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LIBRARIES



Journal
of the Natal
Provincial
Institute of
Architects

2-1983

INPIA

NPIA Journal is distributed free of charge to all members of the Natal Provincial Institute of Architects and to all registered architectural practices in the Republic of South Africa. In addition copies are sent to public bodies, private corporations and certain members of the public as a means of increasing public awareness in contemporary architectural concerns in Natal. The Editor does not hold himself responsible for opinions expressed by contributors to this journal.

Cover: Pinetown Library. Photo by Skyline Studios.

Editorial

The present volume and diversity of new library building in Natal is the reason for devoting this issue to the theme of 'libraries'. It is a great pity that an embargo has been placed on the publication of the University of Natal's Malherbe Library on the Durban Campus. None of the other academic and community libraries is the subject of such difficult and controversial siting issues.

Up until the last century, the planning and design of libraries was a relatively simple architectural problem: an alcoved and galleried room with accommodation for bookracks, readers' lecterns, tables and carrels. Of course there were structural considerations, the contents to be safeguarded, and the need for some expansion and flexibility.

Today's libraries need no longer have the amplitude of the old, communications technology and resources having radically altered the need for large physical enclosures. A smaller library can give almost the same access via terminals as a large one, aids to information retrieval are likely to change the basic nature and function of libraries.

Community libraries have become active in luring people who would previously not have patronised them. Multi-functionality has become a requirement with lecture theatres, exhibition spaces etc. The term "library" is thus no longer amenable to precise definition – save that it is not a building but a service organization.

Competition is good

The Pinetown Public Library featured in this issue is the result of an open competition held in 1978. There was no paucity of competitors, seventy architects competed.

Our city councils and provincial authorities have not often applied this form of patronage. Competitions have distinct advantages, above all, they provide a method of selecting an architect on the basis of his *architectural skills* alone. Any suspicion of favouritism is done away with, competitions are therefore eminently suitable for commissions involving public moneys. If more work were awarded on this basis the effort by individual architects would be less wasteful, for, they would compete in only those competitions they chose to, in the belief of matching architect and project.

In Continental Europe competitions for projects of almost any size are the order of the day. This is unquestionably one of the prime reasons why the average standard of architectural design is so high. Qualitative choice is involved, and besides that, ranking entries provides an educative process for both architects and the public.

What's in a name?

Since its inception in 1976, the *NPIA Newsletter* has regularly featured articles on topical architectural and environmental concerns. News has played a relatively minor role and the term "Newsletter" has hardly been appropriate.

Consequently *NPIA* has been restyled as the *Journal of the Natal Provincial Institute of Architects*. Issues are thematic, there is an editorial policy, and comment is invited from members of our ranks. The aim of the journal is to serve its members and the *NPIA* believes it can do so best by not only illustrating current architectural interests and concerns, but if ours is to remain a learned profession, to review contributions critically.

A professional journal is not to be confused with an in-house magazine which is aimed primarily at camaraderie and public relations. The *NPIA Journal* is intended to meet a need which has long been felt in South African architectural circles.

Westville North Branch Library and Community Centre

INTERARC ARCHITECTS

Project Architect: John Frost.

Brief and siting

The Borough Council of Westville decided at the beginning of 1979 that the development of the Westville North area demanded the provision of a branch library and community centre. The brief for the library required the design to cater for a population of 10 000 people as a first stage with the possibility of expanding the facilities to cater for 20 000.

Funding for the project was provided in part by the Borough of Westville and in part by the Natal Provincial Administration Library Services. The Borough of Westville decided that the community facilities which are normally limited to a group activities room should be expanded to provide two additional activity areas with extensive storage space.

A suitable site was selected close to shops, schools and the major traffic intersection linking local and regional routes.

The site area of 4 000 sq.m proved to be the minimum size acceptable for the library and community centre if expanded to cater for the 20 000 population figure.

The site is west facing and slopes down at a fall of approximately 1:6 to Iver Road. All services were available in the immediate vicinity.

Design solution

The brief called for the future extension of all major facilities consisting of adult library, children's library, community centre activity rooms and administration space. On the basis of these requirements the building was designed on two levels with the libraries, administration and main group activities on the upper level and the secondary community centre functions on the lower level with direct access to Iver Road and the park situated across the road. This arrangement resulted in a series of parallel activity spaces running north-south and capable of expanding northwards and southwards. The adult and children's library areas are separated by means of the issue desk area which results in visual integration of the two spaces and at the same time providing a degree of noise separation.

The form of the building follows the plan arrangement with two mono-pitched roofs parallel to the contours, enclosing the major library spaces with the entrance between them. The half gable ends to these roofs could be extended in the future to provide the additional accommodation. The main roofs slope down to broad concrete gutter beams on the east and west of the building over a series of minor activity spaces and carrels with north and south lighting. Roof overhangs and planting areas are positioned to protect the lower level west orientated activity rooms from the late afternoon summer sun.

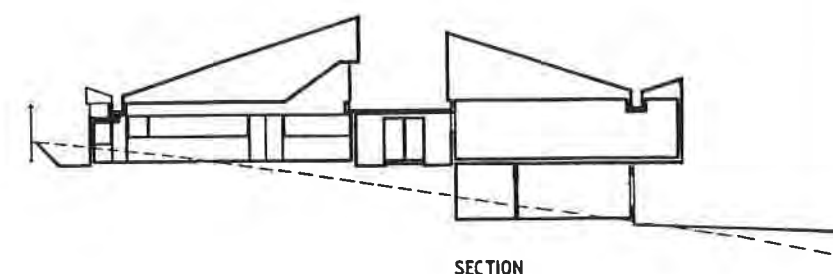
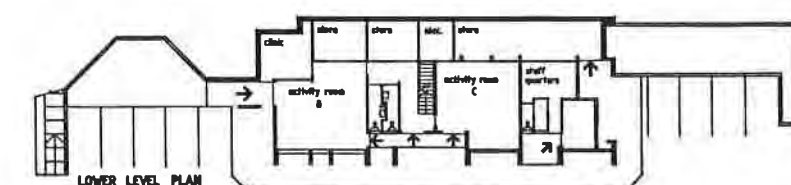
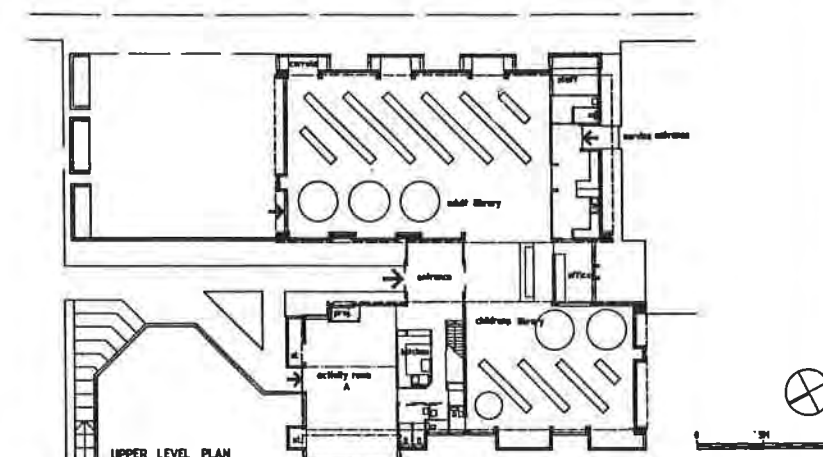
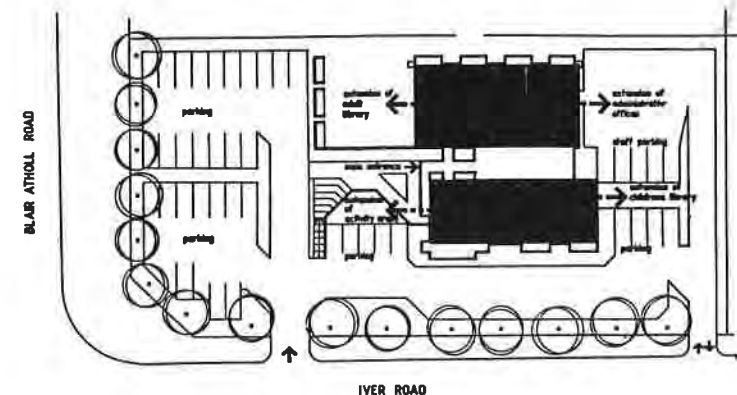
Structure, Services and Finishes

The structure is load bearing brickwork with concrete floor slabs, calcium silicate brick facings externally and concrete roof tiles. All upper level accommodation is airconditioned by means of a central plant located in the roof space.

Upper level interior floors are carpeted, lower level floors are finished in vinyl tiles. Interior walls are either face brick to match the outside or plastered and painted with large areas of display pinboard.

Ceilings to the major spaces are suspended and consist of acoustic tiles with recessed light fittings. The Council's Parks and Gardens Department has provided extensive planting to the landscaped areas.

John Frost



Borough of Pinetown Public Library

ARCHITECTS: P.C. BAKKER

Project Architect: *Piet Bakker*.

Brief and siting

The brief dates back to 1977 when the Borough of Pinetown invited designs on a competition basis for a public library on the Pinetown Park site. The building was to serve a population of 40 000 and the brief called for a building allowing for flexibility in layout based on open planning principles. The Borough stated its objectives as being foremost the transfer of information in an efficient manner and secondly the promotion of an awareness of what a modern library can offer. The Borough also required that the building and the site be developed as an integrated pedestrian precinct in the context of the existing civic centre and gardens and adjacent developments.

The site is situated on the corner of Old Main Road and Crompton Street across the road from the Civic Centre on a major intersection.

Design solution

Where the site abuts the CBD a large paved area had been developed containing a fountain, built during *Water Year*, a flower selling market, an open air chess board and a major pedestrian route across the site linking the main bus stop area with the CBD.

The building was designed with Historical Society exhibition space and group activity areas in the immediate vicinity of the main entrance. The library space was developed to "grow" into the park and its eventual shape was determined by a variety of very old established trees on the site. The building has been enclosed in brickwork, largely to overcome the traffic noise, but visual links into the gardens are provided at children's storytelling and reading areas, at public study areas and at seating spaces set aside

for enjoyment of recorded music through headphones. The windows in these areas are provided with large roof overhangs as sun control.

The level of the major pedestrian route across the site has been raised to first floor level, where in response to the Borough's requirement that public awareness be promoted, windows allow a view into the browsing area and Historical Society exhibition space. The roofs of the building are designed to be partially grassed or covered in patterned coloured stone aggregate that office workers in tall buildings in the vicinity may continue to enjoy the view over this "green lung" in the CBD.

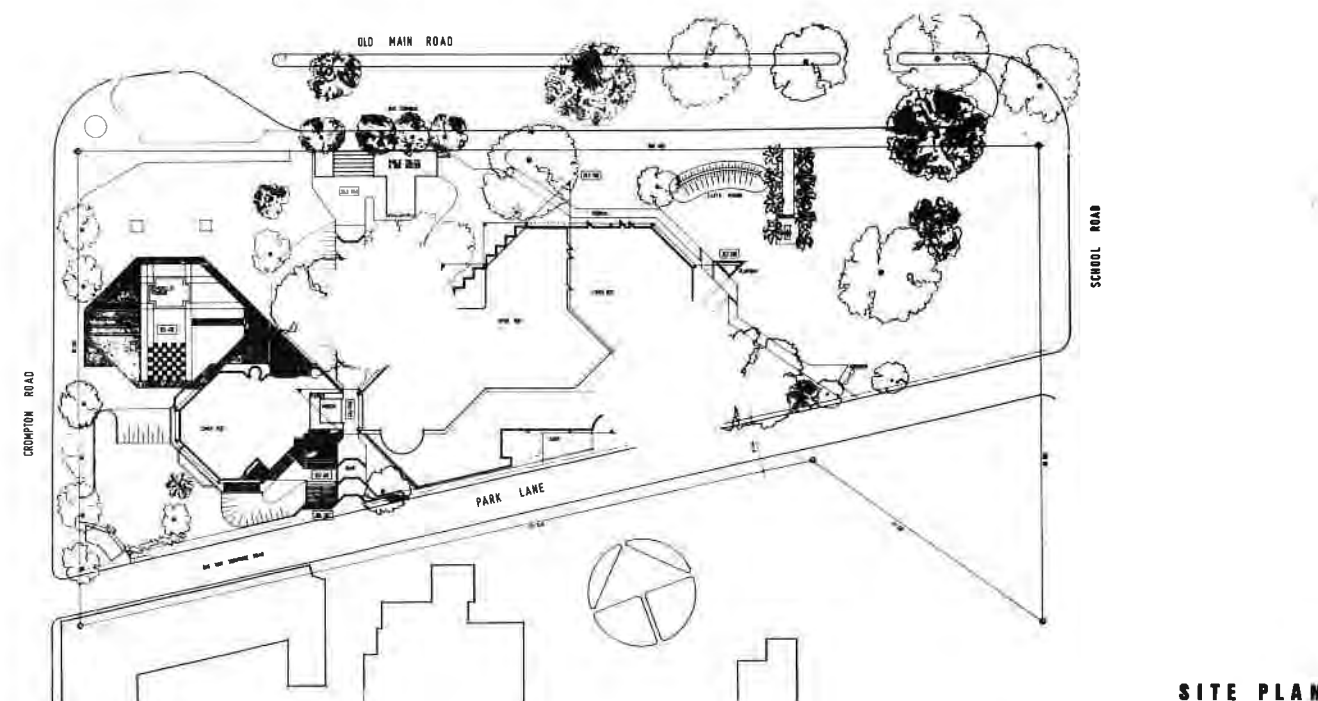
Structure, services and finishes.

The structure consists of a piled reinforced concrete shell with a 7m x 7m column grid to the main library space. A flat slab coffer construction provides for open space uninterrupted by beams.

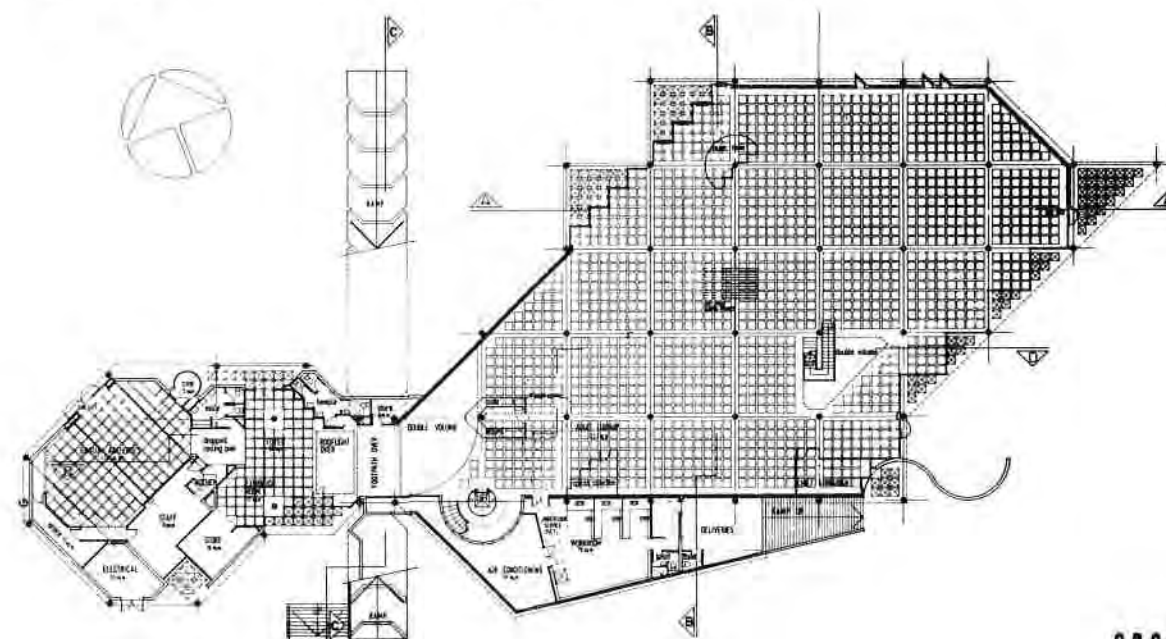
Independent air conditioning units with air filters are provided for the library space, exhibition areas and group activities space. A lift is installed to provide for vertical book distribution and access to the first floor by paraplegics. Ducting has been built for a future conveyor system from the issue counter to the workrooms. Space has been allowed for a future computerised issue system and an electronically controlled stock control security system.

The entire concrete structure including ceilings has an off shutter finish, walls are facebrick and sound reducing glazing in aluminium frames has been installed. Floors are quarry tiled in main access areas and carpeted in the library space.

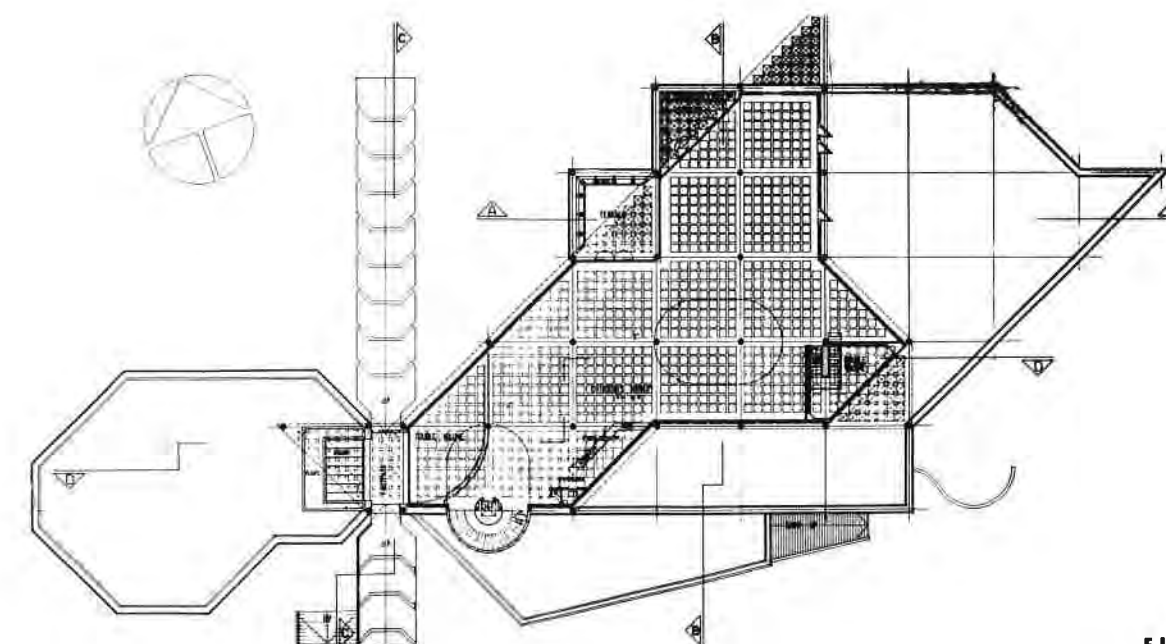
Piet Bakker



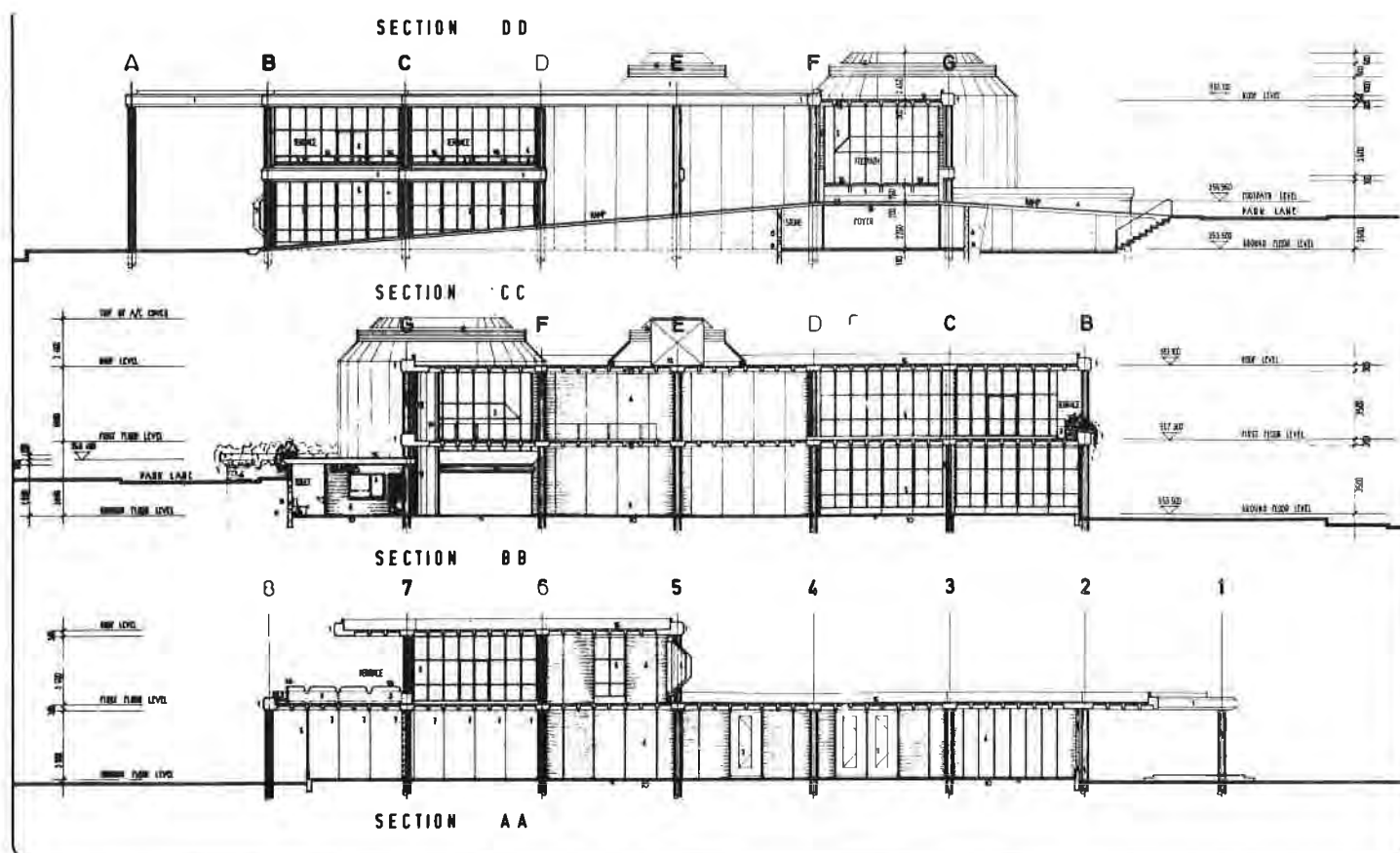
SITE PLAN



GROUND FLOOR



FIRST FLOOR



University of Zululand Library

OSMOND LANGE VANDEVERRE GOLDSWAIN HAARHOFF & BURGER (NATAL) INC.

Project Architect: *Willy C. Vandeverre.*

Brief and siting

The brief calls for the building of a new library as part of the masterplan for the development of the University. The library is to house some 150 000 volumes in separate collections, relating to the University departments, and 3 special collections. The stock is to be arranged in subject divisions with all materials relevant to the subject assembled together, instead of the traditional separation by physical form – i.e., books, periodicals, theses etc. into separate sections. Reading areas, carrels and areas for audio visual learning, library administration, and compactus storage are also required. In addition to these facilities the brief calls for the inclusion of a staff cafeteria; a bookshop; an anthropology museum and exhibition area; and seminar room.

The building is situated at the intersection of numerous circulation routes, in a prominent location at the heart of the campus.

Design solution

The design criteria:

1. Acknowledge importance of location – library as core element in campus design.
2. Acknowledge circulation systems – existing routes are reinforced, and the library is lifted above the circulation systems. A visual link between the two is established by means of a transparent dome that protrudes into the library volume (see section).
3. Acknowledge the 12 collections of the library – this is achieved by forming a top-lit central space that provides visual links between the modules of the different areas. Subject librarians will be located at each module, having direct access to the administration and cataloguing areas at the periphery – the collections will be distributed over three levels within the confines of four modules per floor.

4. General – a lift in the central space and stairs at the corners link all the internal levels. Study carrels are located on the periphery of each level, as are seminar and reading spaces. Library administration and issue areas occur immediately below the stack levels.

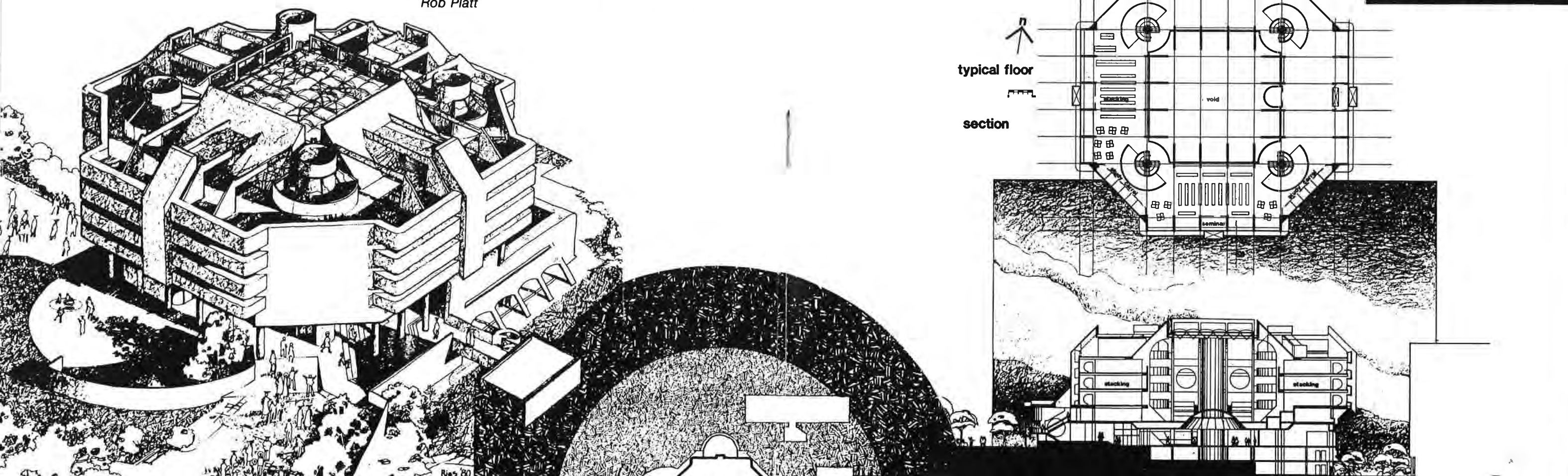
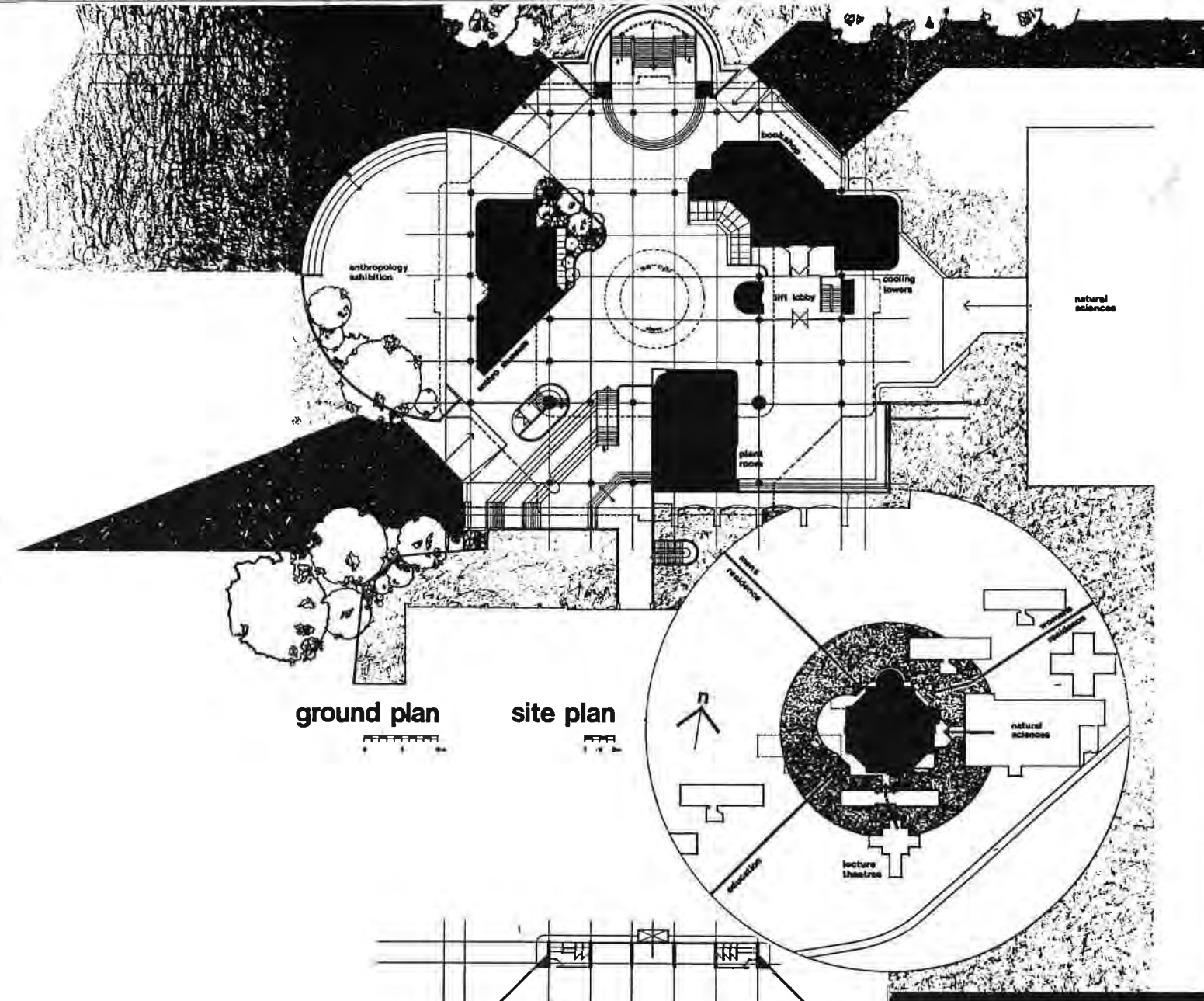
The external form of the building reflects the centralised, inward-orientated character of the spatial development. Horizontal bands indicate levels and the air-conditioning and services are indicated by projecting vertical shafts and specific roof forms.

Structure, services & finishes

At the lower levels a grid of circular columns is established, supporting the webs which surround the internal central space, and which re-appear at roof level to support the clerestory windows. These webs are clad in glazed ceramic tiles, as are most of the external surfaces. Other finishes include 'Marmoran', facebrick, tinted laminated glazing, and melamine surfaces to built-in desks, shelving, etc.

Air-conditioning of the library is handled by four separate plants as part of a decentralised service system that allows maintenance, partial use, and zoned control of different facades at different times of day. Horizontal ducting follows the perimeter bands from central vertical shafts and the constant temperature/variable volume system blows air towards the central volume. The width of each floor, between perimeter and central space, is calculated by the optimum 'throw' of air from the perimeter. Shelving is positioned at right angles to the ducting so as not to impede the air flow. The central volume acts as a return air plenum to the roof-top air-conditioning plants.

Rob Platt



M.L. Sultan Technikon Library, Durban

G.R. KLÖHN AND PARTNERS

Project Architect: *Gerald Seitter*.

Brief and siting

The Technikon campus is located in an area of considerable urban renewal. Centenary Road to the East, established educational institutions to the North and South, and Currie's Fountain prevent horizontal expansion in the foreseeable future.

Approximately 40% of the site is covered by 3 or 4 storey educational buildings (arranged in the usual "high school" pattern) which reflects the dynamic growth of this Technikon from humbler beginnings in 1946.

This rapid, and sometimes unco-ordinated growth resulted in open spaces being unused or under utilized. A central, identifiable, "campus space" is still to be developed.

The client's concise and comprehensive brief stated:

"To build a library which is able to provide the resources to the levels required to support the more advanced academic teaching programmes now taking place and being planned in the Technikon; to overcome the resistance of students to Library useage; to allow for phased growth of 2 500 volumes per annum, from 15 000 volumes to 50 000 volumes, the surplus space to be used for temporary teaching facilities with separate access". A target-figure of 150 000 volumes may eventually be reached.

Design solution

Three major parameters were identified:

1. Accentuation of inner campus through careful massing. The Library should unobtrusively become the academic heart of the campus.
2. Clear, subdued lines, interior activities visible, a "transparent workshop for study".

3. Modular concept, with "fixed" activities (control, cataloguing, administration, educational media production) at the ground-floor, and the ever-expanding book and reader spaces located upstairs. Total inter-changeability of book and reader spaces at the upper levels. Further expansion by two more floors, without disturbance of operation of library. Final expansion into "satellite libraries" in three adjacent buildings via "sky-walks" using the existing library control.
4. Accessibility to top floors, whilst under non-library use was investigated. Security of library stock is to be ensured at every growth-phase.
5. Roof-shape, overhangs and fenestration were determined by a comprehensive sun-angle and thermal-gain study.

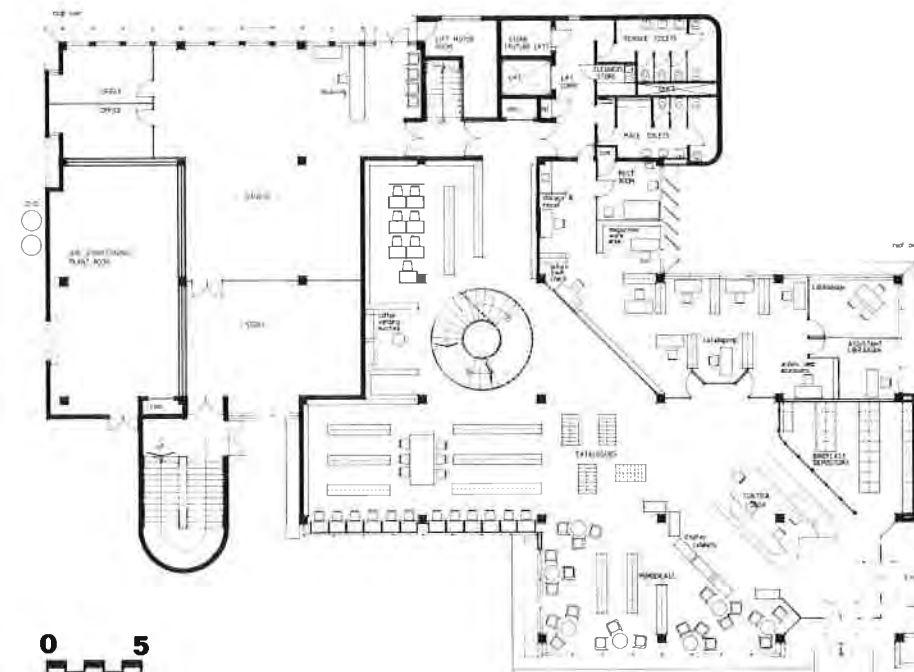
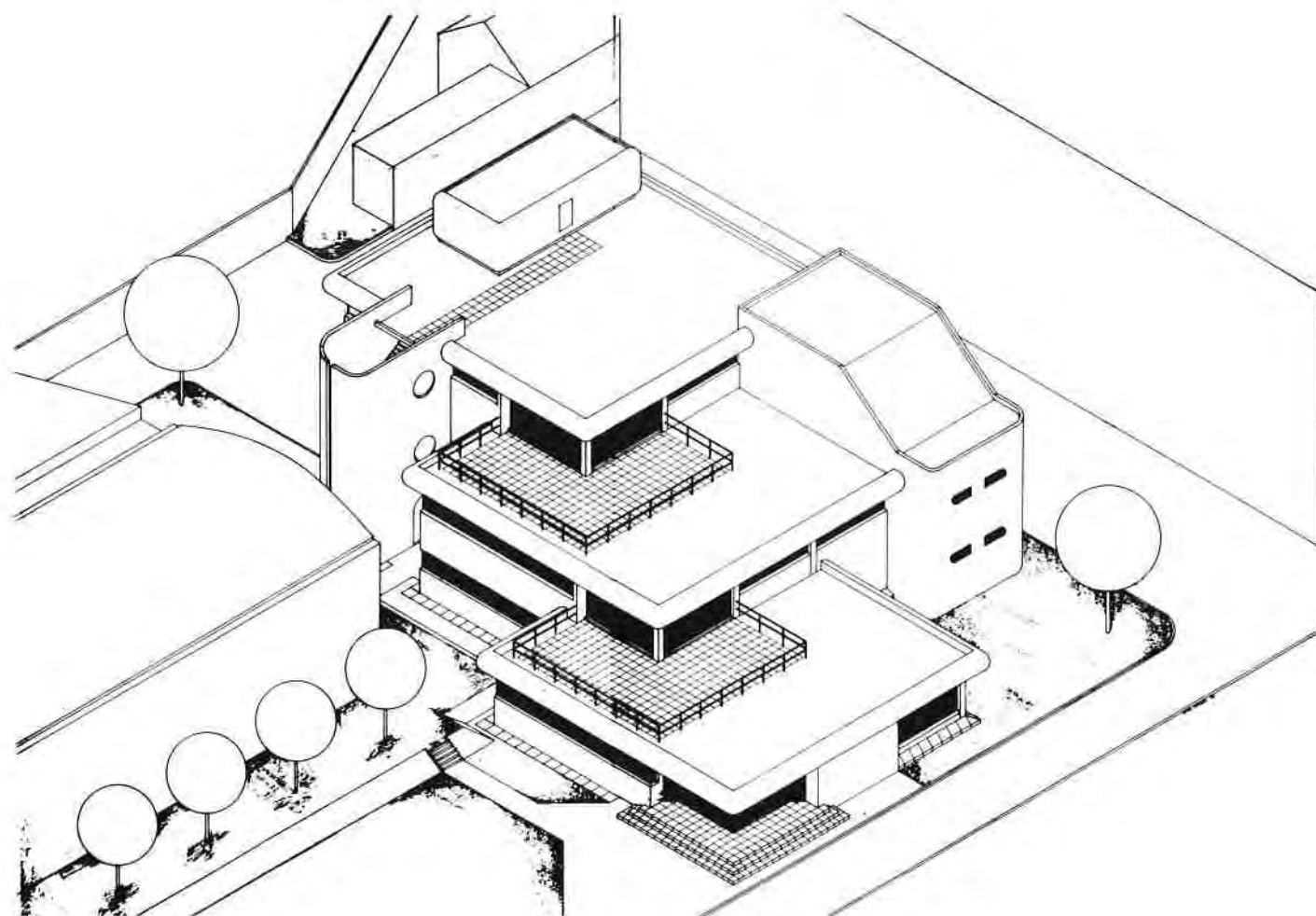
Structure, services and finishes

Square-grid 5,5m column-module with coffered 300mm reinforced concrete slab on piled foundations, an exercise in design-economy by architect, engineer and quantity surveyor. The library has suspended acoustic ceilings and soft floor coverings. The ceiling voids are used to house all services. Open trunking is provided in ceiling-voids with two-compartment conductors to work-stations.

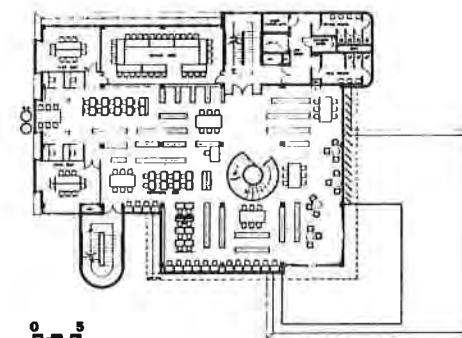
Variable-volume, "all-air" air conditioning is to be installed with return-air through ceiling void and *enthalpy* control for energy-efficient useage.

Good light, soft finishes, some bright colours, coffee machine, absence of noise-pollution, plenty of good books, pretty female students, friendly librarians (do they exist?) – it can't go wrong!

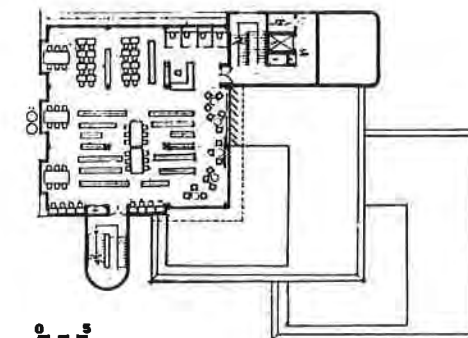
Gerald Seitter



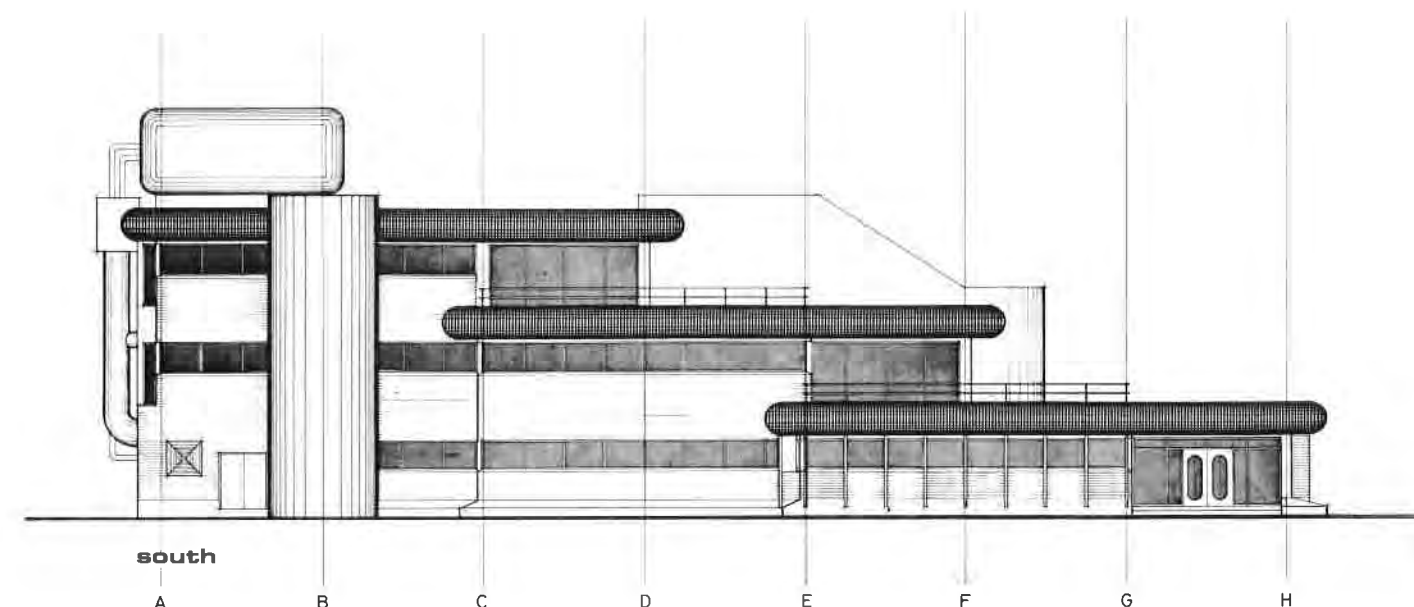
ground level



level 1



level 2



COMMENT

...“only connect”... E.M. Forster

In the period between the building of the library of St. Marco (Savonarola's monastic base) and Michelangelo's alterations to the church and convent of St. Lorenzo in Florence came the age of Guthenberg and later Caxton – and with this libraries as we know them became an institution of society and have remained in most respects unchanged since then, – except in detail. Storing knowledge on bound pieces of paper, caring for and displaying them, and allowing controlled access are what libraries are about and have been for a period of about 500 years.

Whilst technical changes have affected the number and physical quality of books –sometimes for the worse – the nature of the library has not changed greatly until these last two decades or so.

Social changes – the democratisation of society and its institutions, the computer which has brought with it a different approach to the storage of knowledge, and the intrusion of other methods of recording (film, records, tapes, video) have created a revolution in the way information is made accessible. Our institutions and the buildings needed are being changed by these circumstances. The office building and the university are still to feel the full impact of these changes – and we should, as architects, look at how we deal with them.

The libraries in this edition of the *NPIA Journal* are of different types, those of educational institutions and those for the public. Universities are notoriously slow in adjustment to social and technical changes. They are likely to persist with the large central library long after the library as a continuum which mixes central control with some centralisation of resources and with considerable access to cohesive departments, has become the norm for the ‘information’ society. The university of the future will increasingly be structured around easy resource access. Adapting the old is harder both in terms of built form and the ‘mind set’ of the organisation.

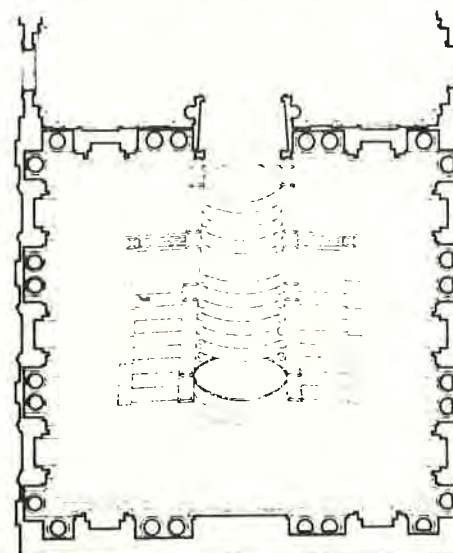
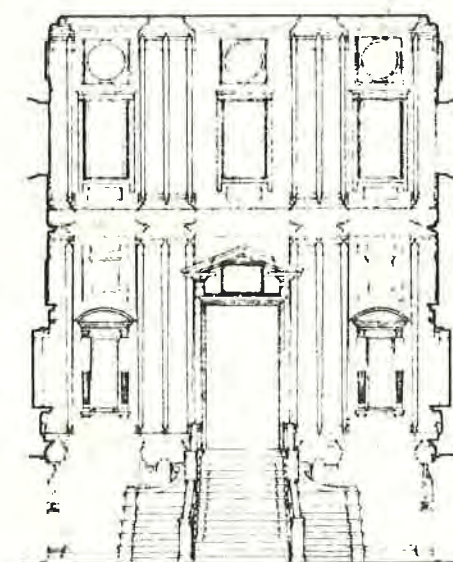
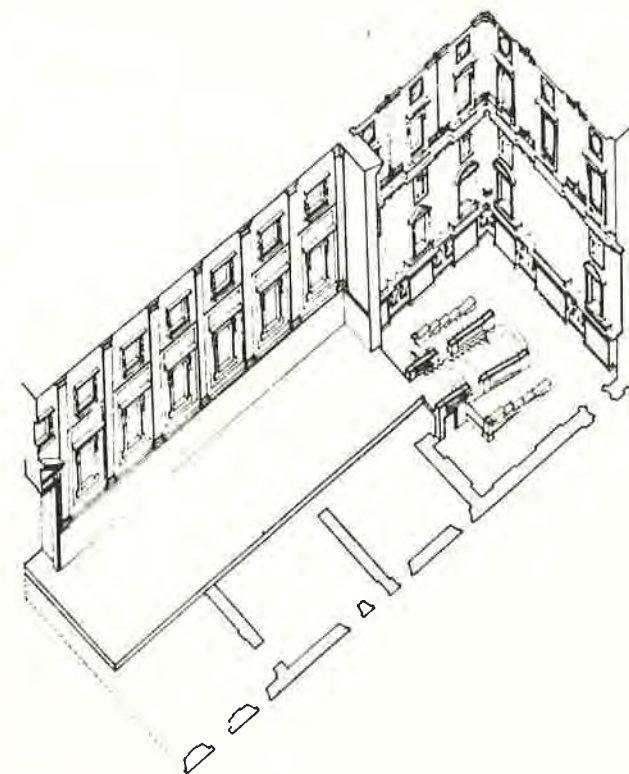
Public libraries developed in the period of industrialisation as a response to greater literacy, industrial techniques in the manufacture of cheap books and the related social and political changes. The public library has reached out boldly to meet the public and as seen in the schemes presented the range of uses is responding increasingly to the broader concept of resource access.

The Pinetown library is the result of a competition and is now nearly complete. It stands in an urban park on the edge of the business centre of Pinetown. The plan acknowledges the need to have positive links with the pedestrian flow to the city and it makes the best of a difficult task for the site is to one side of the city centre. The spaces are open, have an apparent ease of access and a pleasing humane relationship with the open areas beyond. The building as it now appears is well built with that special quality of detailing and concern that competitive situations seem to encourage. The modest Westville library has a pleasant residential scale but suffers the problems created by our urban structures. It is still a motorists library. Westville, in common with many of our smaller urban centres, lacks a sense of cohesion and urban interrelatedness and one hopes that this new library will help to create some of the linkages required.

The University of Zululand has buildings designed by a variety of architects and set down on the rolling hills. The architects for the new library building have sought to identify and reinforce various strong pedestrian accesses on the site and to structure the library as a place of social meeting as well as for its more specific role. The block-like form is, like the old library, a little too monumental for my liking but it has a logic in terms of climatic control in the use of minimal external skin area in relationship to air-conditioned volume as the basis of economical design. In this the building contrasts with the library proposed for the M L Sultan Technikon, where the need for a tight fabric has for reasons of form – of somehow thrusting into the residual central space –yielded to large roof and roofdeck areas in a stepped back series of floors. The use of decks other than for planting would seem to be precluded by the necessary security and climatic controls required. But the building does take hold of major pedestrian routes to make these the key to access and the interaction that libraries need.

I end with the Laurentian library. Despite building into an existing structure and with little external expression a building was created that functions well, and which is part of an overall set of related activities. There are good climatic and environmental characteristics and the solution is a brilliant exposition in its internal spaces of architectural form, and is a major influence to the present time. There are lessons for us there.

Hans Hallen



News

Thintana:

The above exhibition of the Natal Heritage Committee will be on display from 4-29 May at the Art Gallery in the Durban City Hall, as part of the Durban Arts '83 programme.

The exhibition of photographs focusses on ways and means of conserving houses ranging from mud walled and thatch roofed huts to suburban villas and mansions. It will take to the road in a bus in June.

Geoffrey Le Sueur Scholarship:

The coveted Le Sueur Scholarship for 1983/84 has been awarded to George Elphick who intends travelling to the Far East to study housing and urban design.

University/Institute Liaison Committee

The following events have been planned for the second quarter:

Monday, 18 April, 5.15 p.m. in SH2: Sir Philip Dowson, Architectural Founder Partner, Arup Association, London, and RIBA Gold Medalist, on his own work.

Wednesday, 20 April, 5.15 p.m., Western Campus: Soccer, Students vs the Institute. Members willing to make up the Institute teams please contact Keith Alcock, Tel. 330023.

Tuesday, 26 April, 4 – 5.30 p.m., SH2: Marjorie Wallace, journalist with the London Sunday Times, and Prof. Margerison on *technical failures of industrial highrise building systems*.

Tuesday, 3 May, 5.15 p.m., SH2: Dextor Moren of Meyer Pienaar and Partners Inc. on the Marine Parade *Holiday Inn*.

Tuesday, 10 May, 5.15 p.m., SH2: Hans Hallen on Chile and the UIA Congress, *Lessons from Graves*.

Saturday, 21 May, 8 p.m., Open Air Theatre, University of Natal, the students traditional *Archilark*.

Thursday, 26 May, 5.15 p.m. SH2: Tony Lange on *Dunhill City: the Failure of Modern Architecture*.

Tuesday, 14 June, 5.15 p.m., SH2: Revel Fox on the re-planning of Durban's Beachfront and Central District.

Changes:

Changes in partnerships

W.J.G. Ellens has informed that w.e.f. 1.3.82 the architectural partnership of Thorington-Smith, Rosenberg and Ellens was disbanded. Mr. Ellens is in practice for his own account as "W.J.G. Ellens" at Elandskop.

Changes in addresses

D.N. Callinicos to 4614-E Mercury Drive, Greensboro, North Carolina 27410, United States of America.

W.H. Morrison to 101 Mentone Road, Durban.

E.L. van der Walt to 125 Nova Natalia, 41 St Andrews Street, Durban.

C.A.L. Levick to 23 Lynford Place, Durban North.

Changes in membership

A.W. Swiatek from TPI to NPI, c/o Bonieux, Rougier and Croxon, P.O. Box 47, Pinetown.

New members

N.P. Murray, c/o Myles Porter Seirlis and Jarvis, P.O.Box 102, Pinetown.

C.E. Harris, 3 Inyanga, 194 Essenwood Road, Durban.

R.B. Rutherford-Smith, 7 Huntingdon Place, Pietermaritzburg

<

Laurentian Library, Florence (Italy), built by Michelangelo in 1524-60 as part of the complex including S. Lorenzo and Brunelleschi's Old Sacristy. The monumental staircase linking the ante-room and the reading room was completed by Vasaro and Ammanati after 1550.

Top: axonometric drawing. Murray, P. *Renaissance Architecture*. Middle and bottom: elevation and plan of the staircase. Stierlin, H. *Encyclopaedia of World Architecture*.