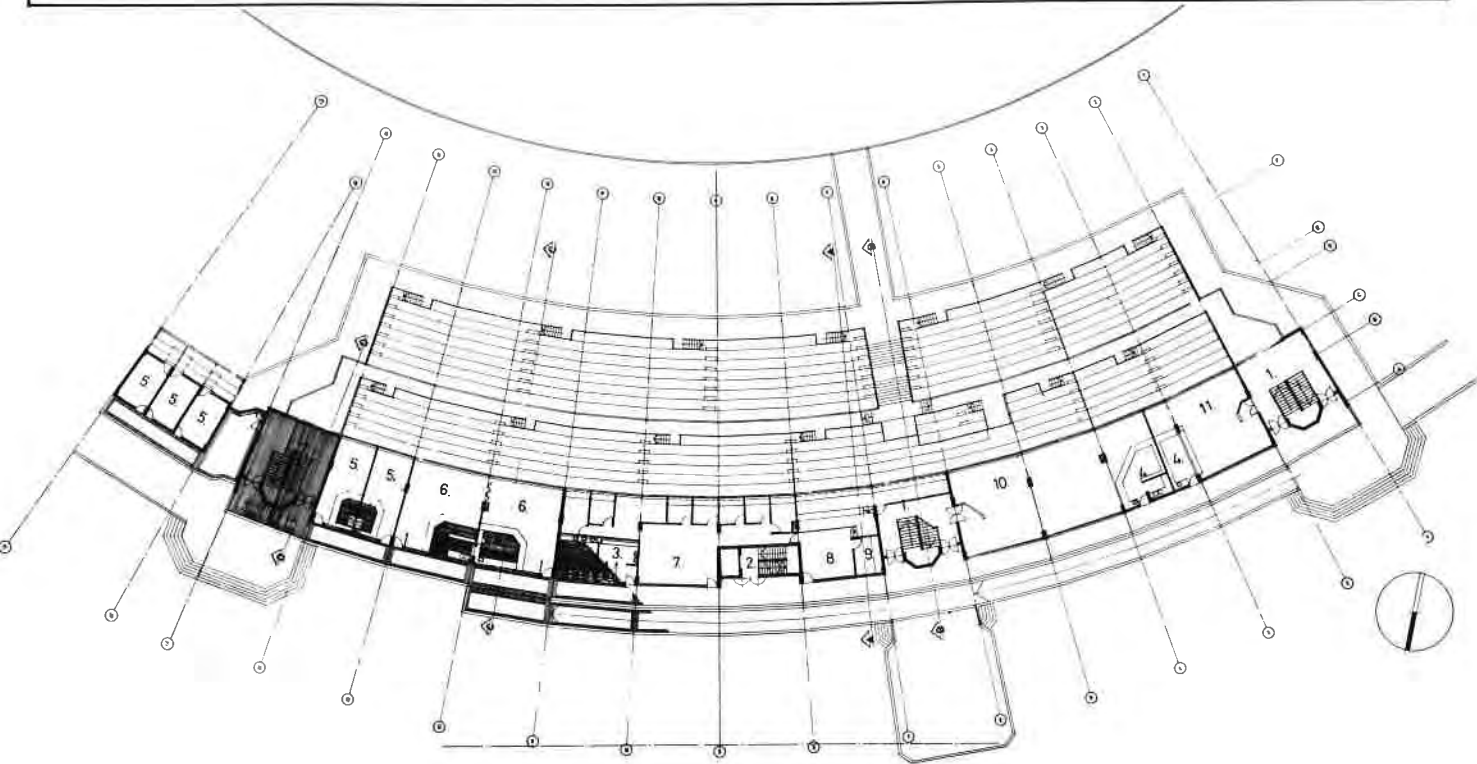
be demolished. This accommodation includes players' change rooms and ablutions, kitchen and dining rooms in the main block as well as the two most popular bars, entrance turnstiles and toilet blocks.

More importantly with NMR Avenue being upgraded to a major access road and the City Council's insistence of no direct access being allowed off this major road, the whole emphasis and direction of development would have to change. Furthermore, with the old grandstand being retained, the logical area of development would have to move to the



# KINGSMEAD CRICKET STADIUM

## McLAREN ALCOCK BEDFORD + PARTNERS



PLAN

### KEY TO ROOMS

1. Foyer
2. Service Access
3. Public Ablutions
4. Bars
5. Private Boxes
6. Members' Function Rooms
7. Radio/TV Area
8. Press Area
9. Telex
10. Official Function Room
11. Mynahs Club Room

### SEATING CAPACITY

Public	- 740 seats
Members	- 350 seats
V.I.P./Officials	- 180 seats
Mynahs	- 280 seats
Players	- 25 seats
Total	- 1,575 seats

SOUTH ELEVATION OFFERING SPECTATORS A "DOWN THE WICKET" VIEW

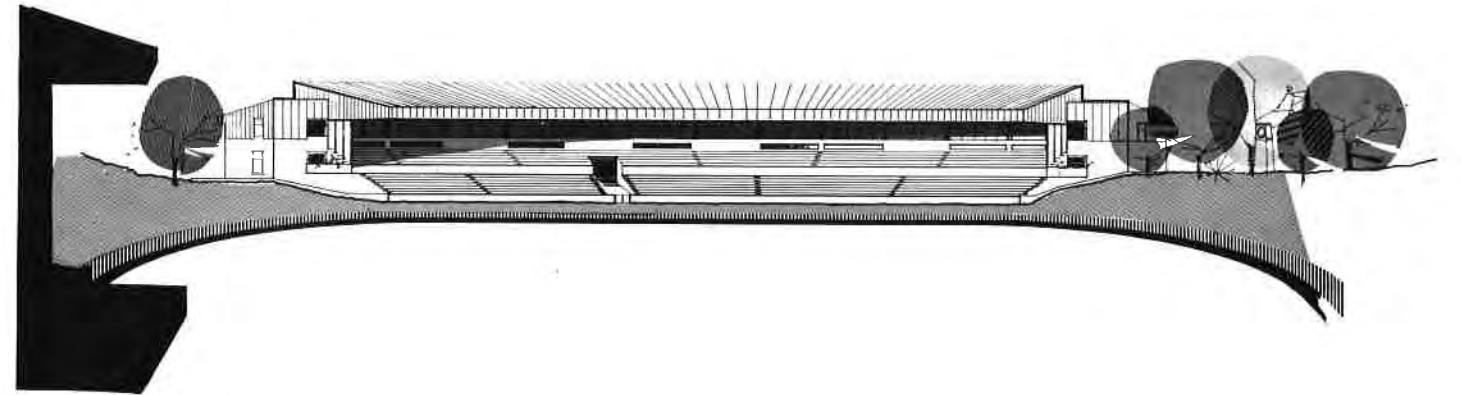


# KINGSMEAD CRICKET STADIUM

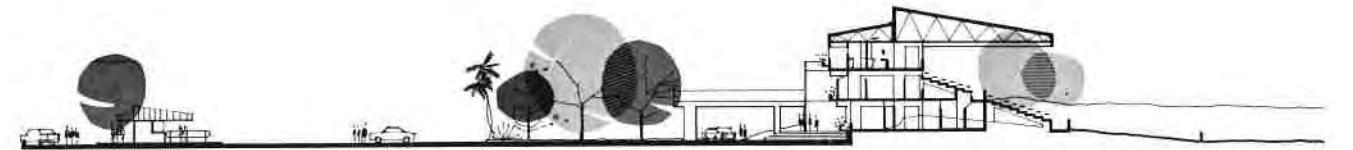
## McLAREN ALCOCK BEDFORD + PARTNERS



NORTH ELEVATION



SOUTH ELEVATION



SECTION

ARTICULATION OF THE NORTHERN ELEVATION BY MEANS OF THE RAMP AND THE PORTE COCHÈRE.





# EXTENSIONS TO KINGS PARK RUGBY STADIUM – DURBAN

## MLH AND HAMLIN

### BACKGROUND

Kings Park Stadium is known internationally as being an intimate stadium because of the close proximity of players and spectators. The clear circulation system and an assured seat position provides spectator security and comfort. The outlying rugby fields provide parking for 2 000 cars and facilitate the informal post-match gatherings which have become part of the character of Kings Park.

The existing structures comprise a covered grandstand along the western touchline with lower and upper open seating on the other three sides, forming a bowl but with two corners still incomplete. The total capacity of 26 000 bookable seats was increased from time to time to 33 000 with temporary seating in the incomplete corners.

### BRIEF

To present a master plan for future development to maximum potential. To plan the phased implementation of this development.

Phase one to include –

Increasing the capacity to 45 000. Incorporation of private suites and increased capacity of season ticket

holders.

Provision of grandstand including improved conditions for rugby administrators, and better facilities for players and spectators.

### PHASE 1

The seating area of the existing grandstand is retained and extended in length to form the lower terrace with two floors of private suites between this and the upper terrace. Within the structure that supports the upper terrace are the six levels of accommodation as follows:

**Ground floor** – Players' and referees' facilities.

**1st floor** – Spectator access to lower terrace and attendant amenities.

**2nd floor** – Natal Rugby Union administration centre.

**3rd & 4th floors** – Private suites and media centre.

**5th floor** – Spectator access to upper terrace and attendant amenities (Refer fig. 3).

Vertical circulation is by means of spiral ramps at both ends of the grandstand which give access to the various spectator levels (Refer fig. 2). The arched frame structure is designed at six metre centres.

As a result the 84 private suites accommodating 1 720 people have a three metre frontage. The suites are handed over in a "shell" form for final interior design and layout to be completed by the suite holder (Refer fig. 4).

The privacy of the suites is enhanced by the architectural treatment as a deep recess between the upper and lower terraces. Seat colours have been carefully selected to complement this.

### FULL DEVELOPMENT

The full development proposal features the following:

Capacity increased to 50 000 by the enclosure of the two open corners.

Construction of an additional 110 private suites in the space between the embankment seating and the open upper terrace on the remaining three sides.

Access to the upper terrace is provided by a newly constructed circulation level above these private suites.

The extension of the grandstand roof over the enclosed corners, sweeping down to the level of the open terrace, and creating the impression of a completed bowl (Refer to fig. 1).

fig. 1 PERSPECTIVE OF FINAL DEVELOPMENT.



# EXTENSIONS TO KINGS PARK RUGBY STADIUM – DURBAN

## MLH AND HAMLIN

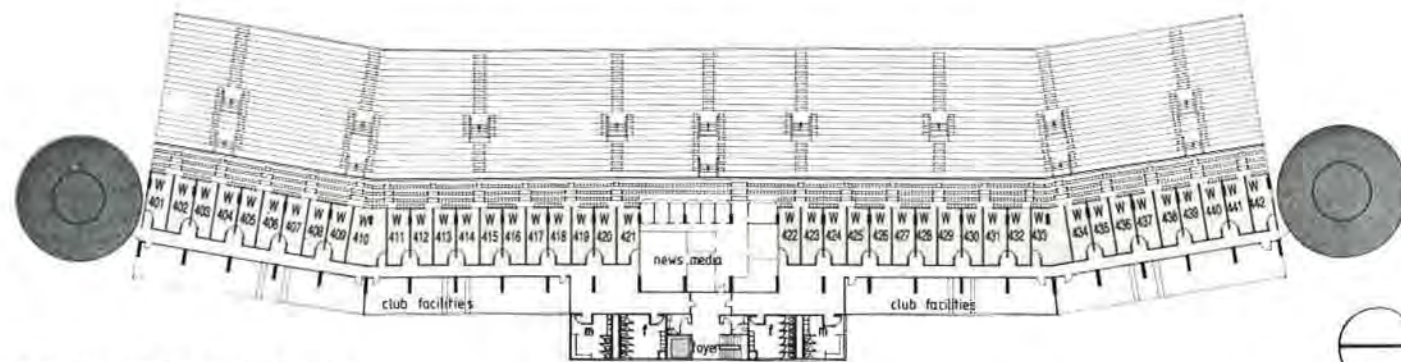


fig. 2 3RD FLOOR OF GRANDSTAND

1. LIFTS.  
2. RAMPS.

3. CLOAKROOMS.  
4. PRIVATE SUITES.

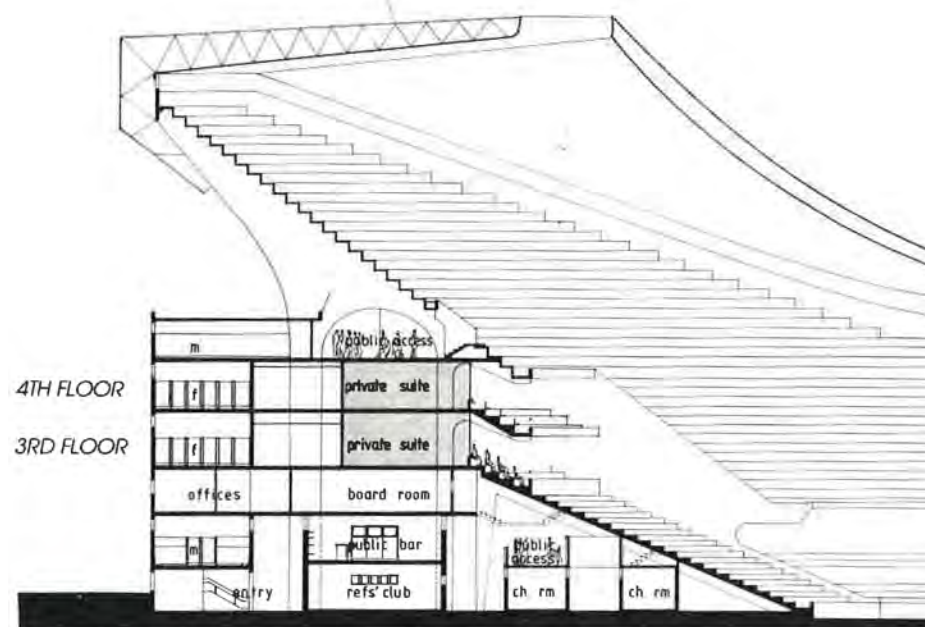


fig. 3 CROSS SECTION OF GRANDSTAND

FIRST PHASE OF THE STADIUM EXTENSION.  
VIEW FROM SOUTH.

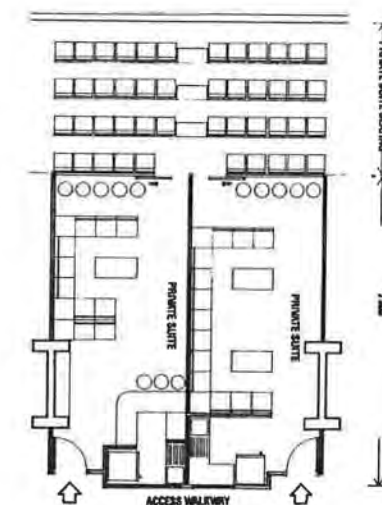


fig. 4 EXAMPLE OF PRIVATE SUITE.

NORTHERN SPIRAL RAMP OF STADIUM.





# DURBAN'S WATER WONDERLAND JOHNSON MURRAY ARCHITECTS

The Water Park phenomenon has developed in the United States into a multi-million dollar industry accounting for 30% of the "leisure dollar". The concept derives from man's affinity for water, playing, relaxing, exercising and having fun in the element from which he emerged millions of years ago.

The basic ingredients of all water parks are the various water slides that vary in layout and speed from curving 150m long flumes to 50 degree straight drop "Kamikazi" that leave your heart in your mouth as you momentarily leave the surface in free fall. In addition supplementary activities like water cannons, inflated tube rides, suspended nets, cable rides, soft play areas and virtually anything one can imagine being done in water is found in water parks.

Early in 1983 the City of Durban called for design, construct and lease tenders for the development of a water theme park on a 3,2 Ha site opposite the northern beaches. The brief, prepared by the Beach and City Planning Group, was specific in its requirements that the successful design would have to provide a facility that would be in keeping with the indigenous environment of the Natal coast.

Contemporary American water parks have taken the approach of creating steel towers off which the various slides are suspended. These towers although visually exciting and appropriate to a Texan landscape would have conflicted with the requirements of the brief. Our design concept was to develop a 15 metre high artificial coastal dune off which the various rides and slides occur and beneath which all the service areas could be located leaving the park completely free of buildings, enhancing the idea of the park as a fantasy world concealed behind an undulating grassed ridge of land.

Our client, Nick Steyn, with his vast knowledge and experience of amusement parks world-wide was an invaluable guiding force to us as architects coming to grips with a totally new set of design problems in planning and detail design. One of the most taxing design problems was to create the artificial dune. Bob Tobbell, the consulting engineer, evolved the system of a primary structural steel lattice grid supporting an intermediate network of secondary steelwork forming the undulating interface that supports the external skin made up of plywood and "gunite", shaped to simulate natural earth forms. Over this, a spaghetti-tangle of convoluted rides had to be

supported in such a way so as to provide a regular gradient with exciting turns and switchbacks fitted together from standard slide components.

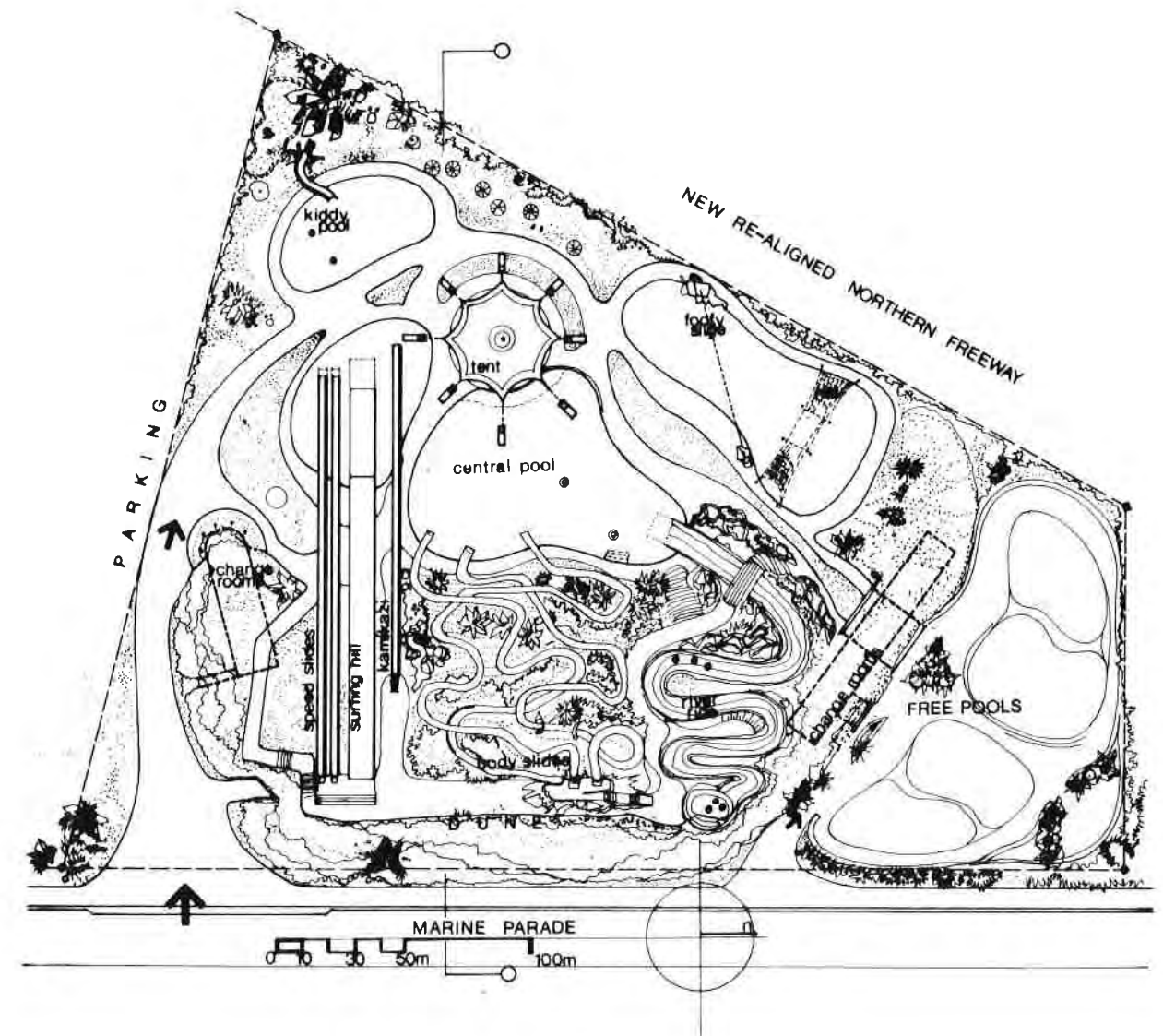
The river ride presented a different set of problems related to fluid dynamics, surface formation and the strange things that water does when it is moving. It was impossible to design accurately on paper and insufficient time to prepare a scale working model so Nick decided to build a full scale model and hope it worked with a minimum of alterations once the water was actually flowing. The result was successful and has proved a popular ride at a slower pace than the other rides allowing one to interact with other people and to imagine one is bobbing down a mountain stream in an inflated tube.

Water Wonderland has proved immensely popular during the summer season attracting 3 500 people on peak days. The common denominator of all the rides is the simple nature of the basic concept involved, activities that children have developed over the centuries like sliding down a bank or bobbing down a river. We found it possible to heighten some natural experiences, not possible to match others and in the process discovered just how difficult it is to try to come anywhere near simulating what nature does so effortlessly.

OVERLOOKING THE KIDDY POOL, LOOKING BACK TOWARDS THE MAIN HILL WITH THE VARIOUS SLIDES ON IT.

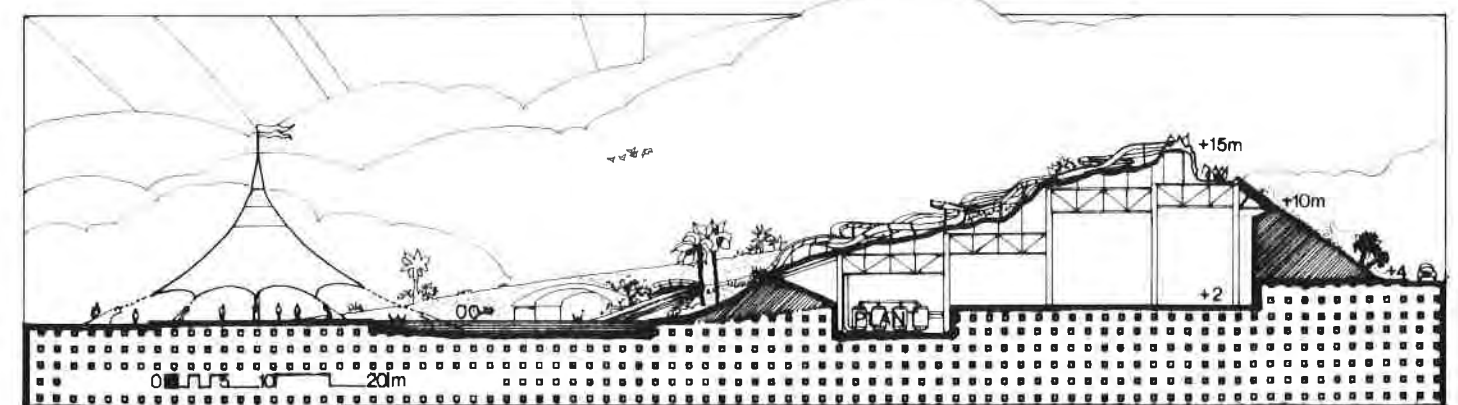


# DURBAN'S WATER WONDERLAND JOHNSON MURRAY ARCHITECTS



PLAN

CROSS SECTION





# COMPETITION AND AWARDS NEWS

## ARCHITECTURAL DESIGN COMPETITION "THE FEEL OF DURBAN"

Myles, Pugh, Sherlock,  
Jarvis  
First prize: R1 000



Winners of the competition organised jointly by the promoters of the Durban Expo Association and the NPIA have been announced.

First prize went to Messrs Myles, Pugh, Sherlock, Jarvis, second prize to Messrs Paton Taylor Associates Incorporated, and third prize to A Skordis Associates.

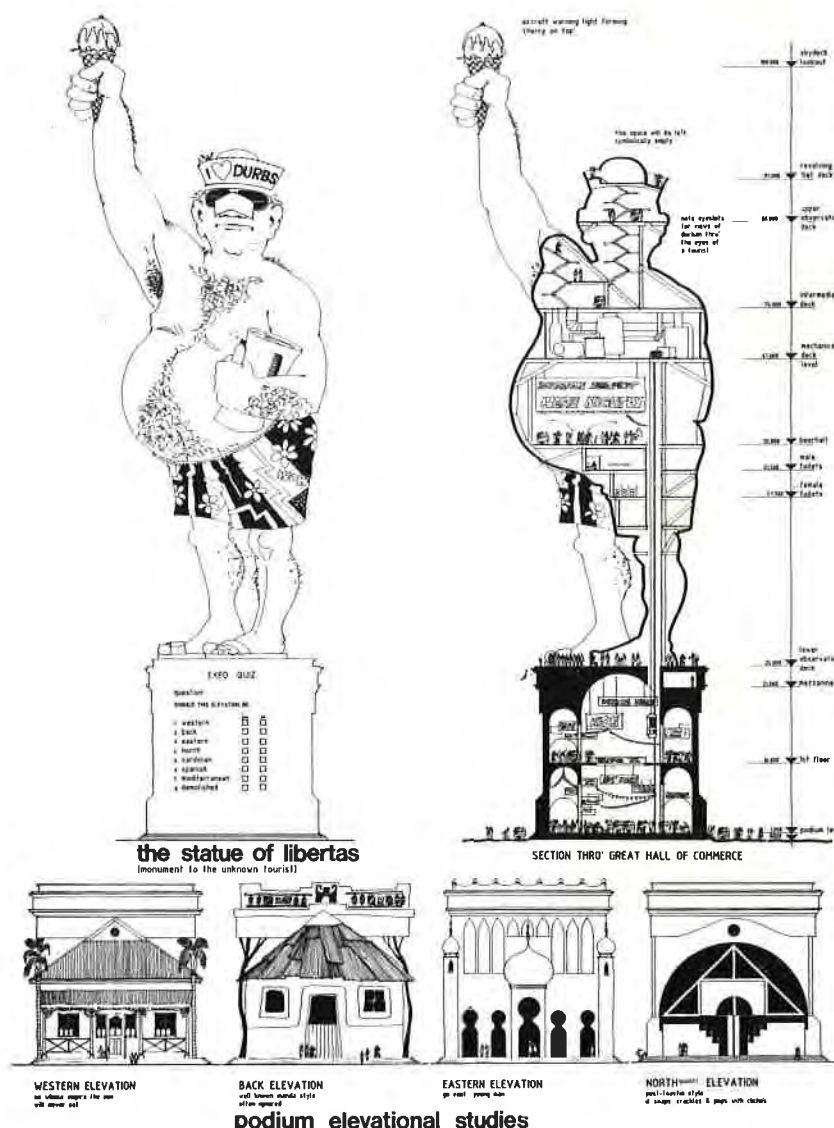
Extracts from the report of the winning team follow:  
*Our design for a pavilion expressing "A feel of Durban in an exciting spatial experience expressing movement" takes the sea as it's point of departure and freezes for a moment in time the experience of "Riding a Tube" complete with the dangers of a "Wipe Out" to be enjoyed vicariously much as football fans enjoy football.*

*We see the structure as an element swelling out of the paved forecourt rather than a building sitting on the ground and competing with the existing historic structures in scale, detail, etc.*

*We envisage the use of modern media communication techniques, video and sound, and ideally elements of user participation. More traditional forms of display, graphics, models and photographs would be arranged along the walls of the tube while a continuous automatic light show using synchronised slide projectors and sound track would project through 180° onto the curved walls provided.*

*Simple modular tubular steel "ladders" bolted to central tubular arched support members would form the basic structure. This would be prefabricated and erected on minimal in-situ concrete pad foundations with the earth beams buttressing and stabilising against uplift. This arrangement allows for quick erection and easy dismantling. Cladding would be in standard Brownbult metal section roofing used inverted to provide a smooth curved plane surface, as desired. Finish would be in sprayed duco to provide graded tonal change in colour across the "wave".*

Submission by Ian  
Poole (now "down under").



podium elevational studies

Submission by Ian Poole (now "down under"). THE FEEL OF DURBAN EXPO 85

# NEWS & CHANGES

## COMPUTER GROUP

The Computer Applications Group (C.A.G.) is nearing the end of its first year of active existence, and it seems appropriate to look back at what has been achieved during this period.

Our first objective was the formulation of a list of the architectural practices in Natal that are computer users.

We are hoping that the list will encourage interaction amongst users, and will also prove useful to those practices who are about to embark on the computer journey - providing them with a reference to users of the systems that they may be considering. Members must please note that we have set the list up as a flexible database, so anyone requiring a specific combination of data can have this abstracted. Please apply through the N.P.I.A. Secretariat or directly to Robert Platt. Our list is the only one of its kind in the country, although there are ambitious plans for a similar list on a national basis in the future.

We also identified a need for workshops on specific aspects of computer usage, and to this end we organised:

1. a lecture by Peter Bold, acknowledged expert on most aspects of computers in the architectural practice - this was a general introduction to the process of becoming computerised, and followed themes he had identified in similar lectures at mid-career courses.
2. a workshop on various areas of concern in the use of computers - this was held at Maurice Dibb's office, and was well attended. The discussion concentrated on such topics as:

*Maintenance (the problems of 'support')*  
*Profit (is CAD profitable?)*  
*Cost-effectiveness*  
*Staff loyalty and training*

We had input from practitioners, from quantity surveyors, and from dealers in an informal discussion that highlighted the concern users have about these issues.

The consensus at the end was that such workshops were necessary, interesting, and educational, both for the user and non-user. 3. a workshop on aspects of computerised office management - this was held at the university. The emphasis here was on a comparison between different approaches to the introduction of management software, as experienced by different practices. We had input by 4 practitioners, each of whom had a different approach:

Piet Bakker demonstrated the power of the dedicated word processor in developing applications such as scheduling and standard letters, for ease of manipulation and accuracy of output.

Mike Hartley showed how commercially available software can be made to meet the demands of a specific user-type by demonstrating his adaption of the popular Visicalc package for producing certificates. Dick Peitman showed how a little knowledge of programming can be of substantial assistance in allowing the development of software that is uniquely suited to a particular application.

Wolf Scherer demonstrated the other end of the scale - the software package that is developed by an expert programmer, in this case providing in one package a series of

modules that are capable of handling every aspect of his practice management.

This workshop was of obvious value, although time unfortunately limited audience input. As with our first workshop this demonstrated that there are many issues that need to be addressed, both by users and by this Committee.

The first meeting of the newly founded National Computer Committee (N.C.C.) was recently held in Johannesburg. Our Committee is represented on the N.C.C. by the Chairman. Members will be interested to note that the N.C.C. intends publishing a series of Practice Notes on computers, including topics such as:

*Getting started - becoming computerised*  
*Legal aspects of computer applications (management & CAD)*

Our plans for the near future include: more workshops - on CAD and management applications (looking at specifics, but also at general concepts); publication of general information of interest to users and potential users, through the medium of this Journal, and through the occasional mailshot; and anything else that anyone reading this article might like us to do in the field of computers and their application in practice. Your ideas and contributions are welcomed - in fact they are essential.

Members of the C.A.G. Committee are: Robert Platt (Chairman), Paul Batho, Keith Breetzke, Geoff Carter-Brown, Ivor Daniel, Colin Dibb, Andrew Ogilvie, and Oliver Tennant.

## PRACTICE CHANGES

### CHANGES IN ADDRESSES

Mr Keith Breetzke, 701a AA Mutual House, 447 Smith Street, Durban 4001.  
Mr M A N P Cretikos, 8 Sherborne Place, Durban North 4051.  
Mr P J Hunt, 7 Hillside Road, Hilton 3245.  
Mr H Ramadhin, 78 Julia Road, Overport, Durban 4091.  
Messrs W Scherer, K Moull and C A L Levick (Scherer, Moull and Levick) have notified a change of address to Butterworth Building, 3rd Floor, 8 Walter Place, Waterval Park, Mayville 4091.  
Mr L R Stretton to 25 Morrison Hodson Road, Glenwood 4001.  
Mr L Grove to 65 Trelawney Road, Pietermaritzburg 3201.  
Mr Vito Coppola to Suite 5 Galleria, 36 Overport Drive, Durban 4001.  
Mr W L Chiazzari (Chiazzari & Franklin) to P O Box 11186, Marine Parade 4056.  
Mr Raj Maharaj to Suite 9, 196 Chatsworth Main Road, Umhlatuzana Township, Durban.  
Mr Douw van Zyl to 207 Seventh Avenue, Morningside, Durban 4001.  
Mr P E Douglass to c/o Dept of Civil Engineering and Building, Natal Technikon, P O Box 953, Durban 4000.  
Mr D E Franklin to P O Box 11186, Marine Parade 4056.  
Mr B G Gibbon to Flat 104, 101 Victoria Embankment, Durban 4001.  
Mr D A Yeo (Ant) to 6 Medwood, 278 Vause Road, Durban 4001.  
Mr Brian O'Neill to 15 Mountain Rise, Carrington Heights, Durban 4001.

### CHANGES IN PRACTICES

Mr D C Smith advised that he has joined in a partnership with Mr R G King under the style

'Don Smith Architects' and their address is 91 Ninth Avenue, Durban 4001.

Mr E A Seirlis advised that he has resigned from the Myles, Pugh Partnership with effect from 28th February 1985 and will be practising on his own account under the style 'Manol Seirlis Architect'. His address is now 33-34 Union Main Centre, 45 Old Main Road, Pinetown 3610. He also advised that his wife, Mrs Joan MackKenzie Seirlis will be of the same address.

Mr T A Tennant ceased to be a partner in Meyer Pienaar and Partners from 31.5.85 and after winding up the Durban practice affairs, this office closed down. Mr Tennant's new address is c/o P O Box 838, Pietermaritzburg 3200.  
Mr J N Nieuwoudt is the architect in charge of the new office of Theunissen Jankowitz S A Ing, 16 Samgram House, 106 Marine Drive, Margate 4275.

Mr E V Hulse has closed his practice at 1 Radman Road, Margate 4275.

Mr B Jenkins became a partner in Mikula and Johnson Architects from March 1985.  
Mr R T Dobson and Mr R W Muller have entered into partnership with Messrs J A Frost and R A G Sommerville, practising under the style of Interarc in Durban (144 Clarence Road) and Empangeni (Mimosa Terrace, Turnbull Street). Both Mr Dobson and Mr Muller are practising from the Durban office.

Mrs P M Emmett has notified that as from 1 May 1985 she will be practising on her own account under the style of Patricia Barker Emmett - Architect at 23 Poynton Place, Berea, Durban 4001.

Mr P B D Jones has notified that as from 1 April 1985 he has closed his practice and is now employed with the Development Services Board in Pietermaritzburg. His new address is 48 Pat Newsom Road, Epworth, Pietermaritzburg 3201.

### CHANGE IN MEMBERSHIP

Mr J N Nieuwoudt transferred from OFS to NPI. His address is: P O Box 1301, Margate 4275. Tel: 03931-21345.  
Mr P N Culligan transferred from TPI to NPI. His address is: c/o Milner Gardens Hotel, 75 Marriott Road, Durban 4001.  
Mr M J R Hansen transferred from TPI to NPI. His address is: 10 Beacon Road, Hayfields, Pietermaritzburg 3201.  
Mr P J Cox transferred from TPI to NPI. His address is: P O Box 5048, Durban 4000. Tel: 3047014.  
Mr W J E Malfeyt transferred from NPI to TPI. His address is: P O Box 23544, Joubert Park 2044.  
Mr T G King from NPI to CPI.  
Mr L K Jooste from NPI to TPI.  
Mr A C Clennett from TPI to NPI - 157 Pietermaritz Street, Pietermaritzburg 3201.  
Mr P J Hunt from NPI to CPI.

### NEW MEMBERS

Mr M S Jhatam, P O Box 19002, Dormerton 4015. Tel: 293345.  
Miss J Smith, 4 Ainsdale, 687 Musgrave Road, Durban 4001.  
Architects in Training:  
Mr E V Plekker, 5 Tarlton Road, Manors, Pinetown 3600.  
Mr D A Yeo, 263 Clark Road, Glenwood, Durban 4001.  
Mrs A E Swift, P O Box 2, Muden 3501.

### RESIGNATIONS

Mr G M Krogsdadt  
Retired:  
Mr A K Sutton  
Mr D B Barbour  
Mr E E Jackson