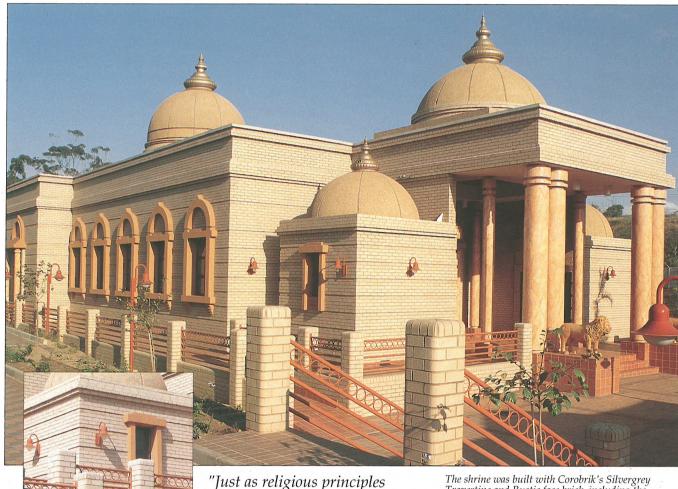
"A religious shrine demands enduring materials - and Corobrik met the specs in every respect!"

Ram Ramauthar, Rambros Construction, Main Contractor, Ramakrishna Centre, Glen Anil, Durban



shrine should be built to last from generation to generation. That

is one of the reasons why Corobrik products were specified for this project.

"We have always been able to rely on Corobrik's quality - not only the durability but also the tight size tolerance and excellent colour consistency of its face bricks. The face bricks specified here also offered a versatile choice of special shapes which have been used throughout the project.

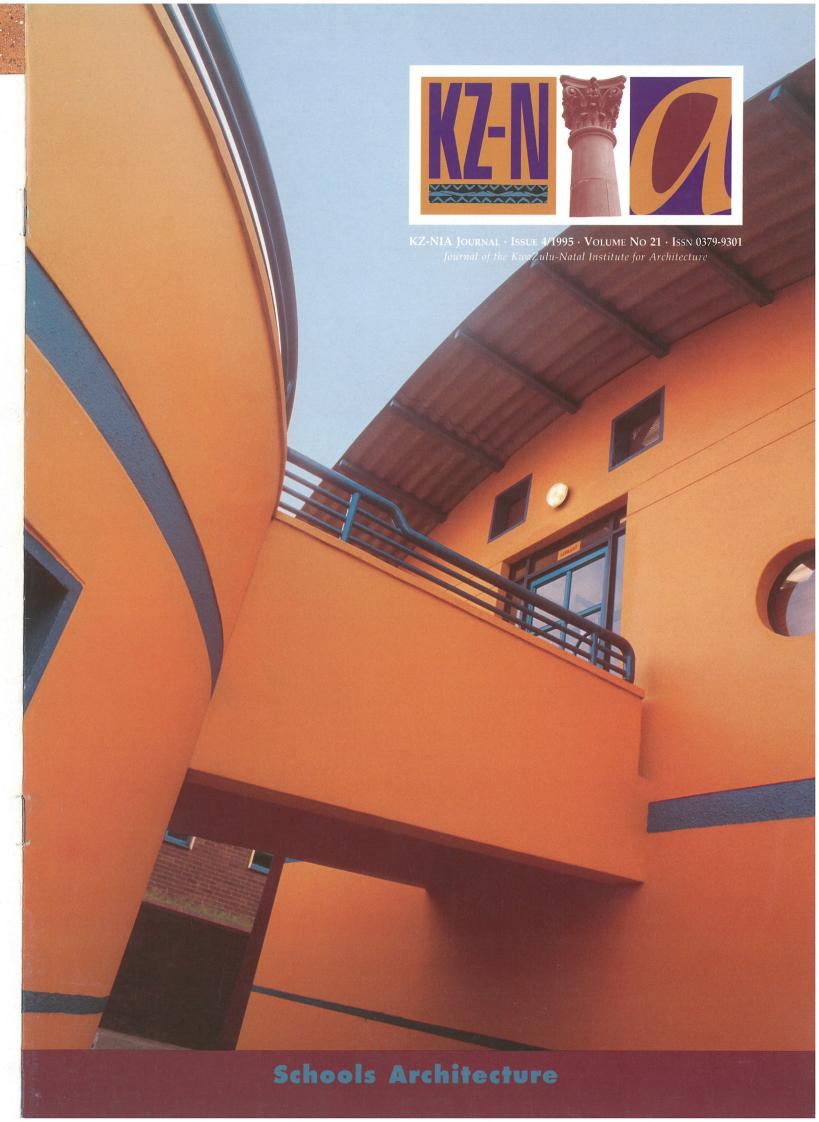
"And it is only to be expected that Corobrik's service matches its fine products. The company has been extremely obliging, with all the personnel involved going the extra distance to help make the project a success."

The shrine was built with Corobrik's Silvergrey Travertine and Rustic face brick, including the following specials: single and double bullnose on edge, plinth header, and solid face.



Rambros Construction contracts director Ram Ramauthar (left) and contracts manager Rakesh Pillay (centre) on site with Corobrik field sales representative Loga Manikam







KZ-NIA JOURNAL · ISSUE 4/1995 · VOL 21 · ISSN 0379-9301

Peters · Editorial Assistant Jessie Birss · Design Maria Criticos

Published by the KWAZULU-NATAL INSTITUTE FOR ARCHITECTURE 160 Bulwer Road, Glenwood, Durban 4001 · Telephone: (031) 21-7590 · Fax: (031) 21-7586



ABOVE: KZ-NIA Childrens' Greeting Card Competition Entry by Thomas Peters.

COVER: Stanger Primary School Library / Resources Centre. PHOTOGRAPH: Angie Buckland

PROFESSIONAL NEWS

African Entré

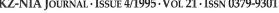
At the recent General Assembly of the African Union of Architects held in Nairobi, Kenya, 17-20 October, Brian Johnson, KZ-N Institute member and ISAA President was elected Vice-President of the Southern Region of the AUA for a three year period.

KZ-N Transitional Regional Committee

Consequent upon the Institute becoming voluntary from 1 July 1995, and as it would take some time before a new structure was formulated, the KZ-NIA Regional Committee believed it would be more expedient to postpone the re-election of a new Committee until the new structure was in operation and to form an interim Transitional Regional Committee. Accordingly, through the KZ-NIA Newsletter, members were informed of this proposal and also invited to offer themselves for nomination. Four new members were proposed, and there were no objections to the proposal. The committee then gave existing long-serving members the opportunity to resign and George Elphick, Peter McCaffery, Frank Emmett and Craig Page-Lee (Architect-in-Training member) indicated that they wished to do so.

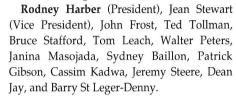
At the Annual General Meeting of the KwaZulu-Natal Institute for Architecture held on 30 October 1995, it was resolved that the fol-

Hierdie publikasie word geborg deur:



Editorial Board Brian Johnson (Chairman) · Sydney Baillon George Elphick · Frank Emmett · John Frost · Peter McCaffery Paul Sanders · Jean Stewart · Production Editor Prof Dr Walter

Transitional Regional Committee:



At a subsequent Committee meeting, Jean Stewart advised that due to her probable move to Cape Town it would be advisable that she tender her resignation. In her stead Janina Mosojada was elected Vice President, and she will take office in the new year. The Executive Committee comprises the immediate Past President, the President, and Vice President.

The Transitional Committee will hold office until July 1996 when the new national and regional Institute structure is scheduled to be

KZ-NIA Working Groups

The present committee structure is in the form of working groups as opposed to the appointment of sub-committees.

These groups report directly to the Transitional Regional Committee, are five in number and their portfolios and chairpersons are as set out hereunder.

Public Relations, Promotions and Marketing Group Chairpersons: Janina Masojada (031 815581), Jeremy Steere (031 3614460 or 813301) Architectural Environment and Heritage

Group Chairpersons: John Frost (031 239271). Walter Peters (031 2602714).

Professionalism and Functions

Group Chairpersons: Sydney Baillon (031 215631), Dean Jay (031 3031214).

Continuing Professional Development and

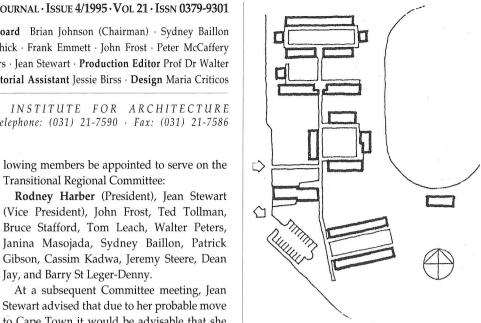
Group Chairpersons: Ted Tollman (031 215677), Cassim Kadwa (031 3060011).

Finances, Premises and Sponsorships

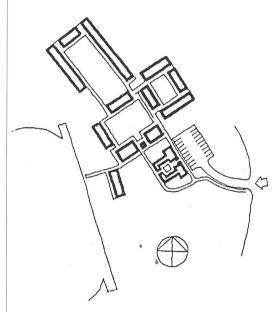
Group Chairperson: Patrick Gibson (031 3056764) assisted by the KZ-NIA Secretary, Sylvia Grobler (031 217590).

The formation of these groups is intended to involve as many members as possible outside those on the Transitional Regional Committee and by so doing, spread the work load and achieve a really ambitious programme for the KZ-NIA in 1996.

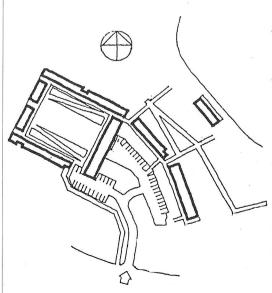
An appeal is therefore being made for members interested in joining any one or more of the groups, to contact one of the chairpersons



Greyville Primary School, Lenasia



"SS3" Secondary School, Lenasia



Savanna Park Secondary School,

KZ-NIA Journal 4/1995

Editorial

Schools Architecture

Schools Architecture of the former House of Delegates, Works Division, Education & **Culture Service**

This issue of the Journal is about schools, to be more precise, schools for Indian children. It is a very special privilege to be invited to make this contribution, because, as we shall see, the work described is the product of a large team of specialists. This included the architects, quantity surveyors, engineers and other technicians of the former House of Delegates. All of these worked closely with the officials of the Department of Education and Culture, together with over a hundred firms of consultants representing all the relevant professional disciplines. It was not an easy task to select a small handful of buildings from the hundreds of examples available. The result makes no claim to be comprehensive although the examples illustrate the wide variety of school buildings that were produced by the House of Delegates. All have been completed within the last three years, or are presently nearing completion.

I hope the sample may prove stimulating, even instructive, as they are indeed to their creators? No apologies are offered if some are considered controversial: this would indeed be healthy, but I do believe that all are enjoyed and are found workable by the teachers and pupils who use them. Although I have had great help from my colleagues I take full responsibility for the thoughts expressed here. It goes without saying that they do not necessarily reflect the views of the former Administration. Certainly the schools are relevant to the development of school design.

The Journal, being the organ of the architects of the province, must primarily concern itself with architectural matters. Thus my voice Is that of the architect and my subject the architecture of the schools, rather than their considerable educational interest and merit, without which they become meaningless ciphers. Owing to the lack of space this essential interaction can only be touched on

With our Country's first democratic election, and the consequent demise of the Tricameral System of government, Indian education, and the schools that served that system, reached a turning point. The very notion of "group" education has disappeared forever. It is still far too early to delineate the transition from schools designed to serve the old order, to those of

the new Province of KwaZulu-Natal.

One may wonder why at such a time, when all eyes are focussed on the future, and our efforts directed to unification and the establishment of a new infrastructure to serve the Province, that we should take time to look at the recent past of just one of its five former, or, in the jargon of the new, "relinquishing" education departments?

In the flurry of deciding who will do what, bound by what rules and regulations, and to what precise ends, it may do some good to be reminded of one recent success story. It is ironical that one of the manifestations of racially divided education was the fine crop of buildings produced for Indian education. These schools are now added to the general stock of fine educational buildings in the Province, schools which are there for all the children of KwaZulu-Natal.

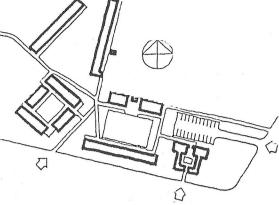
The schools illustrated in this edition are already part of the history of education building in South Africa. With the amalgamation of the five relinquishing departments, a process at the time of writing still in progress, was initiated. It has the purpose of agreeing common standards acceptable to all parties. This is being done by a series of committees and sub-committees which have collected all the relevant data, standard plans and other details in order to extract the essence of collaboration. It is an exciting process and the task ahead is enormous. But it is within our grasp to achieve it. It is hoped that another opportunity to report on the process may be available in a year or so. Michael Keath

Dr Michael Keath was born in London, educated at Michaelhouse and graduated in Architecture from the University of Natal. Returning to England, he worked for many years on schools in Hertfordshire, later becoming Principal Architect to the London Borough Harrow and completing his doctorate (PhD) at Thames Polytechnic. After six years at the CSIR in Pretoria, Dr Keath took up the appointment as Chief Architect for the Department of Education

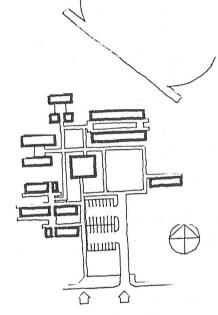
and Culture in the House



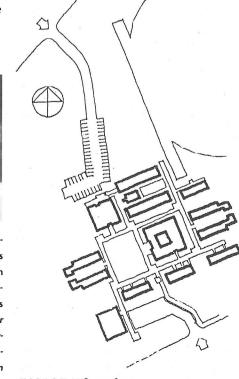
of Delegates Administration and currently heads the Education Sector in the KwaZulu-Natal Department of Works. He is the author of the book Sir Herbert Baker: Architecture & Idealism: 1892-1913. The South African



St Francis Primary School, Park



Brookdale Primary School, Phoenix



"SS19", Phoenix

Schools Architecture

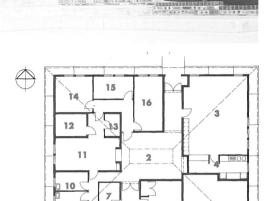
Brookdale Primary School, Phoenix

In 1986 the Education Department of the House of Delegates initiated a programme of research into user needs, standards and norms. The then National Building Research Institute of the CSIR (Council for Scientific and Industrial Research) was approached and a fruitful partnership began. After the basic research into all aspects of teaching spaces to be found in primary and secondary schools, the CSIR was commissioned to design what might best be described as Demonstration Projects for both a primary and a secondary school, in order to put the research findings into practical effect. The primary school was the proposed Brookdale school; the secondary school was known as "SS 19" and has yet to be named. In designing these projects the CSIR architects were concerned that the schools should not be regarded as prototypes for repeated use. Firstly, there was the need to assess the built schools after they had been in use for at least a year. Many of the ideas incorporated were of an experimental nature and, therefore, untried solutions which may need further refinement. It was hoped that the designs would provide new points of depar-

ture – standardising the problem rather than the solution. It was not practical for full architectural services to be provided by the CSIR, so the schemes were executed by private consultants. Both schemes were well interpreted by the firms concerned, who were responsible for detailing, the construction and supervising the contracts on site. Unfortunately the exercise was overshadowed by further exhortations to reduce the costs of school building by 30%. Nevertheless, much of the innovative thinking has been incorporated in the work that followed, and much has still to be taken up in some way or other.

At Brookdale the administration block is situated in the heart of the school, affording a supervisory view from the Principal and Deputy Principal's offices, whilst the staff room overlooks the assembly area. The Junior Primary accommodation has the most direct access from the pedestrian and vehicular approach for parental convenience. The specialist classrooms occupy the furthermost corner of the layout and overlook the playing field. A two-storey general teaching block, situated in the north-west corner of the group,

gives access to a second outdoor teaching-cumsocial seating area: by paving a space between blocks and adding some tiered seating which follows the natural fall on the site, this fortuitous addition to the brief was able to be made. This has turned out to be one of the most popular spaces in the school and has great potential for dramatics and other performances, as well as for relaxing in the sun. The plan is very compact and all parts are easily reached, obviating long walks for both teachers and pupils.



1. Parking

2. Junior Primary

3. Classrooms

4. Resources Centre 5. Classrooms

6. Specialist

Classrooms

7. Administration

8. Assembly Area 9. Changerooms

10. Sportsfield

11. Outdoor Teaching/ Social Space

12. Future Swimmina

Administration Block

1. Entrance

2. Visitors' Waiting

3. Staff Room 4. Tea Kitchen

5. Store

6. Stock

7. Photocopier Room 8. Male Toilets

9. Female Toilets

10. Sick Rooms

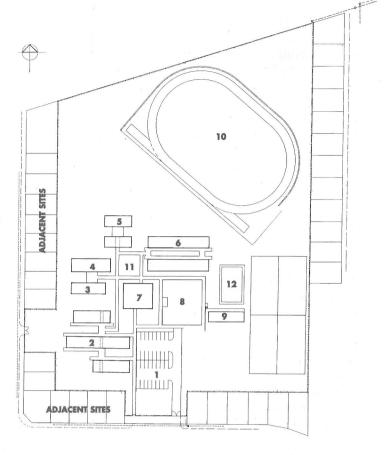
11. Secretary's Office

12. Strong Room 13. Stationery Store

14. Principal's Office

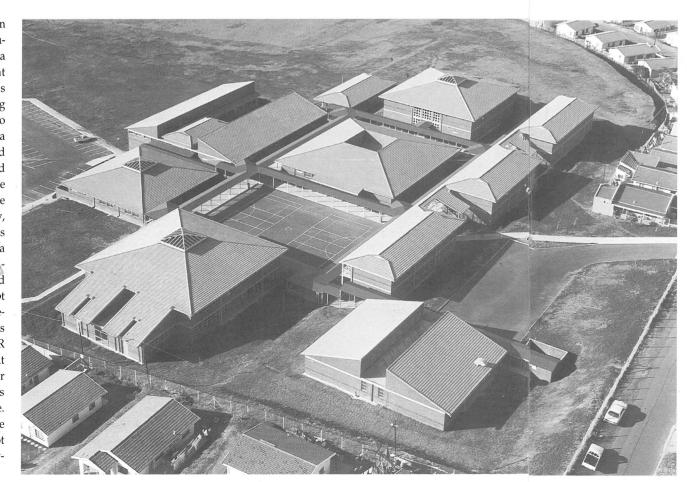
15. Deputy Principal's

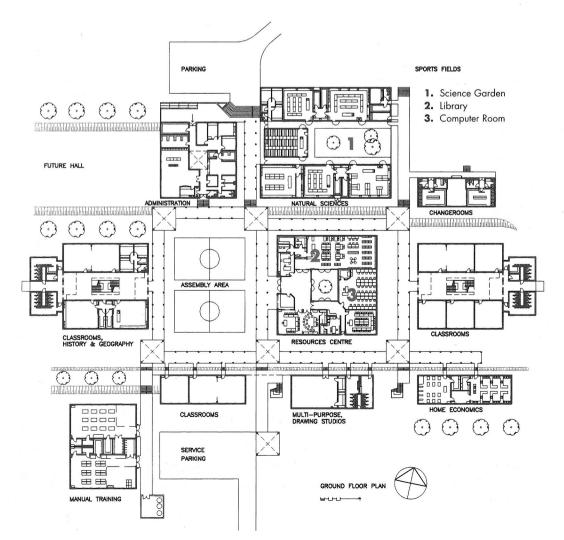
16. Committee Room



"SS 19", **Phoenix**

The secondary school has much in common with the primary school (Brookdale), particularly in the use of courtyard planning, with a more compact layout than before. As at Brookdale the admininistration section is planned around a covered "atrium", enabling the complex interrelationships of planning to be efficiently achieved, and giving the block a separate identity and focus. The library and computer accommodation have been grouped with general purpose rooms and the guidance unit into an atrium plan with its own entrance and focus at the heart of the school. Similarly, the science laboratories and associated rooms are planned around the science garden, again a block with its own identity. Thus the overriding theme is of courtyard blocks grouped around larger courts, a very different concept from the traditional "finger" planning of previous years. These two demonstration projects contained much fresh thinking from the CSIR and were built well within all the current norms. Unfortunately, the demands of further cost reduction make some of its precepts impossible to replicate in the present climate. They remain valid goals however, and the challenge should be constantly to find not cheaper objectives but cheaper ways of achieving the best possible objectives.





Schools Architecture

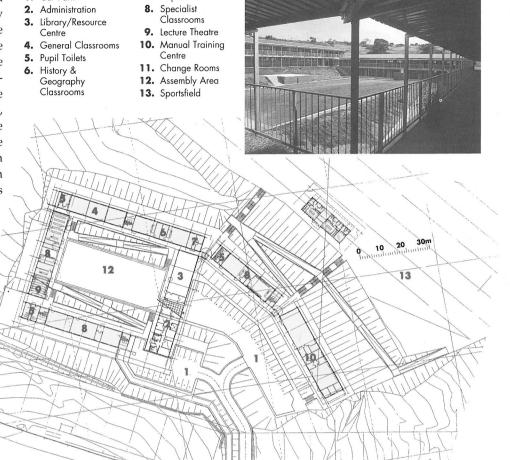
Savanna Park Secondary School, Pinetown

7. Departmental Heads

1. Car Park

Savanna Park is most remarkable for being a large, barrier-free building of varying storey height - virtually all parts of the school can be reached by wheel-chair users. This is despite the fact that some parts of the school are three stories in height. Although this was not a specific part of the brief the objective was in line with the trend towards single-storey design, wherever this could be made possible by the topography of the site. At Savanna Park the single-storey ideal had to be abandoned in favour of a more compact multi-level solution on a very steep fall. By means of an ingenious system of ramps, a striking and highly functional design was economically achieved.

The bulk of the teaching accommodation is concentrated around a large open courtyard containing the assembly area. All but four classrooms are accessible by means of the ramps, which lend a dynamic note to the three-dimensional spaces within the layout. In accordance with the need to reduce costs, the same principles of construction as were employed at Glenhills Primary School, Stanger, have been used. These include singleskin brick walls, ceilings reduced in height to 2.4m, reduced eaves overhangs, simplified covered accessways, and a highly compact



"SS3" Secondary School, Lenasia

This secondary school was designed "in house" in order to test the briefing process and to experiment with some alternatives. Because of the distance from Durban, site supervision was carried out by a firm of Johannesburg architects. Here compact planning on a very restricted site was the main design challenge. Again a distinctive identity has been achieved, although on a very much reduced budget.

- 1. Car Park
- 2. Administration
- 3. Classrooms
- 4. Music & Practice 12. Cleaners' Rooms Rooms
- 13. Manual Training 5. Assembly Area
 - 14. Library/Resource

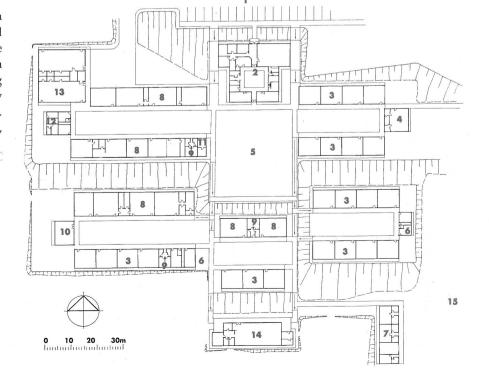
9. Departmental Heads

10. Lecture Room

11. Tuck Shop

- 7. Change Rooms & Stores 15. Sportsfield
- 8. Specialist Classrooms

6. Pupil Toilets



Schools Architecture

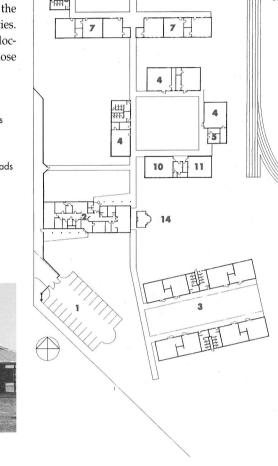
Greyville Primary School, Lenasia

The Tricameral System required the provision of schools for Indian children wherever Indian communities existed. Thus the House of Delegates Education Department was the purvevor of education and school buildings beyond the borders of KwaZulu-Natal. An example of one such school is the recently completed Grevville School in Lenasia, near Pretoria. Designed by Johannesburg architects it replaced, in stages, one of the earliest complexes of prefabricated school buildings in Lenasia, lightweight structures that were beyond reasonable repair and rehabilitation.

The new school illustrates well how charm and architectural grace can be created at minimal extra cost. Although it makes no innovations in school planning, its layout is intelligent and distinctly workable. Above all, the school has a bright, cheery atmosphere and eschews the label of "House of Delegates" many of the earlier schools failed to avoid. Apart from the very individualistic use of Winbloks (the ubiquitous "architects friend"!), the details are thoroughly thought out and set a standard of their

own - much is worth imitating. As we assemble the standard plans, without which current requirements will be difficult, if not impossible, to meet, we might do well to examine this school as an example of how a little imagination can go a long way. Although not a KwaZulu-Natal school, the Greyville School at Lenasia belongs to the family of schools the House of Delegates gave to its communities. Greyville was subject to the same briefing, documentation and supervision routines as those nearer home.

- 1. Car Park
- 2. Administration
- 3. Junior Primary 4. Specialist
- 5. Tuck Shop
- 6. Pupil Toilets
- 7. Remedial
- 8. General Classrooms
- 9. Adaptation Classroom
- 10. Library/Resources Centre 11. General Purpose
- Classroom
- 12. Departmental Heads 13. Sportsfield 14. Assembly Area

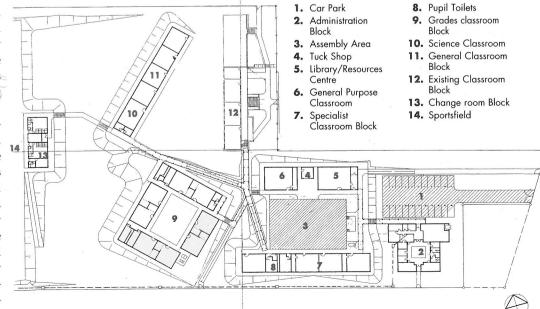


8 12

St Francis Primary School, Park Rynie

This school was for many years housed on the Portiuncula Convent site and incorporates the original two-storey teaching block in the new layout. The scheme consists of single-storey blocks linked by ramped covered ways giving access to all parts of the new school.

A further development of administration block design, now planned around an open courtyard, has been used here as it has at several other schools in this programme. The St Francis school, and the Glenhills Primary School, Stanger, are similarly constructed in many respects but illustrate how the same basic components of a primary school can be arranged so as to impart a totally different character to each. The secondary school counterpart of these primary schools is Savanna Park.

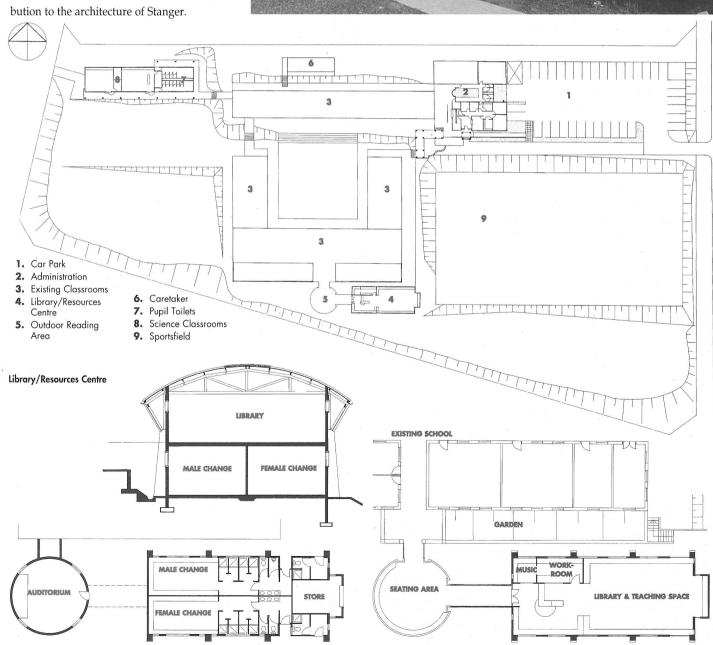


Schools Architecture

Primary School, Stanger

This school illustrates a very different approach to design, although conforming to the same educational requirements as the other schools discussed. Here the fun aspect of being a schoolchild in the new South Africa has been given a slightly freer rein. The building forms are experimental in handling the functional aspect of the three blocks which have been added to the existing school, and are colourful and exuberant in their execution. The older buildings and the new blocks have been united in a colour scheme which was stunning at first but has come to be loved for its sense of identity. The architects concerned have used much skill in designing and constructing this project. Despite the unique and delightful character of the Stanger school, and the obvious difficulties in replicating its elements, the design approach is far from frivolous and makes a fine contri-





Schools Architecture

Berg Street Primary School, Pietermaritzburg

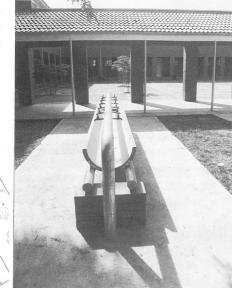
Berg Street School is significant for being an increasingly rare type: a centre city, or urban, school. The original, relatively small red brick building was built in the 1930s as the Pietermaritzburg Indian Girls' High School. In 1990 the High School was due to close because of movement of population away from the inner city: what had been a residential area had become almost exclusively a trading area.

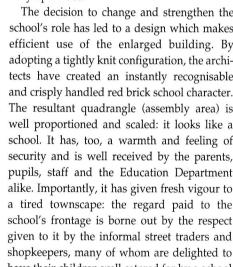
By incorporating pupils from three other primary schools close by, which were to be closed for similar reasons, a larger but different school population has been admirably served. What was a girls' high school of a few hundred pupils has become a large co-educational primary school of twelve hundred pupils. Situated in the northern section of the city grid, the school plays a role in a system of open spaces which the present project has reinforced. As distinct from the three primary schools to be closed, Berg Street alone provided an adequate site, which the architects have fully optimised.

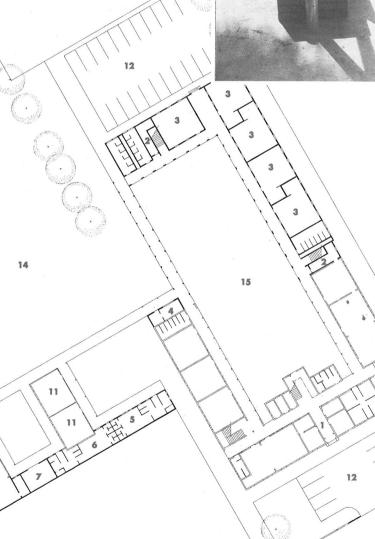
The decision to change and strengthen the school's role has led to a design which makes efficient use of the enlarged building. By adopting a tightly knit configuration, the architects have created an instantly recognisable and crisply handled red brick school character. The resultant quadrangle (assembly area) is well proportioned and scaled: it looks like a school. It has, too, a warmth and feeling of security and is well received by the parents, pupils, staff and the Education Department alike. Importantly, it has given fresh vigour to a tired townscape: the regard paid to the school's frontage is borne out by the respect given to it by the informal street traders and shopkeepers, many of whom are delighted to have their children well catered for by a school

near their places of work.

The cost of the additional accommodation was increased by reroofing the original building and expert refurbishment, especially the sophisticated, linked, projecting top-hung windows. This was achieved through the contractor's special skills and interest.











- 1. Existing Block
- 2. Cleaners' Store
- 3. Junior Classroom
- 4. Tuck Shop
- 5. Boys' Change Room
- 6. Girls' Change Room 7. Games Equipment
- 8. Caretaker's Store
- 9. Caretaker's Room
- 10. Multipurpose Room 11. Existing Classrooms
- 12. Car Park
- 13. Tennis Courts 14. Sports Field
- 15. Assembly Area

Cultural & Documentation Centre, Greyville

It is to be hoped that in our new society there will always be a place for buildings and organisations which cater for the special cultural needs of particular communities. These should not be seen to be perpetuating apartheid but more as celebrating the contributions made to our country by such groups or communities.

The Indian Cultural and Documentation Centre, situated on a triangular site bounded by Epsom Road, Dartnell Crescent and Derby Street, is just such a place. It is housed in a converted former school which has a strong affinity to the architecture of Sir Herbert Baker. The original school was designed in 1913 under Piercy Eagle, Chief Architect of the Public Works Department, to accommodate 325 white girls. Access was originally from Epsom Road but has long since been discontinued in favour of the less traffic-congested Derby Street.

The work of conversion and restoration was undertaken by the Department. A master plan for the future development of the site was prepared and included a multi-purpose hall for the performing arts, a restaurant, as well as various craft shops and display spaces. The new entrance to the building is from a circular paved square, in itself a place in which to congregate away from the swirling traffic surrounding the site. To reach the existing higher floor level, a gentle ramp with a brick balustrade wall topped with a bold red circular handrail has been introduced, terminating at the arched entrance doors. The entrance doors and the surrounding framework are also in red powder-coated aluminium.

A major problem was the security of the building and its irreplaceable contents. A lowkey mesh of burglar bars was inserted into the original accessway arcading. Particular attention was given to the point of arrival at the site where the guardhouse takes its inspiration from the turrets on the main building. It is hoped that the existing brick building (not shown on plan), which tends to obscure the clarity of the entrance, will in time be removed because of its inappropriate style and position on a site of such social and civic importance.

PHASE 1

- 1. Piazza
- 3. Reception

- 6. Curator's Office
- 7. Display Hall
- 8. General Office

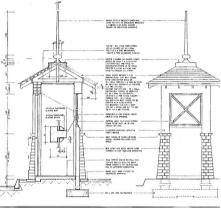
New on-site parking has been provided and this will be extended in accordance with the

Much thought was given to the colour schemes, both internally and externally. On the whole it was decided to use colours which harmonise with the style of the original building.

The character of the Cape Dutch Revival gables, and the overall composition of the orig-



of that time throughout South Africa.





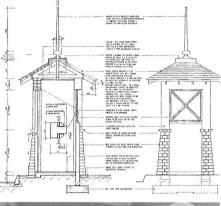
PHASE 2

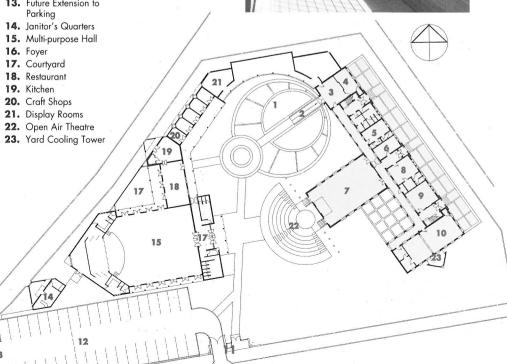
- 13. Future Extension to
- 14. Janitor's Quarters
- 15. Multi-purpose Hall
- 16. Foyer
- 18. Restaurant
- 19. Kitchen
- 20. Craft Shops
- 22. Open Air Theatre

- 2. Entrance Ramp
- 4. Conference
- 5. Administration

- 12. Parking
- 9. Restoration Room 10. Library Research 11. Guardhouse

inal main facade facing Epsom Road, make this perhaps the most Herbert Baker-inspired building in Durban, designed as it was soon after the completion of the Union Buildings in Pretoria, recalling the profound influence which Baker exerted on the public architecture



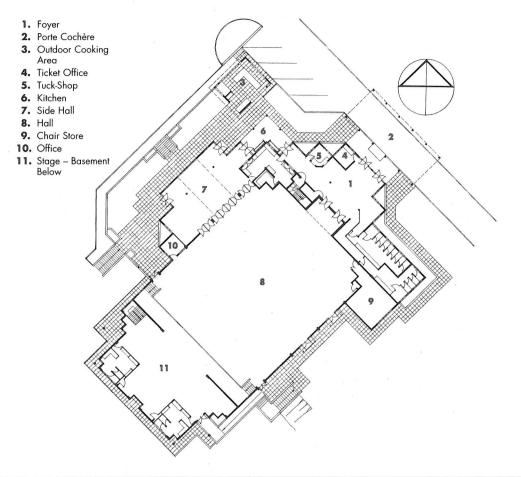


Schools Architecture

Regional School Hall Merebank

This hall was built to serve the community of Merebank as well as the needs of the nearby secondary school. The main auditorium is capable of seating 700 people, with more seating in the side hall, where meals can be served from a kitchen servery. A full stage has been provided and the accommodation includes public toilets, substage basement storage and a further basement hall. Set in a park-like landscaped area, the hall is orientated on a southeast/north-east axis in order to maximise the passive ventilation system. For reasons of economy it was decided at the outset not to provide an air conditioning system but to harness natural convection to ventilate the large volume of the hall.

An outside cooking area, roofed but open sided, is a popular feature, catering for large numbers of people attending weddings and other large group occasions. Cultural advice was sought in the selection of colour schemes. Traditional colours denoting peace and joy were incorporated in the overall treatment.



Professional Credits

The client for all the projects illustrated here was the former House of Delegates, Department of Education and Culture. The design teams concerned with these projects included the Departmental Architect Dr Michael Keath, the project architects Pat Culligan, Ken Froise, Max Walker, Roux Wildenboer and Charles Wilsenach; and the technicians Susan Hart, Gaby Menezes and Jan Smit. The Departmental Quantity Surveyor was Piet Venter, assisted by Roanne Du Preez, Pierre Henning and Kovi Gounden. The Departmental

Secondary School 3, Lenasia

Engineer was Guy Paton with Terry Powe.

Architects Departmental (Supervision by Winterbach Pretorius Quantity Surveyor Clarence De Wet & Partners

Structural & Civil Engineers May Houseman & Associates Mechanical & Electrical Engineers Du Toit, Lindeaue van der Berg

Contractor Radons Construction Date 1993-1995 Cost R6 000 000

Secondary School 19, Phoenix

Architects CSIR (Dr Michael Keath & Dieter Hoffrichter); BDG Architects Inc. in association with Seedat Architects Quantity Surveyor Watson & Thomson Structural & Civil Eng Steffen Robertson & Kirsten Mechanical & Electrical Engineers CA du Toit & Partners Contractor Rambros Building Services

Cost R6 500 000

Savanna Park Secondary School,

Pinetown Architects Stauch Vorster

Quantity Surveyor Buys & Pretorius Structural & Civil Engineers ZAI Incorporated Mechanical & Electrical Engineers CA du Toit & Partners Contractor Rambros Building Services

Date 1993-1995 Cost R5 700 000

Brookdale Primary School, Phoenix

Architects Studio 5 Architects (MA Gafoor Architect; GM Khan Architect; Kiran Lallo Architect) Quantity Surveyor Wiseman, Clothier, Lang, Binney &

Structural & Civil Engineers B S Bergman & Partners Contractor Gonal Design & Construction

Cost R3 500 000

Regional School Hall, Merebank

Architects Departmental (Project Architect C.Wilsenach) Quantity Surveyor Departmental Structural & Civil Engineers May Houseman & Associates Mechanical & Electrical Engineers M & E Design Associates

Contractor Rambros Building Services & Contractors cc Date 1993-1994 Cost R2 600 000

St Francis Primary School, Park Rynie

Architects Stauch Vorster Quantity Surveyor Schoombie Hartmann

Structural & Civil Engineers ZAI Incorporated Mechanical & Electrical Engineers Bosch & Associates Contractor Keary Construction

Date 1993-1995 Cost R3 200 000

Berg Street Primary School, **Pietermaritzburg**

Architect Ismail Cassimjee

Quantity Surveyor Vivier Joubert & Versfeld Structural & Civil Engineers Van Wyk & Louw

Mechanical & Electrical Engineer Charles Pein Associates Contractor Barras Construction (Pty) Ltd

Date 1990-1993 Cost R2 000 000

Stanger Primary School

Architects Elphick Proome Architects Quantity Surveyor Van Rensburg, Van Dyk & Partners

Structural & Civil Engineers Chirangain Kantle Associates Electrical & Mechanical Engineer Ferreira Wessels & Bishoff Contractors Alay's Construction

Date 1993

Cultural and Documentation Centre, Durban

Architects Departmental (Project Architect Ken Froise) Quantity Surveyor Bothma Johnstone Structural & Civil Engineers Madan Singh & Associates

Mechanical & Electrical Engineer BKS Incorporated Contractor R & B Projects

Date 1993-1995 Cost R1 200 000

Greyville Primary School, Lenasia

Architects PWP Architects & Designers Quantity Surveyor Bham Tayob & Khan

Structural & Civil Engineers PD Naidoo & Associates Mechanical & Electrical Engineers Leon van der Merwe

& Associates Contractor Formington Systems

Date 1993-1995 Cost R4 000 000