

BUILDING DESIGN GROUP ARCHITECTS (1968-1977)

A STUDY OF THEIR PRACTICE, BUILDINGS AND PROJECTS.

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ABSTRACT

This research examines the practice, buildings and projects of Building Design Group Architects (BDG), a collaborative of architects and students in Durban during the period 1968-1977. It traces the careers of its principal members, firstly as students at the University of Natal, and later in private practice through the formation and practice of BDG.

BDG operated at the fringes of conventional practice. Through a diminished office hierarchy, a team culture was established whereby the endeavors of all personnel were to the common purpose of furthering the architectural objectives of the practice. Responsibilities were shared by qualified architects and students alike.

BDG were young and uninhibited by the dogmas of the established profession, architectural compromise being supplanted by investigation and experimentation. The practice operated in a studio atmosphere where a heightened expectation was imposed on each project design and individual concerned.

The resulting product of the practice was a vibrant oeuvre of work, predominantly residential; the designs asked questions of the conventions of building form, spatial relationships, technology and building economics. The answers to these questions manifested in an architecture resonating with regional identity.

The study identifies the early careers of many important architects who were associated with BDG, and who would contribute to the development of contemporary South African architecture. Paul Mikula, Bryan Lee, John Edgar, Brian Kearney as founding members of BDG would shape the direction of the practice and beyond. They were joined at various stages and durations by Kevin MacGarry, Colin Savage, Tony Wilson, Peter Wilkinson, Bruce Stafford, Luis Ferreira da Silva and Jo Noero, all of whom would later start their own independent practices.

However, what emerges from the study is the pivotal role of Paul Mikula in the account of BDG. It was his vigor, vision, passion and talent for design that ignited the practice and drew the attention of the local architectural fraternity. The influence of his work and personality was felt by all those around him; he has significantly marked the architectural landscape of the region, and this study promotes the recognition of Paul Mikula as a significant South African architect.

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RESEARCH METHODOLOGY

The timing of the study was opportune as the principal members of BDG were known to the author, and furthermore BDG practised mostly in the KwaZulu-Natal region and therefore the majority of the buildings are local and accessible. Twenty five years have passed since the practice effectively dissolved, which is an adequate period for reflective analysis of the work.

The initial task of the research was to compile a project list from the available published material on BDG as well as through contact with the practice members. This exercise was paramount due to the fact that the practice archives had been destroyed some years earlier due to a decision by the management of ZAI (Inc), the company which absorbed BDG in 1978. Office space was deemed to be at a premium and the drawings were by then, considered obsolete.

Under the editorship of Danie Theron, a special edition of *Plan* magazine in 1974 (74.3.74) had been published which illustrated 43 of BDG's buildings and projects; this has remained as the most comprehensive account of their work. Additionally, Theron had listed several BDG buildings in two separate published guides to important buildings in the Durban region, *Credo* No.36 1972 and the *NPIA Newsletter* 1-1981.

Through the course of this research, 92 completed buildings have been identified, along with an additional 6 competition entries and 10 unbuilt projects (Appendix 2). In most cases the exact street address of buildings had not been recorded and therefore extensive field work was undertaken to make in-situ inspections of the buildings, to pin-point building location and ascertain the relative condition. This process enabled the search for records of submission drawings at the various Municipalities, and the subsequent acquisition of copies from these archives.

The drawing material along with an extensive collection of slides, that had been retained by the BDG members, enabled accurate documentation of the work. The re-established practice archive will now be retained at the University of Natal, within the Barrie Biermann Architectural Library.

The hypothesis of the research is centred on the inquiry as to what level of contribution Building Design Group made to furthering architecture in South Africa. The research can be summarised in terms of the following subsidiary research questions: Who were the key individuals at BDG? Which

buildings can be attributed to BDG? What were the influences on the individual and collective members of the group? What were the philosophies of the practice? How did these impact on the architectural objectives of the group? What difficulties were experienced with respect to the established profession at the time? What was the nature of the various working environments at BDG?

The intention of this dissertation is therefore to present an audit of the body of work produced by BDG, to describe and analyse the buildings, and to capture the essence of the special working environment that evolved around the group.

It has been necessary to redraw many of the plans and sections from the source material to complement the illustrations that already exist either in publication or held in private collection. The typical BDG building diagram was a reductive hand drawn sketch that communicated the essential design information, and this approach has been adopted with the new illustrations.

An important aspect of the research was also to extract memoirs from as many sources as possible to relay the story of BDG as close as possible to the accounts of those who were there and involved at the time. Anecdotal quotation have therefore been used to assist in the description of important issues and events, and corroborate the facts that have been stated in the primary source material.

The theoretical discourse is placed at the ambit of the relevant architectural theory of the time, both at an international scale and as a regional influence. The literature review conducted for this research probed the key writings of the period of study in order to contextualize the work in question. Furthermore a comprehensive scan of the periodical journals, *South African Architectural Record*, *Architect & Builder* and the *Architectural Review* was conducted, covering the period of publication between 1960-1978, to ascertain local and international architectural traits. The scope of this area of research is reflected in the Bibliography.

The closing statements of the dissertation will seek to place the work of BDG in the context of the prevailing architectural milieu as ascertained above, and will further test these findings against Kenneth Frampton's barometer of Critical Regionalism (Frampton 1992).

CHAPTER 1: OVERVIEW

1.1 Introduction

Building Design Group Architects, colloquially abbreviated to BDG, practised in Durban between 1968 and 1977. The period of research itself is slightly broader and encompasses the period from 1959, when the principal founding members first engaged with architectural education as students at the University of Natal. It also scans beyond the registered dissolution of the practise to account for various project and personnel continuities that withstood the formal termination.

The key personalities in this study are Paul Mikula and Bryan Lee, who had a continuous presence as partners of BDG with John Edgar, Brian Kearney, Peter Stewart and Anthony Wilson all co-partners of BDG at various stages. Denis Jordaan, Kevin MacGarry, Roy Owen, Colin Savage, Bruce Stafford, Peter Wilkinson and Bob Barwise, made important contributions to BDG as students. Important influential figures at the University of Natal were lecturers Dr.Barrie Biermann and Dr.Ronald Lewcock; and later Danie Theron and Hans Hallen.

The structure of this dissertation has been designed to acquaint the reader in Chapter 1, with the general context and prevailing conditions, both internationally and in South Africa. In Chapter 2, the circumstances leading to the formation of BDG are explained, which includes the student careers and early built work of the founding members. Chapter 3 discusses the formal details of the practice and Chapter 4, the nature of the various working environments. Chapter 5 contains the core of the research which describes and analyses the buildings and projects of BDG in five typological categories. Chapter 6 reflects on this volume of work in terms its philosophical characteristics, with Chapters 7 and 8 dealing with the circumstances leading to the dissolution of BDG and the conclusions drawn from the study.

1.2 Architectural context: International

By 1960, international modernism had irrevocably changed. Team 10¹ had emerged out of the stagnation of CIAM² to foster the manifesto of 'New Brutalism'³. "Team 10 came together, in the first place, certainly because of mutual realisation of the inadequacies of the processes of architectural thought which they had inherited from the modern movement as a whole, but, more important, each sensed that the other had already found some way forward towards a new beginning." (Smithson, P 1964, in *Arena* 1966:p215).

Alison and Peter Smithson (Fig 1.1) had completed their Hunstanton School (Fig 6.13) in 1954 and co-organised the 'Parallel of life and art' (1953) and 'This is tomorrow' (1956) exhibitions that challenged notions of conventional artistic values by promoting "bizarre or anti-aesthetic images that flouted humanistic conventions of beauty" (Banham 1966:p61).

"New Brutalism is the only possible development for this moment from the modern movement, stems not only from the knowledge that Mr. Le Corbusier is one of its practitioners (starting with the 'breton brut' of the Unite) but fundamentally both movements have had as their yardstick Japanese Architecture. Japanese architecture seduced the generation spanning 1900, producing in Frank Lloyd Wright the open plan and an odd sort of constructed decoration; in Le Corbusier, the purist aesthetic – sliding screens, continuous space, the power of white and earth colours; in Mies the structure and screen as absolutes. But for the Japanese their form was only part of a general conception of life, a sort of reverence for the natural world and, from that the materials of the built world. It is this reverence for materials, a realisation of the affinity that can be established between a building and man – which is at the root of New Brutalism." (Smithson, P 1955: in *Arena* 1966:p190).

Danie Theron in one of his early essays, wrote enthusiastically about the movement in *Theoria* June 1965, acknowledging its stronghold in

¹ Team 10 : independent splinter organization of CIAM : membership at primer date (Jan 1954) were: Bakema, Van Eyck, Candilis, Woods, Smithson, Voelcker, Soltan, Grung, Erskine, Coderch. (*Arena* 1966: p186)

² CIAM : *Congrès Internationaux d'Architecture Moderne*. "the official organ of modern architecture". (Jenks 1985:p36) Started in 1928, which "created an international climate of architectural ideas lasting until the late 1950s." (Raeburn 1980: p262)

³ New Brutalism : term 'Brutalist' coined from a letter from Hans Asplund, and adopted by a group of architects at the Architectural Association and London County Council in the UK. An interpretation to mean modern architecture of the more pure forms. (Banham 1966:p10)



Fig 1.1:
Peter & Alison Smithson.
Photo: Theo Crosby
Ref: *Arena* 1966: p180

Fig 1.2: Stirling & Gowan – Flats at Ham Common (1955-58)
Ref: *AD Profile* 1982: p25



Britain with examples of Stirling & Gowan's recent work at Ham Common (1958 – Fig 1.2) and Leicester University (1964). Theron also suggests that Louis Kahn's Yale Art Centre (1953) and Richards Medical Research Building (1961 – Fig 1.3) also contribute to 'New Brutalism'. Theron himself had been a pupil of Kahn's at the University of Pennsylvania Master's programme, and other South African architects Willie Meyer, Glen Gallagher and Roelof Uytenbogaardt shared this influence.

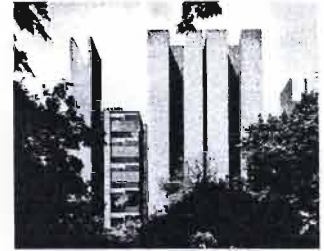


Fig 1.3: Louis Kahn – Richards Medical Research Building (1957-61).
Ref: Scully, 1962:p84.

"The Louis Kahn influence was strong because so many South Africans shot off to 'Penn'. Few shook off his influence to find their own expression. Kahn was scarcely a modernist - more a modernized beaux arts architect." (Hallen 2002 – personal communication).

Architects and students in South Africa followed the new architectural developments in Britain and the USA through the pages of the international journals. "The School of Architecture (Philadelphia) is widely held to be an invention of the editors of *Progressive Architecture* – rather as the 'New Brutalism' is regarded as the invention of *The Architectural Review*." (*The Architectural Review*, March 1962: p230).

The provocative impact of New Brutalism was paralleled by the widespread movement of popular culture. "Pop Art's alternative was clearly based on a tough, no-nonsense, no-precocity, no-refinement standard appropriate to the 1960s." (Lippard 1966:p10).

Lawrence Alloway⁴ explains;

"We discovered that we had in common a vernacular culture that persisted beyond any special interest of skills in art, architecture, design or art criticism that any of us might possess. The area of contact was mass-produced urban culture; movies; advertisement; science fiction, Pop music. We felt none of the dislike of commercial culture standard among most intellectuals, but accepted it as a fact,

4

Lawrence Alloway: member of the Independent Group at the Institute of Contemporary Arts in London and " founder and caretaker of the concept 'Pop'. (Jenks 1985:p271)

Fig 1.4: Andy Warhol – Campbell Soup Can (1964).
Ref: Jenks 1985:p211.



discussed it in detail, and consumed it enthusiastically.” (Alloway 1966: p31)

The celebration of day to day artefacts had become the context for the Pop Art paintings of Andy Warhol (Fig 1.4), Claes Oldenburg and others. In architecture, concepts of ‘beyond architecture’ were being developed through the polemical projects of Archigram⁵, eg. Michael Webb’s ‘Sin Centre’ (1962), Ron Herron’s ‘Walking City’ (1964 – Fig 1.5) and Peter Cook’s ‘Plug in City’ (1964 – Fig 1.6).

“Archigram demonstrated the immediacy in urban products which had been predictably termed moribund and infantile by the older generation. They collected images from any part of the city – the accepted Pop iconography of spacemen, superman, robotman and woman, and presented them in a way and with a message that was new to architecture.” (Jenks 1985: p288).

Cedric Price’s ‘Fun Palace’ (1963 – Fig 1.7) and ‘Potteries Thinkbelt’ (1966) were also enquiries into buildings as pure service elements, information technology, with the lightweight and air structures that had previously been developed by Buckminster Fuller, and would inspire the emerging ‘Hi Tech’ movement.

“He (Price) decided to jettison all the traditional categories of architecture that even Brutalism had held on to, such as identity and space. He put forward an idea of ‘servicing’ instead of architecture; he placed primary value on all structures capable of quick change and response; he envisaged a kind of non-building activity which would liberate man from all the constraints and categories of the past; in short, he sensed the idea of absolute freedom and thus put one finger in the underlying student pulse of the sixties.” (Jenks 1985: p284).

The swell of resistance in the 1960s to the constraints of the modern

Fig 1.5: Ron Herron – Cities moving, project (1964). “A concept of the furthest extension of the grouped environment: a complete city that ‘walks’.”

Ref: Cook, 1967: p95

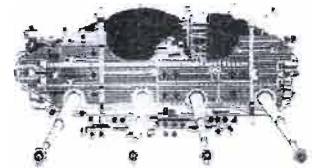
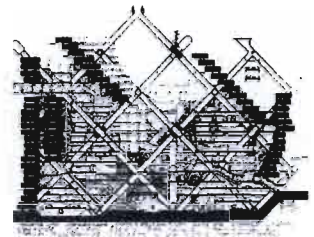


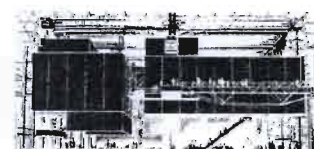
Fig 1.6: Peter Cook – ‘Plug in city’ (1964). “Megastructure incorporating lifts and service tubes. Throw away units.”

Ref: Cook, 1967: p78



5 Archigram formulated their ideas in a magazine called ARCHitectural TeleGRAM, from which their name has been adopted. Members Peter Cook, Michael Webb, Dennis Crompton, David Green, Warren Chalk, and Ron Herron all believed architecture should be an instrument of social progress that incorporated everything from technology to Pop art to personal freedom. Ref: <http://www.artandculture.com/art/s/artist?artistid=542>

Fig 1.7: Cedric Price – ‘Fun Palace’ (1963). “The whole complex, in both the activity it enables and the resultant structure it provides is in effect a short term toy to enable people, for once, to use a building with the same degree of meaningful personal immediacy that they are forced normally to reserve for a limited range of traditional pleasures” (Price, 1984: p60)



movement was encapsulated by the seminal book '*Complexity and Contradiction in Architecture*' (1966), written by Robert Venturi, himself a student under the mentorship of Louis Kahn. Acclaimed as a balance to the views of Le Corbusier, Vincent Scully states in the introduction to the book that; "Le Corbusier's great teacher was the Greek temple – with its isolated white body and free in the landscape. Venturi's primary inspiration would seem to come from the Greek temple's historical and archetypal opposite, the urban facades of Italy, with their endless adjustments to the counter-requirements of inside and outside and their inflection with all the business of everyday life: not primarily sculptural actors in vast landscapes but complex spatial containers, and definers of streets and squares. The images of Le Corbusier and Venturi are diametrically opposed. Le Corbusier professing Cartesian rigor, generalised in *Vers une Architecture* and presenting a clear general scheme for the whole. Venturi is more fragmentary, moving step by step through more compromised relationships." (Scully 1966: p9).

1.3 Architectural context : South Africa

The Modern Movement in South Africa had taken root mainly in the Transvaal a short lapse after its genesis in Europe.

"In the story of South African architecture, a seminal set of paradigm shifts occurred with the introduction of the Modern Movement from the 1920s onwards, and its exemplification by the publication of the manifesto '*zero hour*' by Gordon McIntosh, Norman Hanson and Rex Martienssen in 1933" (Prinsloo 1993:p31).

Martienssen, as the driving force in the formation of the Transvaal Group⁶, had by 1932 been established in a care-taking leadership role at the University of the Witwatersrand (Wits) and was the sole editor of the *South African Architectural Record*, " in one term he had totally and

Fig 1.8: Rex Martienssen
Ref: *South African Architectural Record*, November 1942.



⁶ 'Transvaal Group': or 'Le Groupe Transvaal'— the name coined by Le Corbusier for the architects working in the International Style in Johannesburg & Pretoria.

irrevocably committed the school and the journal to a path of unabashed modernity." (Herbert 1974: p69).

Hanson and Martienssen had travelled to Europe to see the pioneering work of Le Corbusier and Gropius at first hand. Indeed personal contact was made with Le Corbusier and Léger in Paris, and a direct line of communication was established⁷. Further International representation was made with the proposed Transvaal group of C.I.A.M. (Herbert 1974: p187).

The firms of Martienssen, Fassler & Cooke and Hanson, Tomkin & Finkelstein produced several notable houses (Fig 1.9) in this period that were published in the *South African Architectural Record* and noted by Le Corbusier in his well documented letter⁷ of September 1936 to Martienssen.

Paul Connell, a student of Martienssen and member of the Transvaal Group; acting as Secretary of the Architectural Society at Wits, also corresponded with Le Corbusier, requesting a message for a planned congress in 1938 (Herbert 1974: p198). Connell would later become the first appointment to the Chair of Architecture at the University of Natal in 1949.

The resonance of modernism had been less of an influence in Durban than other parts of South Africa with a limited number of International Style buildings constructed. A notable example being the Natal Technical College Clubhouse (1938 – Fig 1.10). Designed by the practice Ing. Jackson and Park Ross, it was possibly the finest piece of modern architecture in Durban. It had gained international attention through illustration in the *The Architectural Review* special features on South African architecture in August 1940 and October 1944 and was further noted in Sir Bannister Fletcher's *'A History of Architecture'* (19th Edition: p1386) as showing the influence of the brick architecture of the Dutch Dudok.

Fig 1.9: Martienssen, R – House at Greenside (1940).

Ref: *South African Architectural Record*, November 1942.



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Le Corbusier wrote several letters to Martienssen and other South African architects. His letter of 23rd September 1936, begins with:

"I was very touched to read your copies of *South African Architectural Record*...because there exists there youthful conviction, feeling for architecture and a great desire to attain a philosophy in these things."

(Herbert 1974: p185)



Fig 1.10 : Ing. Jackson and Park Ross - Natal Technical College Clubhouse (1938).

Ref: *The South African Architect*, July 1940: p129.

Hans Hallen a graduate of the University of Natal, would become a prolific practitioner and influential member of the profession, recalls: "In listing names it is worth recalling that of Biermann's generation. Jack Barnett and others had turned their backs on Modernism, and as if in response to Stalin's directives. The architecture that came about in South Africa during this period including work by erstwhile modernist like Tomkin, Kantorowich and Hanson who had embarked on a (for me) sterile formalism and neo classicism. The fight for creative freedom rather to avoid being caught in the narrowing forms of this kind of architecture coloured our debates. It was not overly theoretical. However it was also a time when architects clustered around 'Wits' could bring out a pamphlet '*zero hour*' (1933) echoing the cry of 20's modernism and its communist origins. Zero hour, i.e. man starting from scratch, throwing his past away for a brave new world was not the sort of architecture and theoretical argument we were hooked on in Durban. We were past that inhuman approach.!" (Hallen 2002 – personal communication)

The 1950s were a particularly prosperous time for architecture in Pretoria, with Helmut Stauch (Fig 1.11), Karl Jooste and Norman Eaton (Fig 1.12) seeking a synthesis of modernism and regional vernacular.

"Regionalist architecture is not a question of style. Regionalism has to do with a sense of place and belonging. This was not the basis of Stauch's training which would have emphasised the functional and rational. Peter Buchanan (1983: P15) has postulated that true functionalism would always have been to some extent regional. Accommodating local lifestyle and exploiting climate, local technology and materials should always have resulted in a form of regionalist expression. Eaton did this all along, gradually rejecting the International Style." (Peters 1998: p187)

Fig 1.11: Stauch, H – Winckley House (1941).
Ref: W. Peters (1998: p191)



Fig 1.12: Norman Eaton.
Ref: *South African Architectural Record*, June 1964 :p8.



Eaton designed many notable houses, banks and public buildings. In Pretoria, his work is extensive with fine examples being the Anderssen House (1950), Greenwood House (1951), Netherlands Bank (1949-53) and The Wachthuis (1955-60). "His (Eaton) mature work brought together a Cape upbringing, classical training, the International Style, Wright, and wide experience in Africa and the east." (Cook 1985: p60) His Netherlands Bank (1961-65) in Durban (Fig 1.13), is one of the cities finest buildings, a "modernist box clad with a light filtering ceramic screen." (Sanders 2000: p68)

"Eaton made a significant contribution to the vitally formative period of South African architecture and artistic development between 1930 and the mid 1960s. His individuality, the clarity with which these were pursued and their unique relevance to a modern but at the same time essentially African milieu, produced a body of work that is as important in a South African context as that of the great names of modern architectural history in the wider context of the international scene." (Harrop – Allin 1975: p11)

Amancio d'Alpoim (Pancho) Guedes (Fig 1.14-1.16), "*Architect of Lourenço Marques*"⁸ as proclaimed by Julian Beinart (1961:p241), had by then at the age of 35, already executed a body of work that was beginning to be acknowledged internationally. "For ten years Guedes has worked intensely at the development of a highly personal architectural expression which, in its variety and significant contribution to the environment, is probably unsurpassed in Africa." (Beinart 1961: p241)

Julian Cooke continues; "Pancho Guedes' phenomenal output of exuberant work acted as a stimulus and irritant to a comparatively dry Southern African profession. He brought two challenges: architect as autonomous artist, and an architecture opposed to the rationalist –



1.13: Eaton, N - Netherlands Bank, Durban (1961-65).
Ref: NPIA – *Architecture in our City* 1978: p36.

8
Lourenço Marques, renamed Maputo.



Fig 1.14 : Pancho Guedes
Ref: *South African Architectural Record*, June 1964:p8.

Fig 1.15: Guedes, A – Houses for the Coop on Avenida Miguel Bombarda.(1954-56)
Photo: B. Lee



functionalist stream. His work is deeply personal – sculptural, decorated, full of wit and fancy, and woven through with impression: Portuguese colonial buildings, Art Nouveau, Wright, African Art. “ (Cooke 1985:p61)

Guedes was a collaborator with Team 10 at Abbaye Royaumont in September 1962 where he gave an exposition of his work in the company of Alison & Peter Smithson, Aldo van Eck, Jacob Bakema, Shadrach Woods, Kisho Kurokawa, James Stirling and Giancarlo de Carlo. (Smithson 1966: p212) Further publication of Guedes' work appeared in the *World Architecture series*, *Volume 1* (1964), *Volume 2* (1965) and *Volume 4* (1967).

Prior to the 1950s the volume of notable modern buildings in Durban had been modest in comparison to the other national centres in South Africa. This situation was addressed to some extent by the work of architect Issy Benjamin, whose practice Crofton and Benjamin (Fig 1.17) designed a considerable number of residential apartment buildings over a period of 10 years that bore the influence of the exuberant contemporary Brazilian modernism of Oscar Niemeyer. “Benjamin developed a style that was sensitive to site conditions and local climate. In his compact and highly functional internal organisation, he creates the illusion of space by using features such as angled walls, perspectival views and corner windows.” (Butler 1987:p9).

Durban's Ocean Terminal (1961-62 – Fig 1.18) by M.S. Zakrzewski and J. Warunkiewicz, also made the connection in architectural form with Niemeyer's buildings in Brasilia and had gained the attention of the *Architectural Review* in March 1963, with a four page feature. Some of the most advanced uses of off shutter in-situ concrete in South Africa were executed in the construction of the building. “Advances in the technology of concrete and steel structures made possible the creation of new forms in architecture. The Ocean Terminal

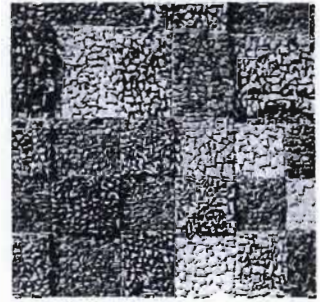


Fig 1.16: Guedes, P - Houses for the Coop on Avenida Miguel Bombada (1954-56). Stone mosaic wall.
Photo: B.Lee

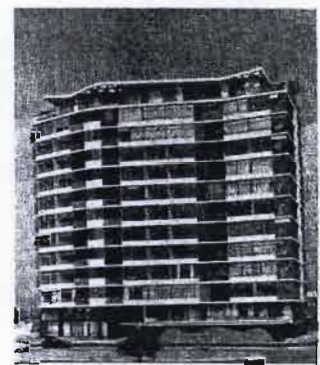


Fig 1.17: Crofton & Benjamin - Las Vegas Apartment Building, (1957).
Ref: *Architect & Builder*, April 1958 :p36.



Fig 1.18: M.S. Zakrzewski and J. Warunkiewicz – Ocean Terminal Complex, Durban (1961-62).
Ref: *The Architectural Review*, March 1963: p193.

(Arrivals Hall) is an example where technology is the over-riding determinant of the form of the building." (Smith 1992:p15)

"By the mid 1950s we were aware of New Empiricism and Le Corbusier's work at Ronchamp and La Tourette, and Barrie (Biermann – Fig 1.19) and I, at least, thought of Modernism as style, and were aware that architecture was moving on. By then Le Corbusier had built a number of projects using local building traditions, and Hasan Fathy was in *The Architectural Review*. As historians and theorists, we both felt that the local South African environment was important for the direction of future architecture in the country - as were South African architectural traditions. So we tried to work to foster our own and the students' understanding of them." (Lewcock 2002 – personal communication)

From 1960, the University of Witwatersrand was once again the centre of a significant architectural uprising. The students (including Antonio de Sousa Santos, Ivor Prinsloo and Paul Swellnus) apparent dissatisfaction with the stagnant direction of the course resulted in a manifesto and exhibition in September 1962. The students "felt it necessary to state their point of view towards architecture at that time. These students had been active in political protest, but at this time were concentrating their concerns on architecture. It was a protest action only in the sense that it asked the staff of the school, and of architects generally, that they respond in similar vein with a statement of their own belief systems, which to the students has become ineffectual, non existent or hidden. The student group also made the important local architectural discoveries of the work of Wilhelm Pabst (Fig 1.20) in Johannesburg and the industrial vernacular of the mining and industrial buildings of the reef" (Prinsloo 1993:p35)

The momentum in the renewed architectural debate was enhanced by a number of architects returning to South Africa after post graduate study in the United States; Julian Beinart from M.I.T.(influence of Kevin Lynch), Wilhelm Meyer and Glen Gallagher from Pennsylvania



Fig 1.19: Barrie Biermann.
Ref: *South African Architectural Record*, June 1964:p8.



Fig 1.20: W.A. Pabst –
Chinese Club, Johannesburg
(1948).

Ref: *Credo* No.18 August
1969.

(influence of Louis Kahn, Lewis Mumford and Robert Venturi).

"The returnees first actions in concert was the formation of the Urban Action Group (UAG); a loosely structured group who came together to intervene in architecture and city affairs so as to influence development." (Prinsloo, 1993: p38)

The influence of the UAG eventually led to developments at Wits whereby following an Educational Symposium in 1969, the Urban Action Teaching Group (UATG- group of 16 architects) was established to jointly hold one of the new teaching posts.

"The UATG took full responsibility for teaching the third year. The basis of the studio subject matter was directed at urban analysis, research and design. The programmes were pursued intensely and the influence of Team 10, particularly Alison and Peter Smithson, and from the urban and architectural studies of Robert Venturi and Denise Scott-Brown." (Prinsloo 1993: p40)

The UATG were responsible for organising the visits of the Smithsons' and Venturi's to South Africa in 1970.

Architects in Cape Town were gaining national recognition, particularly the distinguished designs of Gawie Fagan, Revel Fox and Roelof Uytenbogaardt. Fagan's private practice which "started in 1963 has always included much conservation work, often in country villages. This has developed an intimated understanding of the beautiful vernacular architecture, so that lessons about sense of belonging, structural integrity, plasticity, proportion and scale are inherently part of the new work, without being conscious references." (UIA 1985:cover)

These virtues were encapsulated in his own house at Camps Bay (Fig 1.21 - 1965), "creating a regional vernacular rooted in Cape Dutch vernacular architecture, yet thoroughly modern" (Buchanan 1995: p79).

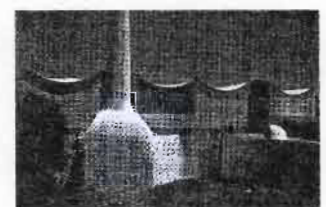


Fig 1.21: Gawie Fagan –House Fagan (1965).
Photo: Ronnie Levitan – *The Architectural Review* 1995: p79.

The same can be said of Revel Fox's early houses (Fig 1.22 & 2.19), "although primarily interested in the development of a new and personal domestic architecture, Fox was too responsive to the continuity of tradition not to be influenced by the past. His houses shared with those of the 18th Century a concern with the articulation of light-coloured surfaces and the use of openings to make precise punctuations related to internal and external volumes." (Lewcock 1980: p320)

A synergy existed between Fox and architects in Natal, Fox explains; "Natal was of interest to me as I was born in Durban, and spent some of my school years at Durban High School. In my early years of study (at the University of Cape town), Barrie Biermann had been my closest friend, and we remained that way throughout his life. I also had a good relationship with Ronald Lewcock, Hans Hallen, Danie Theron, and many of the architects in Natal at that time. My influences were somewhat different, having worked in Stockholm, and having been influenced by the New Empiricism that was current at that time. Working in the isolation of the country town of Worcester, I was also impressed by Pius Pahl who reinterpreted his Bauhaus studies to adapt to the crafts and techniques of a Cape vernacular." (Fox 2002 – personal communication).

In Durban, the influence of sub tropical Brazilian architecture, combined with an understanding of the regional environment is apparent in the seminal House Biermann in 1961 (Fig 1.23 – 1.24). Having travelled to Brazil, Barrie Biermann returned to continue lecturing at the University of Natal as well as start the design of his own house. It is interesting to note that in his case, the influence of the modern movement was importantly synthesised with his own research on the vernacular architecture of the Cape and interests in colonial and indigenous architecture.

"Barrie Biermann's house is a remarkable essay in the integration of indoor and outdoor spaces, and the innovative use of commonly available building materials and recycled components. Touching the

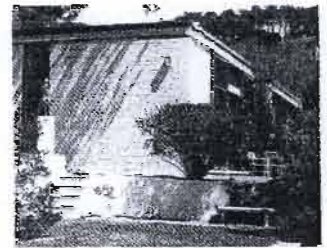


Fig 1.22: Revel Fox
Vlaggenmanhuis (1961).
Ref: Fox, R (1998) p95.



Fig 1.23: Biermann, B – House
Biermann (1961)
Ref: NPIA – *Architecture in our
City* 1978:p31.

Fig 1.24: Biermann, B - House
Biermann (1961)
Ref: Barrie Biermann Library
University of Natal.



dreams of virtually every young (and not so young) architect in Natal.” (Theron 2001:p3.)

“The problem of living in the Natal coastal region is different from much of the rest of South Africa. Architects considering the warm and humid climate, rich vegetation and sloping sites are gradually producing an architecture which, in spite of borrowed plumes, is beginning to be expressive of the environment. Deep overhanging roofs; cross ventilation; or clipped eaves and shutters; and a direct involvement with luxurious growth are characteristics of much recent work. Limewash or white paint applied on strong and rich forms see to strike the correct note in Durban’s subtropical environment.” (*South African Architectural Record*, author un-stated, July 1965)

Biermann’s house in addition to his teaching established a benchmark for a regional modernism, coined the ‘Natal School’, and his example was quickly followed by a succession of his students. Hans Hallen who’s oeuvre is extensive and in turn influential, sought clarity of form and siting in much of his work during the following decades.

Hallen, who had returned from England to set up practice in Durban comments: “I worked for the LCC⁹ on the Roehampton team (Fig 1.26). The scheme was a great showpiece very much modernist and full of tower and slab blocks standing in open fields and the well-maintained Capability Brown garden landscapes! However the low-rise duplexes to which I contributed a variation that entered the LCC standard plan book is what I brought back. I also learned about construction methods which we could develop and which we eventually did.” (Hallen 2002-personal communication)

Hallen’s prodigious portfolio of buildings includes numerous apartment buildings and houses. *House Hattingh* (1962 – Fig 1.25), *Drostdy* (1965 – Fig 1.27), *Riebeck* (1966) were described by Biermann as “youthful and lyrical examples of his eclectic ability, investigating a

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LCC : London County Council



Fig 1.25: LCC Architects – Roehampton Housing (1955-60).
Ref: Raeburn 1980:p272.

Fig 1.26: Hallen ,H – House Hattingh (1962).
Ref: *Architecture SA*, Winter 1981:p42.

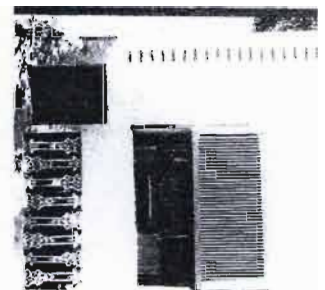


Fig 1.27: Hallen & Dibb – Drostdy Flats (1965).
Ref: Barrie Biermann Library University of Natal.



Cape Dutch atmosphere of whitewashed domesticity in dappled shade with Brazilian ebullience, for a sub-tropical setting." (Biermann 1985)

"Hallen's first contact with architecture beyond local confines came on a visit to the Cape of Good Hope where he was captivated by the humanity and simplicity of the historical style and the rich pictorial quality of its peasant materials. An experience he expanded by visits to the Mediterranean homeland of the Cape style. These cultural forays found expression on his return to Durban in a wide range of building types developing the potential of white modulated surfaces in the local tropical context." (Biermann 1987)

In July 1966, the Natal Provincial Institute of Architects (NPIA), hosted a national conference '*Architecture in the next decade*' at the University of Natal in Durban. Hallen (Fig 1.28) had been largely instrumental in organising the event, and was involved in compiling the programme and list of speakers as well as editing the conference papers for publishing in the *South African Architectural Record*, November 1966.

Although James Stirling had initially agreed to attend, his late withdrawal did not undermine the value of the conference. International speakers included Shadrach Woods (France), Lord Holford (UK) and Prof. A. Rosselli (Italy).

The most significant impact made at the conference was however to be the contingent of young South African architects who would make their mark on proceedings. Papers were delivered by Roelof Uytenbogaart (Fig 1.29) '*The new urban environment*', Willie Meyer (Fig 1.30) '*Values and the making of buildings*', Barrie Biermann '*The Suburb*' and Hans Hallen '*Architect, building and city*'. These presentations were debated and supported during the discussion sessions by Revel Fox, Danie Theron, Bannie Britz and Ivan Schlapobersky. The conference represented a unique gathering of



Fig 1.28: Hans Hallen.
Ref: *UIA International Architect*
Issue 8, 1985: cover.



Fig 1.29: Roelof Uytenbogaart.
Ref: *South African Architectural*
Record, November 1966:p66.



Fig 1.30: Willie Meyer.
Ref: *South African Architectural*
Record, November 1966:p12.

the architects who would make a significant impact on the profession in South Africa during the following decades.

"The conference also introduced innovations which included visiting delegates taking part in a review of student projects from different schools and which involved large scaled projects from the cities where the schools were based." (Hallen 2001:p7)

A particularly lively debate among the students ensued after the presentations of the various schemes, leading Revel Fox to summarise; "It was a most heartening thing to hear the students criticising each other's work and to see the way in which students tackled sophisticated subjects. He firmly believed, that, after this, the profession could never be the same." (Fox 1966:p35)

Architecture in South Africa had found a purpose though an understanding of international influences, however more importantly synthesised with an understanding of regional conditions that would help to express a fundamentally independent architecture.

1.4 Political and economic conditions in South Africa

The National Party government of South Africa was elected into power at the General Election of 1948 and instigated a course of policies, lasting over forty years, designed to effect racial segregation in the country, under the name of 'apartheid'.

It is not within the scope of this dissertation to recite the details of the grossly unjust political system of apartheid, nor is it the intention to pursue the argument whether architecture is possible at all under such conditions. Nevertheless it is important to observe the two major political events that occurred at either end of the study period, namely the 'Sharpeville massacre' of March 1960 and the Soweto uprising of June 1976.

Arising out of the 1966 ISAA Congress, the following manifesto which appeared on the front page of the first edition of *Credo*, October 1966.

"We believe that the withdrawal of the architect from the wider field of city-making and the narrowing down of his activities to the making of certain types of buildings only, is one of the main causes of the chaos and inhuman order of our cities, which have made them unthinkable. We believe that the meaningful making of buildings and the meaningful making of city- environment are inextricably bound up with one another and that, as long as our cities continue to be made according to arbitrary theories, imposed from without, so long will our buildings remain isolated acts, isolated patterns of order. Unrelated to one another and to the greater city order.

We plead for a new humanism in the making of our city- environment – using the powerful forces which are seeking to destroy it at present, to regenerate it and to find the new city –order in the contradictions, the complexity, the richness and the shelter that human life demands from its dwelling place."

Danie Theron, Ron Lewcock, Pat Holdcroft, Bryan Lee, Glen Gallagher, Wilhelm Meyer, Ivan Schlapobersky, Wynand Smit, Hannes Meiring, Jan van Wyk, Keith Alcock, Barry Clark, John Templer, Bannie Britz.

Credo, October 1966: cover.

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ANC: African National Congress – founded in 1912 at a gathering in Bloemfontein. Renamed from South African Native National Congress. Ref: Meredith (1988:p39)

11

PAC : Pan-Africanist Congress. Organisation formed in November 1959 by an 'Africanist' break away group from the ANC. Ref: Meredith (1988:p79)

The ANC¹⁰ and the PAC¹¹ had organised protests throughout 1960 against the 'Pass Laws', measures which had been in effect for decades to restrict the movement of the African population. On 21st March 1960, several thousand people had gathered outside the police station at Sharpeville, a township south-west of Vereeniging, 80 kilometers south of Johannesburg. The police, responding to the refusal of the crowd to disperse, opened fire on the protestors; 69 Africans were shot dead with 186 wounded. The event sparked strikes throughout the country; the government responded with the proclamation of a 'State of Emergency' and the detention of political leaders which was quickly followed by the banning of the ANC and PAC as illegal organisations, 18,000 dissidents had been arrested. (Meredith 1988:p78-83)

"The cost to government was high. White confidence in the apartheid system was severely shaken. Black activists now began to think in terms of revolutionary strategy, and abroad South Africa faced universal condemnation. Though the storm of condemnation was to recede, from Sharpeville onwards South Africa was marked out as one of the worlds pariah states. Foreign investors, meanwhile, fearing imminent upheaval, took their own actions. A sharp outflow of capital from South Africa hit the value of the currency and halved its foreign exchange reserves." (Meredith 1988:pp83-87)

The economic slump was short lived, and despite the government's continued tightening of their oppressive measures, South Africa entered a period of relative prosperity. In June 1964, the infamous Rivonia Treason Trials had been concluded with the black political leadership, including Nelson Mandela and Walter Sisulu condemned to life imprisonment.

"The impact (of the Rivonia Trial) on the economy was negligible.

Foreign investors, far from being frightened away during the early 1960s, became more deeply involved. Throughout the '60s South Africa experienced one of the highest rates of economic growth in the world, second only to that of Japan. Its mines produced record amounts of gold and other minerals and its factories boomed as domestic consumption soared. Foreign trade with western countries rose in leaps and bounds. Foreign investors, after recovering from the shock of Sharpeville, found South Africa to be an increasingly lucrative proposition. In 1970, 260 US corporations reported their South African ventures to be their most profitable investments abroad. Annual inflow of foreign capital in 1970 rose to a level six times higher than the pre-Sharpeville era." (Meredith 1988:pp106-108)

"It is worth remembering that the sixties was a time of lifestyle changes and a period of reasonable growth in income for the 'middle class' whites and a part the Indian community. There was a sense of optimism that new planning forms and building types would respond to make cities better places for all!" (Hallen 2002 – personal communication)

The political and social economic conditions within South Africa would determine the direction of BDG who had operated on the fringes of conventional practice and had enjoyed a large client base from outside the white community. The prevailing situation would ultimately have a bearing on the kinds of commissions the practice was seeking, particularly in the areas of social housing and community projects.

Wilson comments:

"The overwhelming influence at the time was the political context in which we lived and worked. The early seventies were the darkest days of Apartheid. The process of racially segregating society was rampant and one was always aware of the repressive centralised authority of the police state. As privileged whites we were relatively free from the day to day consequences of the political situation, but we were

certainly overwhelmed by the intellectual and moral implications of what was happening around us. We were individually constantly, but privately, having to confront our consciences, how could one continue to practice with integrity as an architect in such a manifestly unjust and repressive society.” (Wilson 2002 – personal communication)

The economic and building boom which had been sustained throughout the 1960s, that had provided ample work for the architectural profession and impetus for newly formed practices, began a decline in 1971 with a sharp increase in the inflation rate and cost of living. The resulting pressures in the poorer communities led to renewed tensions and an outbreak of strikes over issues relating to deteriorating conditions in the townships.

The situation intensified in the face of further government intimidation and culminated in the 1976 student uprising.

“Into this tense and potentially explosive atmosphere the government decided to enforce an old ruling, originally made in 1958, that half of the subjects in secondary schools not taught in the African vernacular should be taught in Afrikaans and the other half in English. In Soweto, the epicentre of the revolt, students, denouncing Afrikaans as the language of the ‘oppressor’, began to boycott classes in Afrikaans. As agitation spread, ‘The South African Students Movement’ took the initiative in organising a protest.” (Meredith 1988:p143)

The protest on 16th June 1976, was once again met by a Police blockade, and as at Sharpeville, shots were fired into the crowds, this time killing a thirteen year old boy, Hector Petersen. The ensuing riots resulted in further deaths and the detention of dissidents as the government attempted to quell the unrest, which

12
Black Conscience Movement: founded by Steve Biko in 1970; to infuse pride, dignity and solidarity among the black population. Banned as an organization, after Biko's death, in October 1977.
Ref: Meredith (1988:p138-142)

continued for several months. Campaigns against the education departments and school boards continued well into 1977 and by September 250,000 students were on strike. On 12th September 1977, Steve Biko, the leader of the Black Conscience Movement¹² was murdered in police custody, and a new wave of public fury was unleashed.

“The international outcry over South Africa’s racial policies endangered export markets. In the aftermath of Soweto (uprising), foreign capital began to flow out (of South Africa). Multinational companies with subsidiaries in South Africa, like Mobil, General Motors, Ford and Barclays Bank, faced intense criticism from anti-apartheid groups.” (Meredith 1988:p166)

CHAPTER 2: SYNERGY

2.1 The 'Natal School' of Architecture

The School of Architecture at the University of Natal had been established in 1949, having been upgraded from a part-time course with examinations conducted by the University of the Witwatersrand. The Schools' inaugural Professor and Head was Paul Connell (Fig 2.1), "a Wits graduate of the celebrated Martienssen era" (Radford 1999:1), who had participated in the 'Transvaal Group' and had corresponded directly with Le Corbusier in his capacity as Secretary of the Architectural Society.¹³

Connell's previous academic experience had been as lecturer at the University of Cape Town, and as founder member and first Head of the Architectural Division of the National Building Research Institute of the South African Council for Scientific and Industrial research in 1945 (*The School of Architecture 1949-1970*: June 1970).

Connell's significant contribution in the early development of the school, was his ability to attract quality staff and visiting lecturers. Such international figures as R. Buckminster Fuller (Fig 2.2 & 2.3), Prof. Nicholas Pevsner, Sir Hugh Casson, Amancio 'Pancho' Guedes, Ove Arup and Richard Neutra visited the school during his period as Head.

"Connell as Head of Department was a very clever man; he was a very shrewd organiser and administrator, he knew that it would be a very good thing for architectural education to get teachers from elsewhere". (Kearney 2002 – personal communication).

The most notable appointments during the formative period of the School, were those of Dr. Barrie Biermann and Dr. Ronald Lewcock in 1952 (*The School of Architecture 1949-1970*: June 1970). Both architects were embarking on distinguished careers and were to develop the History of Architecture course as well as the research and publication profile of the school to a high level of academic standing.



Fig.2.1: Prof. Paul Connell
Ref : *The School of Architecture 1949-1970*.

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See Chapter 1.3

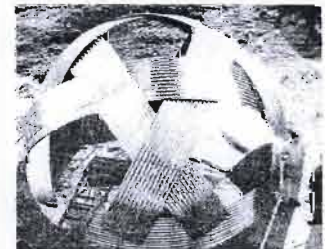


Fig.2.2 & Fig.2.3:
"Indlu" Geodesic Research project carried out by senior students under the guidance of Buckminster Fuller at the University of Natal.
Ref : *The School of Architecture 1949-1970*.
Fig 2.3



"For Connell to have got Biermann and Lewcock in the same School of Architecture was quite a coup, certainly in regards to the abilities of the two men. Biermann came through with a very strong Brazilian regionalism and an incredible interest in South African landscape and architecture. Lewcock was much wider than South Africa, his interests were in the Middle East, Yemen, Saudi Arabia and Da-Es-Salaam. Lewcock could bring not only his tremendous teaching in history or his tremendous interest in South Africa, but he could also bring other regionalisms." (Kearney 2002 – personal communication).

Barrie Biermann's (Fig 2.4) first association with Professor Connell had been at the N.B.R.I., where Biermann was a Research Assistant as a HB Webb Scholar (Biographical notes: *NIA Journal* 1992: 9). It was from there that he was recruited to join the full time staff at the University of Natal in 1952, having completed his Doctoral Degree 'A contribution to the study of the origins of Colonial Architecture in the Cape' at the University of Cape Town the same year.

"His understanding of the architecture of South Africa was encapsulated in his remarkable book, '*Boukuns in Suid Africa*' (1955). A succinctly written book, beautifully illustrated with his own drawings, it showed the main themes of the history of building in South Africa." (Hallen 1991:p57).

In 1964 Biermann was the protagonist in the publication of the reprint series '*Greek Studies*' by Rex Martienssen, published by the University of Natal as source material in response to a request from the students for a facsimile reproduction of the original articles in *South African Architectural Record* (November 1942). Biermann was to later publish his own study '*Greek sites revisited*', published in the same journal in March 1966 alongside Hallen's contribution titled '*The Greek Island*'.

Biermann was also a researcher on the subject of indigenous architecture and published widely on the subject. With reference to 'Indlu: the domed dwelling of the Nguni people' a chapter in the book '*Shelter in Africa*' (1971) Colin Polwarth comments: "Biermann



Fig. 2.4:
Barrie Biermann in lecture
mode. c1962.
Photo. B.Lee.

included commentary on the structure, process of construction, and the names of the various construction constituents of the Zulu hut. This was indicative of his interest in technology, not in its end form, but as a process of evolution and communication". (Polwarth 1994: p43)

Hallen continues;

"Biermann's interests were not constrained by a narrow view, for he saw architecture as a broad and complex intertwining of the arts. To him, urban and landscape design was architecture, sharing a place with sculpture and painting in giving expression to the many cultural drives of a society. He brought to his teaching a rich understanding of the scale, character and form of building as well as their symbolic value, and demonstrated how appropriate setting and interaction between buildings could best shape urban architecture. His examples in teaching were drawn from sources as diverse as Greek temple siting studies, the way in which the Hindu temples of Durban were placed, the organisation of the buildings of the Malay Quarter, or the shape of Greek villages." (Hallen 1991:p57)

Ronald Lewcock (Fig 2.5) completed his BArch degree alongside Biermann at the University of Cape Town in 1951 and came to join the teaching staff at the University of Natal the following year. Synonymous with Biermann's research initiatives "he was one of the first academics to undertake rigorous research into historic South African architecture, including that of indigenous cultures. His PhD dissertation was published as *'Early Nineteenth Century Architecture in South Africa'* (1963) and became a definitive work that is now an item of Africana." (Radford :Citation for Degree of Doctor of Architecture *Honoris Causa* : UND 1999)

Leslie Croft (Fig.2.6) was another formative member of the Natal School of Architecture. Prior to his appointment as lecturer in 1950, he had received an Award of Special Merit at the 1949 C.I.A.M. International Summer School, a reflection of his interest in the Modern Movement. Furthermore, Croft was to develop a particular penchant for the industrialisation of the building process (*The School of Architecture 1949-1970*: June 1970).



Fig 2.5: Ronald Lewcock
Ref: *South African Architectural Record* July 1965:p38.



Fig 2.6 Prof. Leslie Croft
Ref : *The School of Architecture 1949-1970*. June 1970.

Other lecturing staff who had an influence at the school at the time were Ms. Hope Brandt, appointed in 1951, Don Dyke Wells in 1953, Bill Chandler in 1959, and Gerald Goldman and Ted Tollman in 1961.

"In the junior school, the first three years of study, there was a profound commitment to the Modern Movement, modernism in all its common senses, whether it be modern art or modern architecture. Contradictorily balanced on the other hand by the best history teaching in the country and by the best history courses. It could not have been a better educational process to encourage thinking and independence of thinking." (Kearney 2002 – personal communication).



Fig 2.7:
First Year Studio 1959 in Centenary Building.
In the foreground in Nick Beatie and Rodney Harber, with Maria Ester Ferreira to the right and Brian Kearney in a striped blazer. Barrie Biermann is in attendance at the rear.
Photo. E.Lee.

The environment at the school was also one of a strong studio culture (Fig 2.7), this was partly due to small classes; in the period between 1959 and 1965 student numbers were generally less than twenty and sometimes as few as six. (Schedule of student names: University of Natal, School of Architecture records) .

"We literally lived in the studio, there was one person who really facilitated that, and that was Lewcock, because he too lived in the School of Architecture (Fig 2.8). He was a bachelor, had no reason to disappear, he was there at night and he was there at weekends. There is nothing better than to have a staff member around to encourage studio work." (Kearney 2002 – personal communication).



Fig 2.8:
Ronald Lewcock in studio.
On the wall is one of the Barrie Biermann 'Brazilian' cubist inspired murals.
Photo. School of Architecture archives.

Danie Theron (Fig 2.9), a University of Cape Town graduate, joined the full time teaching staff in 1964 and made an immediate impact on the school; having recently completed a MArch degree from Pennsylvania, he would translate the influence of Louis Kahn at first hand.

His experience of American architecture was the subject of his early publications, for example his essay *'The Development of American Architecture; Louis Kahn, in the tradition of Sullivan'* (Theron 1964: pp32-36). In this he was following the example set by Vincent Scully in his examination of Kahn's work. The impact of *'The New Brutalism'* would also shape his thinking, teaching and practice, having penned an article reviewing Brutalism in European architecture (Theron 1965: pp49-52). Theron's interest was therefore in international theory and would find currency in the student work under his tutorship.

Reflecting on the School of Architecture during this period, Kearney concludes;

"I think that our education was coloured on the one hand by this serious dichotomy between the strengths of history on the one hand and the strengths of modernism on the other. We were really encouraged to examine and turn over modernism and look at it from every point of view." (Kearney 2002 - personal communication).

2.2 Convergence

The pattern of convergence of Mikula, Lee, Edgar and Kearney, the founding members of BDG, can be traced in their various student career paths at the School of Architecture at the University of Natal between 1959 and 1967:

Table 2.1

	1959	1960	1961	1962	1963	1964	1965	1966	1967
John Edgar	1	2	3		4	5			
Brian Kearney	1	1	1	3		4	5	M/L	M/L
Bryan Lee		1	2	3	4	5		L	L
Paul Mikula			1	2	2	3	4	5	5

M – MArch candidate / L – Lecturer

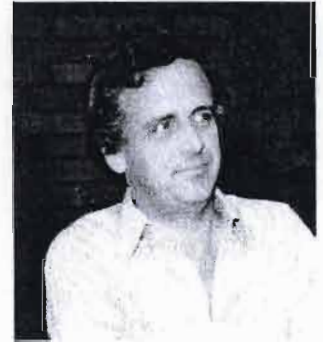


Fig 2.9:
Danie Theron. Circa 1974
Photo. School of Architecture
archives.



Fig. 2.10:
Brian Kearney and Bryan Lee
outside Centenary Building
1962.
Photo : B.Lee.

Table 2.1 illustrates how at various times Bryan Lee, Brian Kearney and John Edgar were in the same year of study in the School of Architecture at the University of Natal. Paul Mikula was the exception, due to the fact that he entered the School later than the others in 1961, and having repeated 2nd year and later withdrawing from 5th year, was the last to complete his studies in 1967.

Bryan Lee

Bryan Lee (Fig 2.11) was an exemplary student who excelled throughout the course, particularly in Architectural Design and History of Architecture, receiving several Certificates of Merit as well as being awarded a University scholarship and the Natal Provincial Institute of Architects (NPIA) Prize for each year of study. Having matriculated in 1958 from Northlands Boys High School, he spent the following year in England where he underwent a heart operation in March 1959 at Guys Hospital, London. This was followed by a period of convalescence which Lee used as preparation for study; "I recall seeing the Architectural review for the first time at a newsagent stall in Harrow, and was struck by the quality of the drawings and buildings" (Lee 2001 –personal communication).



Fig 2.11:
Bryan Lee, 1960
Photo: B.Lee

Lee registered for first year in 1960 and among his classmates for the new intake were Brian Kearney and Ms Maria Ester Ferreira, both repeating the year after having failed Architectural Design. Ferreira soon noticed Lee as he was topping the class assessment lists, and a relationship developed.

Trips to Ferreira's home in Lourenço Marques were frequent, and it is here that Lee first met Pancho Guedes. This was a time when Guedes was receiving international recognition for his significant oeuvre of work, most notably his participation in Team 10 and the inclusion of his work in international publications.¹⁴



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See Chapter 1.2

Fig. 2.12: Excursion to
Mozambique Island, 1968.
From right to left ; Hans Hallen,
Ronald Lewcock, John
Templer and Pancho Guedes.
Photo B. Lee

Lee subsequently spent the vacation between 4th & 5th years in Guedes' office, a time when the Mozambican architect's influence on Lee would incubate.

Lee's academic aptitude would also have contributed to the special relationship that he had developed with Biermann and Lewcock; friendships that would extend well beyond the study of architecture. In December 1963, Lee and Ferreira were married in Durban, with Biermann (Fig 2.13) escorting the bride to the altar, a sign of closeness and respect that the students had for their mentor. Furthermore Gerald Goldman, Lee's third year lecturer, was 'best man' at the ceremony; having been next door neighbours in Manor Drive near the University campus, a mutual friendship had developed.

After the birth of their first child, Chandra in 1964, the Lee's sought a suitable home for their young family. "Lewcock was instrumental in finding an architectural gem that he had discovered in the 1950s during his early research into domestic homesteads in Durban" (Lee 2002 – personal communication), and he joined them in the purchase of Trevean in Bellair¹⁵ (Fig 2.14). Two years later Lewcock was asked to be godfather to the Lee's second child, Aldo.

Rodney Harber (Fig 2.15), a student contemporary of Lee, recalls; "Bryan was a very diligent student, he used to have very good design concepts which he would come up with quite quickly at an early stage." (Harber 2002 – personal communication)

Two of Lee's student design projects have been archived in the 'Star Drawings Collection' in the Barrie Biermann Architectural Library, a Courtyard House in second year (1961) and his Design thesis titled '*Airport Terminal for Lourenço Marques*' (1964), for which he received both a Distinction and Certificate of Merit.

Fig 2.13:
Barrie Biermann at the wedding
of Lee and Ferreira 1963.
Photo B.Lee.



15
Trevean – proclaimed a national
monument in 1981.

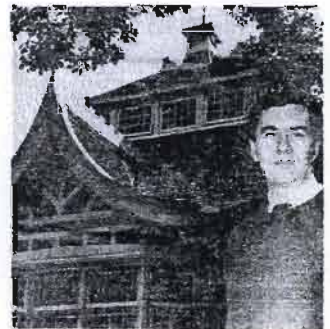


Fig 2.14:
Ronald Lewcock outside the
Billiard Room at Trevean 1970.
Ref :Daily News, August 01st
1970.



Fig 2.15:
Rodney Harber studied at the School of Architecture at
the University of Natal between 1959 and 1965. Was
appointed as Lecturer in 1971. Photo: B.Lee.

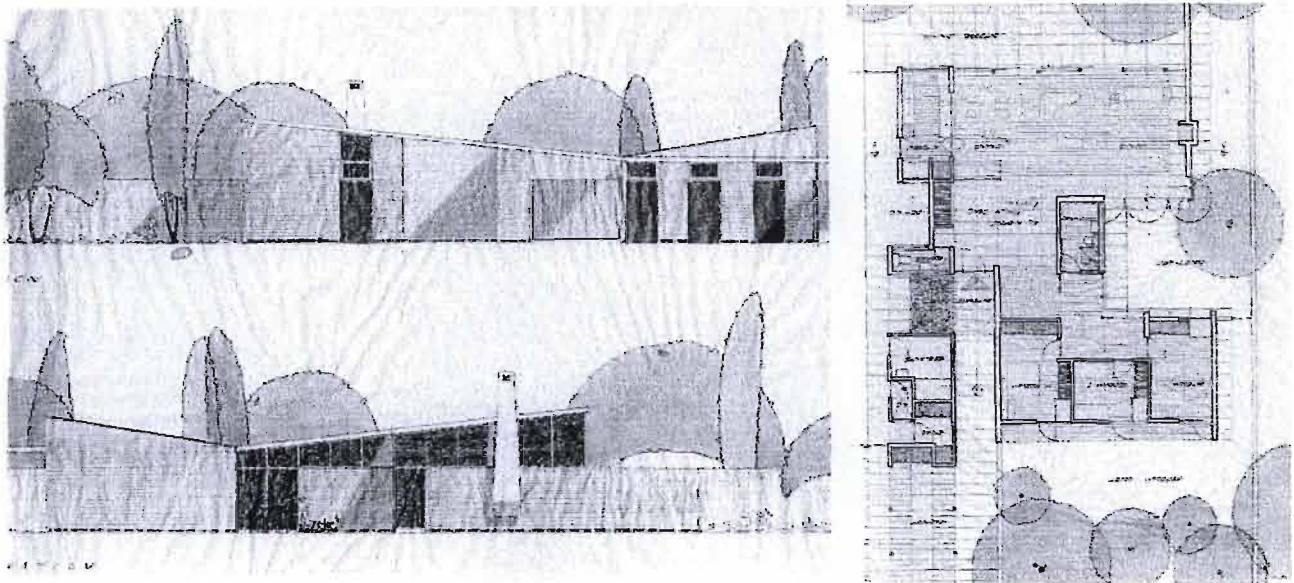


Fig. 2.16: Bryan Lee – student project for a 'Courtyard House' 1961. Elevations and plan. Ref: Barrie Biermann Architectural Library.

The 'Courtyard House' (Fig 2.16) is interesting for its modernist rooting characterised by the interplay of inside and out through the open plan spaces and external courts. It is also noted for its formalistic gestures, planes of mono-pitched roofs and white washed walls with fenestration that is already testing the convention of the window. There is indication here of an architecture keen to make connections with modernist discipline and regional vernaculars, that were concurrently being intellectually explored through the teaching at the School of Architecture, as well as the construction of Biermann's own house (1961: Fig 2.17) and Hallen's House Hattingh (1962 :Fig 2.18).

"I had just met Hans Hallen in 1961 who in turn spoke of his knowledge of Revel Fox in the Cape (Fig 2.19). Fox's early houses were just starting to get published and that is where the chimney came from!" (Lee 2002 – personal communication).

"Bryan from a very early student was a great devotee of the *Architects Journal*. His interest in technology, interest in technique, interest in taking drawing as a powerful manifestation of architecture came to him out of the *Architects Journal*. Bryan was always fascinated by designs, but with a technical interest." (Kearney 2001 – personal communication).

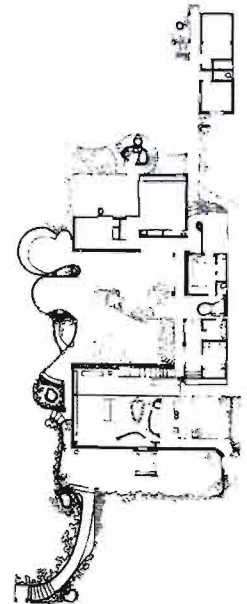
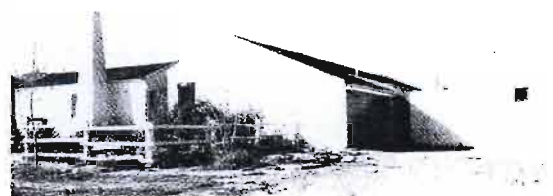


Fig 2.17: Barrie Biermann -House 1961. Plan. Ref: *UIA International Architect* 1985: p47.



Fig 2.18: Hans Hallen -House Hattingh (1962)
Ref: *Lantern*, 1972: p63.
Fig 2.19: Revel Fox -House Wilson (1954).
Ref: Fox 1998: p81.



In the design for his BArch thesis in 1964, Lee demonstrated a strong architectural discipline in planning principles through technological and structural resolutions.

"A logical and impressive architectural solution accommodating all passengers and administrative services in one vast space" (Lee 1964), here Lee describes his design precedent, the terminal buildings at Fiumicino, Rome by A. Luccichenti and V. Monaco (Fig 2.20); Dulles, Washington DC; and TWA, Idlewild, both by Eero Saarinen and Associates.



Fig 2.20: Terminal building at Fiumicino, Rome by A. Luccichenti and V. Monaco. Ref. B.Lee – BArch Thesis 1964.

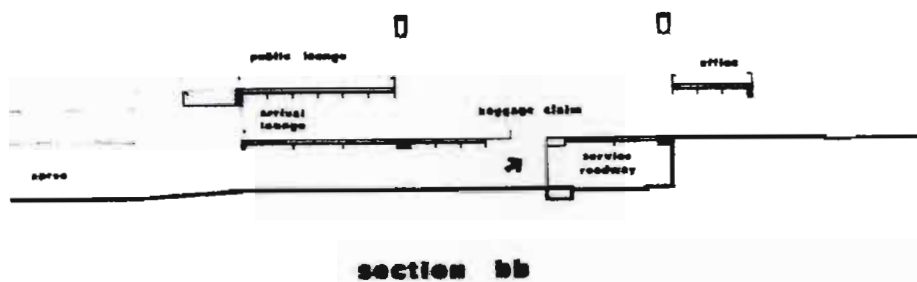


Fig 2.21: B.Lee, BArch Design Thesis 'An Airport terminal for Lourenço Marques' 1964 – Section.

The triangulated inverted concrete ribbed roof is elegantly handled, capped by a slender ridged skylight (Fig 2.21 & 2.22), the roof projects beyond the building enclosure to provide a good degree of cover to the porte-cochere to the south and glazed façade to the north. The dominant roof is suggestive of that employed by Hallen some ten years later in his Huletts Office building at Umhlanga, Durban (Fig 2.23 & 2.24).

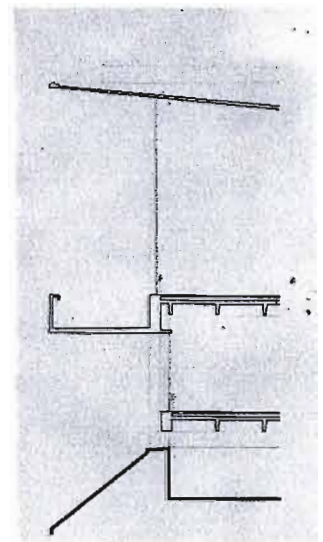


Fig 2.22: B.Lee, BArch Design Thesis 'An Airport terminal for Lourenço Marques' 1964 – detail section.

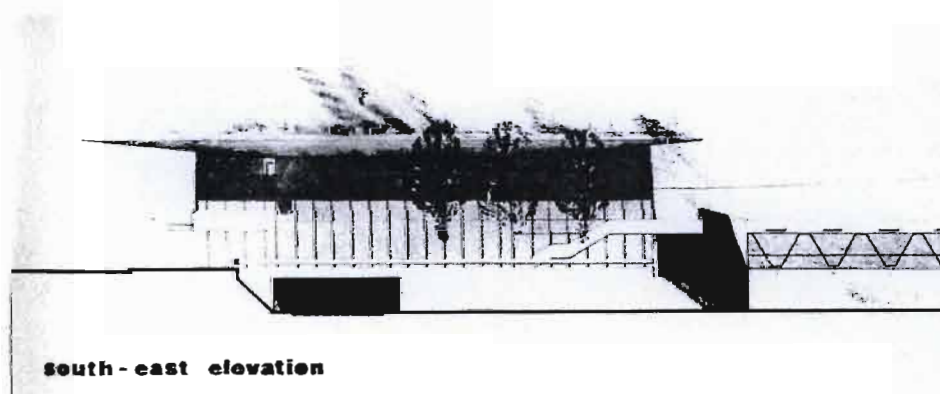


Fig 2.23: B.Lee, BArch Design Thesis 'An Airport terminal for Lourenço Marques' 1964 – Elevation.



Fig 2.24: Hallen Theron & Partners, Huletts Office building at Umhlanga, Durban. 1976 Ref: *Architecture SA* 1981: p44.

The 'boarding finger' (Fig 2.25), the linear elements that extend out onto the apron, depicts distinct Brutalist tendencies particularly at the boarding lobby pavilions. The influence of this British movement would be incumbent in Lee's vocabulary throughout the BDG years.

Incisive planning and the use of a functionally divisive section, reveal Lee's ability to resolve a complex design problem with a clearly stated solution. Danie Theron and Pancho Guedes performing the role as mentors on Lee's thesis, may well have contributed towards the accomplished design resolution.

Lee's thesis was also noted for its striking model (Fig 2.26), Lance Smith¹⁶ recalls; "Bryan will always be remembered by me as the 'mirror man'. His thesis was an Airport for Lourenço Marques. It was a symmetrical building with a wing off each side of a central arrivals/departure space. I don't recall the details of the design but I remember the model – half a model actually. Being a symmetrical building he built only half of the model, stopping on the axis of symmetry. Against this he placed a mirror and low and behold when you looked into the mirror you read the complete building. I've always thought that very clever and whenever I build a model one of the first things that comes to mind is "can I use the mirror trick". (Smith 2002 –personal communication).

According to Lee, Lewcock was the one with the real fascination for mirrors and suggested this device to him. It was he who had mirror clad the entrance hall at Trevean, to compensate for its loss of depth due to the introduction of a dividing wall. (Lee 2002 – personal communication)



Fig 2.25 : B.Lee, BArch Design Thesis 'An Airport terminal for Lourenço Marques' 1964 – 'Boarding finger' elevation.

16
Lance Smith studied for his BArch at the School of Architecture between 1964 to 1970 and was a student of Lee's in 1968. Completed a MArch at the university of pennsylvania in 1971 under Louis Kahn, and a further MSc in 1978 at Columbia University.
Significant architect in Natal, firstly in partnership with Luis Ferreira da Silva and later as partner in the firm Hallen Theron & Partners.
Ref : U/A Issue 8 1985: cover.

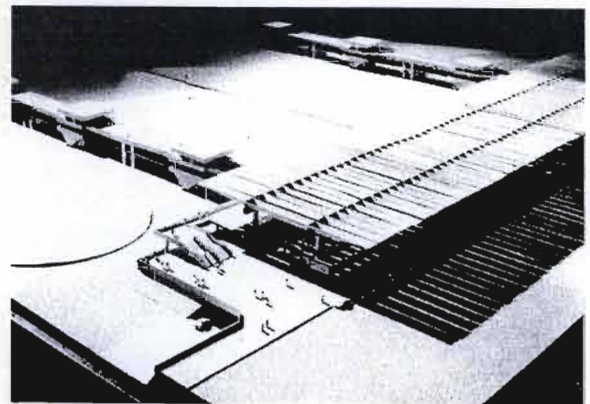


Fig 2.26: B.Lee, BArch Design Thesis 'An Airport terminal for Lourenço Marques' 1964 – model photograph showing the use of a mirror to illustrate the symmetry.
Ref: *South African Architectural Record*, July 1965: p36.

Bryan Lee's first executed project was due to highly unfortunate circumstances; the passing of his father-in-law in 1963 and the consequential design for his mausoleum in Lourenço Marques (Fig 2.27). A simply-stated yet carefully proportioned cubic tomb was constructed with thickset marble panels clad to the blockwork infill walls. The framing columns and door lintel were expressed in off shutter concrete.

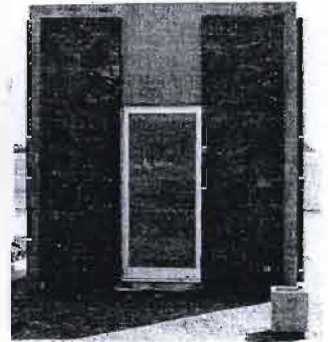


Fig. 2.27: B.Lee, Mausoleum in Lourenço Marques 1963. Photo B.Lee.

Brian Kearney

Brian Kearney (Fig 2.28) had been educated at St. Charles College, Pietermaritzburg where he matriculated in 1957. The following year was spent studying 1st year Engineering at the Pietermaritzburg campus of the University of Natal. In 1959 he transferred to study architecture and although his first year was a disappointment, in repeating he was to team up with Lee for the following three years. From then on Kearney developed into an avid scholar. Their intellectual bond is most noticeable in the History of Architecture course where both would receive marks in excess of 70%, with Kearney receiving Certificates of Merit on three occasions as well as the NPJA prize and David Haddon Prize for final year in 1965. Indeed Kearney's academic acumen would continue beyond the Bachelors degree, obtaining a Distinction in 1967 for his exemplary Master of Architecture thesis '*Architecture in Natal from 1824 – 1893*', published as a book under the same title in 1973 by AA Balkema, as a definitive work.



Fig 2.28: Brian Kearney 1959
Photo E.Lee.

Kearney's contribution to the 'Star Drawings Collection' is mostly from his fourth year work, a collection of projects that indicate an affinity

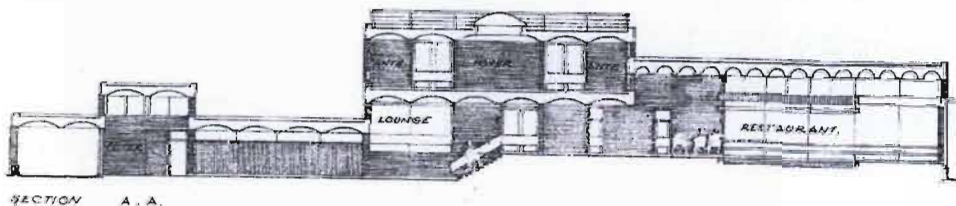
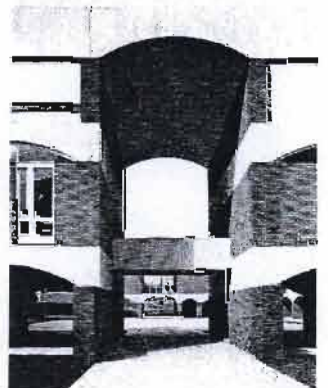


Fig. 2.29: B. Kearney – Student project for a Restaurant 1964. Section.
Ref: Barrie Biermann Architectural Library.

Fig. 2.30 : Falmer House and Physics Buildings at the University of Sussex, 1962/3 by Sir Basil Spence
Ref : Banham 1966: p114.



with British Brutalism. This is particularly evident in a proposal for a Restaurant (1964 :Fig 2.29) where a striking use of brick and concrete are dispersed with planes of glass. The section reveals a series of barrel vaults modulated at varying horizontal levels in differing rhythms and is reminiscent of the Falmer House and Physics Buildings at the University of Sussex 1962/3, by Sir Basil Spence (Fig 2.30). Kearney's restaurant project differs in that the extrusion of the vaults does not impact on the façade, a consideration not overlooked by Lee a few years later in his design for House Azizollahoff (1967 : Fig 2.31) in Lamont Road, Durban.

The proliferation of the shallow concrete vault through practice and student projects can be attributed to the impact of Le Corbusier's Maisons Jaoul of 1955 (Fig 2.32), which itself is referred to as a catalyst of the Brutalist movement. 'The visual impact of the houses had greater effect to underline the impact of Brutalism than the theoretical propositions of the Smithsons.....and became the common standard by which the Brutalism of other buildings could be evaluated'. (Banham 1966: p85).

Kearney's third year project for a Hotel (Fig 2.33) has also been archived in the 'Star Drawings Collection', and was also featured in 'The School of Architecture, 1949-1970' published by the Department of Architecture and Quantity Surveying in 1970.

Kearney's BArch Design thesis in 1965 was a design for a Roman Catholic Cathedral, sited on Medwood Gardens in Durban. The choice of topic was a natural one as Kearney was a practicing roman Catholic and who had previously worked on religious buildings in northern Zululand during vacations in the offices of Meanwell, Anderson & Jackson in Pietermaritzburg. Furthermore, his brother, G.P (Paddy) Kearney, was a brother in the Roman Catholic Church and later became the Director of the Diakonia Ecumenical church agency in 1977.

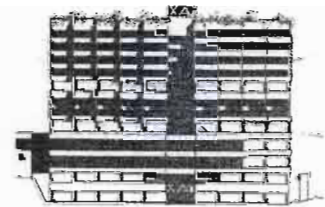
The thesis (Fig 2.36-38) presents a clear interest in geometric design



^ Fig 2.31: B.Lee, House Azizollahoff 1967. Model. Photo: P.Mikula.



^ Fig 2.32: Le Corbusier, Maison Jaoul 1955. Ref: R. Banham 'The New Brutalism' 1966: p97



^ Fig 2.33 : B.Kearney, student project for a Hotel 1962. Elevation Ref: Barrie Biermann Architectural Library



^ Fig. 2.34: B.Kearney, Thesis design for a 'Roman Catholic Cathedral' 1965 – graphic from thesis dissertation.

and platonic forms. A dominant diagonal processional axis bisects a square plan that forms the base for an elaborate hyperbolic paraboloid roof, a relationship Kearney would deploy on future ecclesiastical designs. A strong correlation with the choice of precedent is also evident. There is reference to Robert Maguire's St. Paul's in Bow Common, London and Marcel Breuer's St. John the Baptist in Collegeville, Minnesota. However it is Alison and Peter Smithsons design for the Coventry Cathedral Competition of 1951 (Fig 2.35), a noted polemical scheme in the formation of Brutalist theory (Banham 1966: p42), which offers strong cues to Kearney's BArch thesis design.

"Among all the entries for the new Coventry Cathedral Competition this scheme stands out as a serious and imaginative attempt to approach the problem from the point of view of functional analysis. The church was conceived as one large simple volume containing all the cathedral functions. The plan is based on a square with the altar set on the diagonal forming the east-west axis." (Kearney 1965)

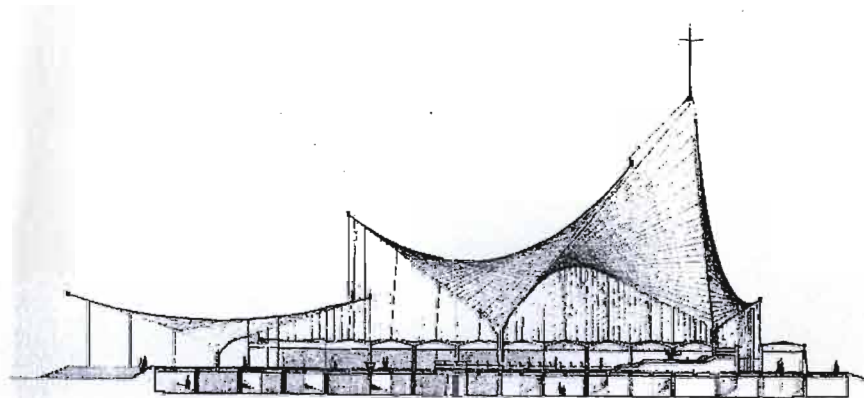


Fig 2.37: B.Kearney, BArch Design Thesis 'A Roman Catholic Cathedral' 1965 –Elevation

It is also apparent from the text in his thesis document that Kearney was developing a commitment to environmental design; there are references to human comfort, acoustic control and illumination.

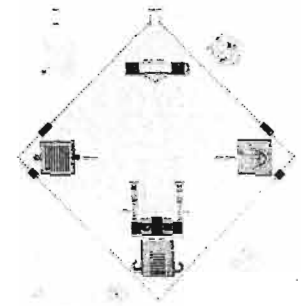


Fig. 2.35: Alison and Peter Smithson, design for the Coventry Cathedral Competition 1951.
Ref : B.Kearney BArch Thesis 1965.

Fig. 2.36: B.Kearney, BArch Design Thesis 'A Roman Catholic Cathedral' 1965 –Plan.

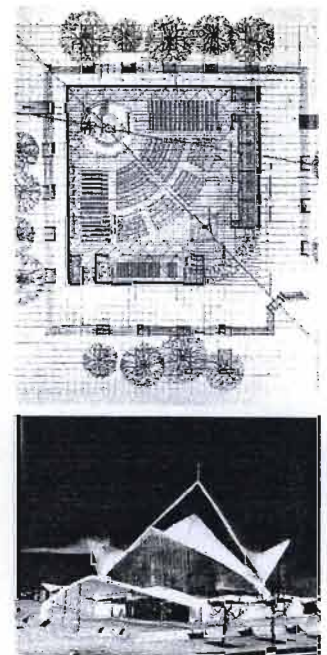


Fig 2.38: B.Kearney, BArch Design Thesis 'A Roman Catholic Cathedral' 1965 .

Paul Mikula

Paul Mikula's progress through the School of Architecture was somewhat turbulent. His marks in the first three years were undistinguished and he had to repeat the 2nd year courses of Building Construction 2 and Architectural Science 1 in 1963 (Student record card: School of Architecture). He was awarded less than 50% for Architectural Design in both 2nd and 3rd years and for someone who would become one of the most respected architects in the region this is all the more surprising. His marks did improved noticeably in his final two years, and he received the NPIA prize for 4th year in 1965 (Minutes of Staff Meeting 16/02/66: School of Architecture).



Fig 2.39: Paul Mikula circa 1965
Photo : P.Mikula.

Mikula stated in the University of Natal student newssheet *Events*; "I learnt so many useless things in half-baked courses at varsity that I ended up learning very little of anything". (Mikula 1975:p2)

"All I wanted to do was to build, I went to University because you had to do that, you had to go through that thing in order to be allowed to build. You did whatever you could get away with there, until you struck a rapport with somebody whom you actually felt that now you are getting something. So you would have a little short love affair over a couple of buildings with Lewcock or somebody." (Mikula 2000 personal communication)

A rebellious nature is already apparent here, the belief that studying was side tracking his desire to create and construct tangible things led him to team up at University with a fellow student Bill Ellens, as 'Paul Bill Studio', to produce designs for speculative builders who were active in the Durban North and Westville areas.

Rodney Harber recalls;

"We put ourselves through University by doing 'spec.' houses for a developer called Shoebridge. Paul and Bill Ellens were the contact men and we would be paid for a full set of working drawings." (Harber 2002 – personal communication)

Fig 2.40: Team working on Mikula's thesis model 1967. Front to back, T.Wilson, B.Lee, D.Jordaan with Mikula standing. Photo: P. Mikula



An interesting University project of Mikula's was featured in the *'School of Architecture 1949-1970'*; published by the Department of Architecture and Quantity Surveying to mark the 21st anniversary of the establishment of the department. A photograph of a model for a 'Country Club' (Fig 2.41) designed by Mikula in 1966, clearly demonstrates a sculptural quality and his formal ability.



^ Fig 2.41: P.Mikula, Student project for a 'Country Club' 1966. Photo P.Mikula.

Mikula's BArch Design thesis, *'A School of Architecture'* (1967) is the only student work of his that has been retained in the Barrie Biermann library. The document itself researches the history of architectural education and philosophies from antiquity through the Guilds of the Middle Ages, the Renaissance and Palladio, the Ecole de Beaux Arts through to the Modern era of Schools of Architecture. Flowing out of this appraisal, Mikula formulates a proposal to accommodate a new School on the Howard College campus at the University of Natal, electing a site adjacent to the Jubilee Gardens.

The design (Fig 2.42-44) has an imposing monumentality with its spatial and formal language boldly articulated, and this is most evident in the model and sections. However the plans that are included in the thesis document do not communicate the design well; this suggests a tendency to not engage with the more mundane tasks in the execution of a project, while the physical and intuitive aspects excel.

Fig. 2.42: P.Mikula, BArch Design Thesis *'A School of Architecture'* 1967. Model. Photo: P. Mikula

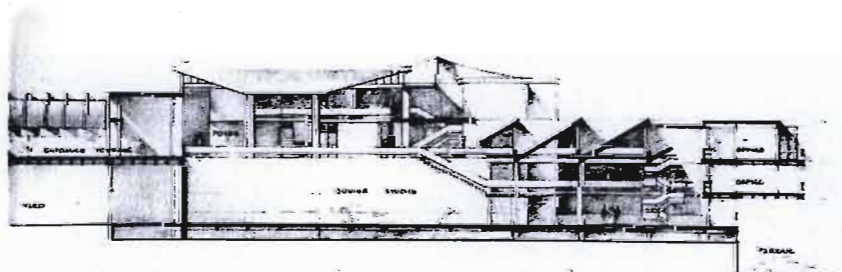
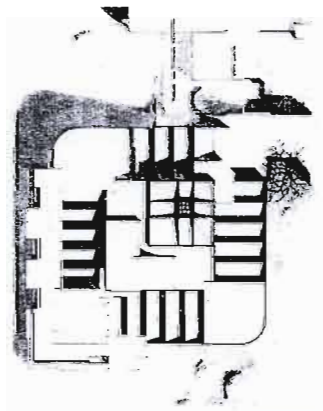


Fig. 2.43: P.Mikula, BArch Design Thesis *'A School of Architecture'* 1967. Model. Photo: P. Mikula

A few years later the University of Natal was in the process of considering a new building to house the School of Architecture. Mikula, by then a part-time Lecturer would promote a programme for the whole

^ Fig. 2.44: P.Mikula, BArch Design Thesis *'A School of Architecture'* 1967. Model. Photo: P. Mikula

School on the design for the proposed building (Minutes of Staff Meeting 27/05/69: School of Architecture).

The 'School of Architecture Exercise' took place between 28th July and 06th August 1969, with Julian Elliott, Willie Meyer and Hans Hallen being the invited specialist critics (Fig 2.45). The project was instrumental in raising a debate on the nature of the design brief to be adopted. One of the main points of contention was the "advocation of the design of a multi-use building" (Lewcock :Minutes of Staff Meeting 26/08/69 : School of Architecture) this appeared controversial and was debated at length amongst staff in the department. It is interesting to note that Peter Engelbrecht, as student representative, was asked to join the sub-committee to facilitate the project. He would later be a key figure in the team headed by Prof. Leslie Croft that was appointed to design what is now known as the Denis Shepstone Building (1972-73). Mikula's thesis had been a precursor to the events that shaped the new School of Architecture building .

Fig 2.45 : Panel of critics for the School of Architecture exercise 1969 from right to left.

Julian Elliott, Willie Meyer, Leslie Croft, Hans Hallen and Peter Engelbrecht.

Ref: 'New School of Architecture', symposium report 1972.



John Edgar

John Edgar (Fig 2.46) had joined the 1st year class of 1959 along with Kearney, and in similar fashion, having spent the previous year studying Engineering at the University of the Witwatersrand. The six months prior to commencing study was spent in the office of architects Crofton & Benjamin in Durban.

Although Edgar went straight through from 1st to 3rd year, he only achieved moderate marks in his subjects. A year out working in two architectural offices in London was taken in 1962 along with extended travel in Europe, before returning to complete 4th & 5th years in the same class as Lee. Improvement in academic marks was only



Fig. 2.46: John Edgar c1964.

marginal, and Edgar completed his Degree in 1964 without having really made a strong impression at the School.

Edgar's BArch thesis, submitted in 1964 was a proposal for 'A Town Centre for Margate' (fig 2.47-48). The document pays attention to historical precedent with particular reference to European civic space, the agora and piazza, with attention to the dominant structures of town halls or Campanile. These elements are reinterpreted in Edgar's proposal for the Margate Centre and the complex is notable for its integration into a steep sloping site.

Edgar observes a local 'architectural idiom' in some of the older domestic buildings. "Composed of one or more circular rooms with rectangular links and projections, the white-washed walls, sometimes softly dappled with shadows of foliage, and sometimes in stark relief against the blue Indian Ocean, never fail to please the eye with their subtle variations and grading of light and shade, and always appear cool and inviting." (Edgar 1964)

Fig 2.47: J. Edgar, BArch Thesis design for a 'Town Centre for Margate' 1964 Model. Project featured in *South African Architectural Record*, July 1965: p37. v

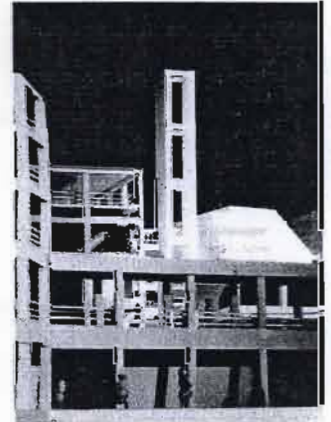
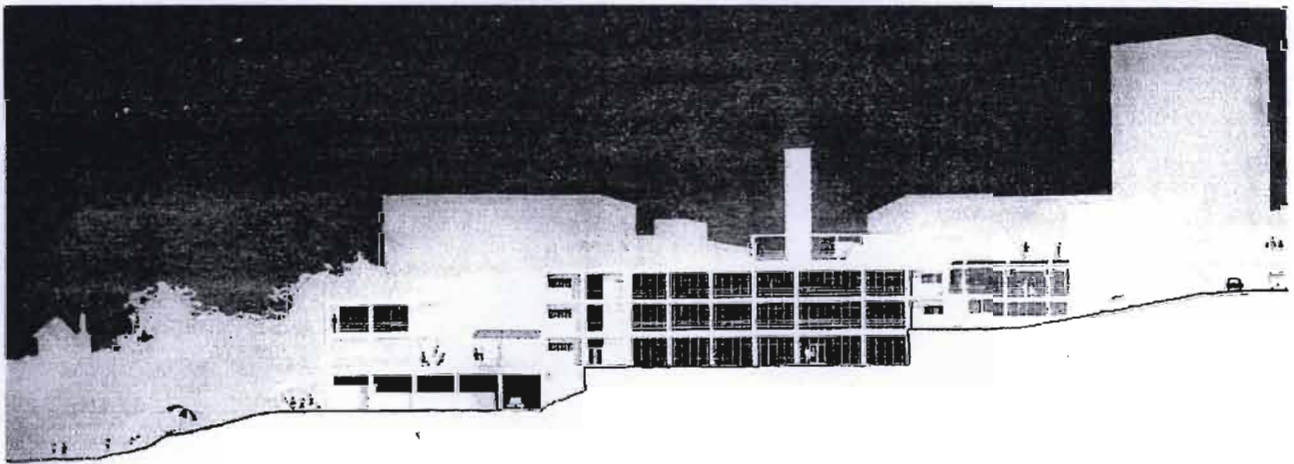


Fig 2.48: J. Edgar, BArch Thesis design for a 'Town Centre for Margate' 1964 Model. v



These sentiments would find substance in the later work of BDG more so than the thesis proposal itself, which is characterised by an imposing white frame which speaks of the 1936 Italian Rationalism of Terragni at Como (Fig 2.49).

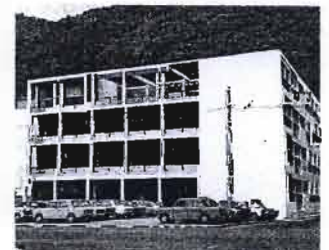


Fig. 2.49: Giuseppe Terragni, Casa del Fascio at Como, Italy, 1936. Ref: Raeburn, M, 1980:p264.

2.3 Practice

The years between 1964 and 1968 were the period when Lee (1964), Edgar (1964), Kearney (1965) and Mikula (1967) graduated and moved into either employment, further study or private practice. It is a period where associations would be cemented and professional experience gained.

Table 2.2

	1965	1966	1967	1968
John Edgar	Basil Powell Johannesburg Markowitz & Margoles London	Anthony Slaven London	Private Practice Durban	Private practice Durban
Brian Kearney	5th year	March candidate Part time Lecturer	March candidate Part time Lecturer Private Practice Durban	Temp. Lecturer Private Practice Durban
Bryan Lee	Hallen & Dibb, Durban Part time Lecturer	Temp. Lecturer Private Practice Durban	Temp. Lecturer Private Practice Durban	Temp. Lecturer Private practice Durban
Paul Mikula	4 th year	5 th Year (de-reg) V. Polfreman Durban	5 th year V. Polfreman Durban	March candidate Private Practice Durban

Bryan Lee

After graduation, Lee was employed almost immediately by Hallen & Dibb, a leading Durban design practice, and spent the Christmas period of 1964 working on an Urban Design Competition for Tel Aviv with Hans Hallen and Danie Theron. The most significant project in the office at that time was the New Student Residences for the University of Natal, Hans Hallen's first major institutional commission (Fig 2.50).

"Initially the approach to the design was similar to the apartment buildings for speculative developers Hans had recently completed which were based on ordinary residential layouts. Danie Theron's influence was key in the development of the project. Although not in partnership at this stage, he persuaded Hallen to develop an urban strategy for the group of buildings that greatly improved the project and

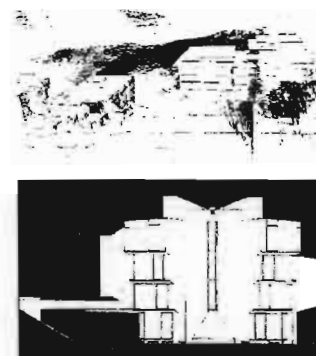


Fig 2.50:
Hallen & Dibb – New student residences for the University of Natal, 1965-68.
Hallen's sketch of the complex at top, with Lee's drawing for the elevation of John Bews Hall below.
Ref. *Architecture SA* 1981:p44.

brought in essence, a 'Kahnian' quality to the buildings. Danie Theron and Hans Hallen had formed a working relationship that was based on creative and competitive stimulus. The two collaborated again shortly afterwards for a joint entry for the Dublin University Library Competition in early 1966." (Lee 2002-personal communication).

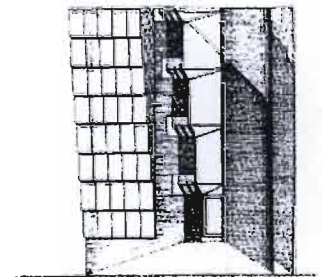
During the course of 1965, Lee was responsible for the documentation and site administration of the first building of the group of residences to be constructed, John Bews Hall (Fig 2.51). It is most noted for its "pioneering work in insitu concrete and the development of large internal spaces and strong pedestrian system" (*Architecture SA* 1981:p44). There is a distinct correlation with concurrent campus buildings in the UK and the project is in tune with Brutalist sensibilities. The projecting building profile is reminiscent of Stirling and Gowan's 1959 project for Selwyn College (Fig 2.52).

"Working at Hans' office was a stimulating environment; Hans was pushing boundaries with quality builders on quality buildings" (Lee 2002- personal communication). Lee **also** learnt a great deal on site administration as the contractors were Dougall and Munro, "a highly skilled and knowledgeable contractor of the 'old school', the Managing Director being Mark Lipshitz, an authority on the building contract" (Lee 2002 – personal communication).

In July of 1965, Lee was appointed as a "half time lecturer for mornings only" (Minutes of staff meeting 28/07/1965: School of Architecture) at the School of Architecture and resigned from Hallen & Dibb later in December, having completed the year of 'practical training' required to register as an architect¹⁷. This coincided with the upgrading of Lee's appointment to the position of Temporary Lecturer that was effective from the first semester of 1966 and official from the beginning of April (Minutes of Staff meeting 16/02/66: School of Architecture). It was at this time that Lee was engaged on his first private commissions.



^ Fig 2.51: Hallen & Dibb - John Bews Hall under construction in 1965. Photo: B.Lee.



^ Fig 2.52: Stirling & Gowan – project for Selwyn College 1959. Ref -*Architectural Design* 1982:p28.

17

In a letter dated 23rd of April 1966 to the Natal Provincial Institute of Architects, Lee advised that he wished to change from the Salaried to the Practising Class of Membership with address at the School of Architecture, University of Natal (Minutes of Provincial Committee Meeting NPIA 13/05/66)

Bryan and Ester Lee were close friends of Dr. Yusuf Minty who knew of Indian families looking for young and talented architects to design their new family houses, and so recommended the Paruk family to Lee. Two adjoining sites in Meerut Road, Westville had been acquired for which the two brothers Ismail and Yacoob Paruk were requiring designs. **Houses IM & YM Paruk** (1966 – Fig 2.53-2.59) were designed as a series of pyramidal slate capped pavilions that were displaced around courtyards in clusters, providing a sense of unity across the two family dwellings. The use of white walls, corner windows and articulated fenestration is also evident. Denis Jordaan, a student who later assisted Lee with the working drawings comments:

'I first met Bryan when he started as a part time studio master. I had seen interesting drawings coming out of the dyeline machine next to the lecture theatre on the ground floor of the Centenary Building. Shades of Louis Kahn that later turned out to be IM/YM Paruk sketch design drawings.' (Jordaan 2002 – personal communication).

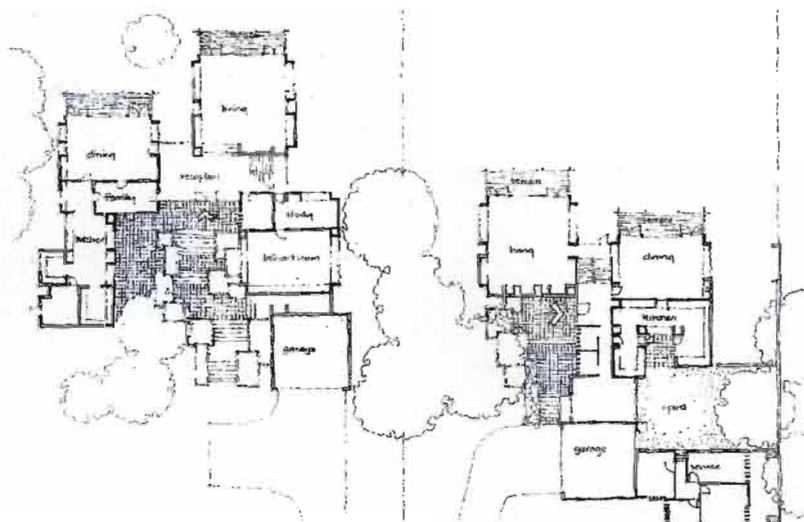


Fig 2.56: B.Lee - Houses IM & YM Paruk 1966. Plans. Drawn by D.Jordaan.

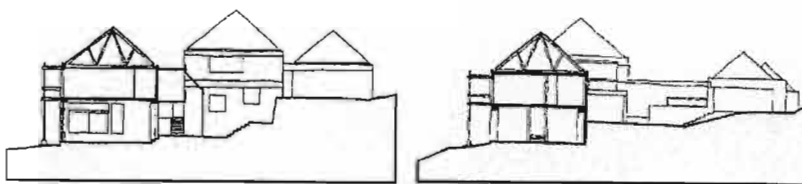
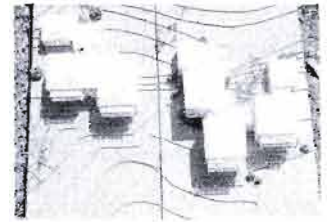


Fig 2.57: B.Lee - Houses IM & YM Paruk 1966. Sections & Elevations

Indeed there are formal cues reminiscent of Kahn's Adler House (1955 – Fig 2.58), perhaps an echo of the way Theron had influenced the



^ Fig 2.53

Fig 2.54 v



^ Fig 2.53- 2.55: B.Lee – Houses IM & YM Paruk 1966. View of model and completed buildings. Photos: P.Mikula.



^ Fig 2.58: Louis Kahn – Adler House 1955. Plan. Ref V.Scully, Jr. – 'Louis Kahn' 1962:p70.



^ Fig 2.59: B.Lee (right) with contractor on site at Houses IM & YM Paruk 1966. Photo : B.Lee

development of Hallen's University buildings the previous year.

Further commissions on the recommendation of Dr. Minty soon followed, and in similar fashion to the Paruk Houses, they were exercises in space and volume through the articulation of painted brickwork. **House Randeria** (1966 – Fig 2.60-2.62), on a small corner site in Parlock was in fact Lee's first completed contract as a practising architect (due to a very slow contractor on the Paruk houses); the modestly scaled house is enriched externally with corbelled brick buttresses, and internally by a well defined double volume.

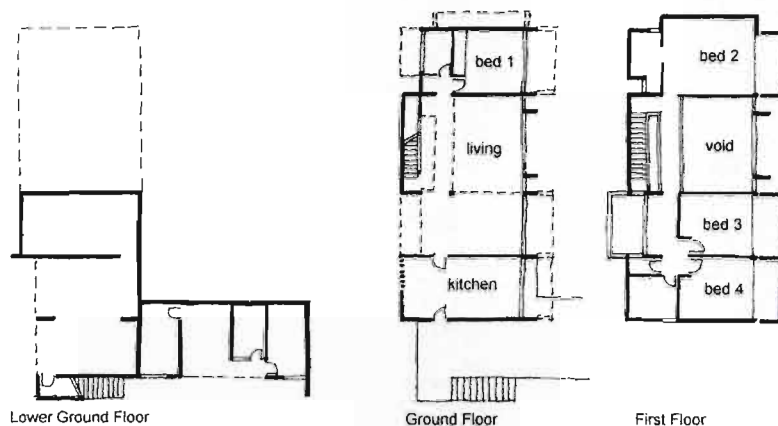


Fig 2.61: B.Lee - House Randeria 1966. Plans.

House Dr. Goga in Pietermaritzburg (1967. Fig 2.63-2.66) although sharing a similar brief to the Randeria house is more expressive. A trellised forecourt with cantilevered concrete beams introduces the point of entry. A double volumed living area is naturally lit through a filigree grille block screen that is bisected at first floor by a planted shelf. Externally, concise corner windows and defined stepping gables give the house a distinctive aesthetic.

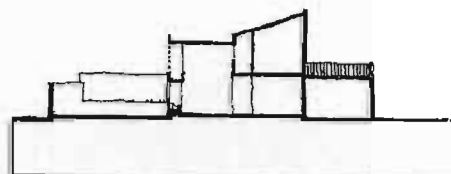
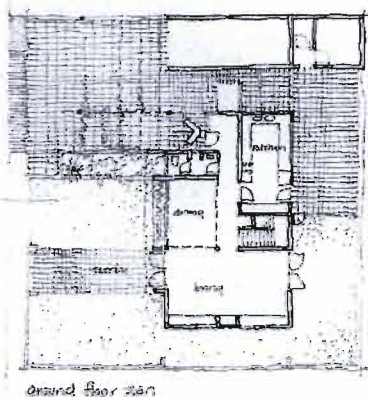


Fig 2.65: B.Lee - House Goga 1967. Plans drawn by D.Jordaan.

Fig 2.66: B.Lee - House Goga 1967. Photo: P.Mikula.



Fig 2.60: B.Lee – House Randeria 1966. Photo by author. March 2003.

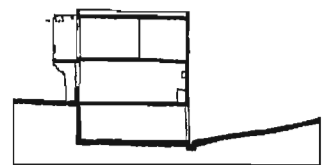


Fig 2.62: B.Lee - House Randeria 1966. Section.

Fig 2.63: B.Lee – House Goga 1967. View of double volume over dining room. Photo: P.Mikula.

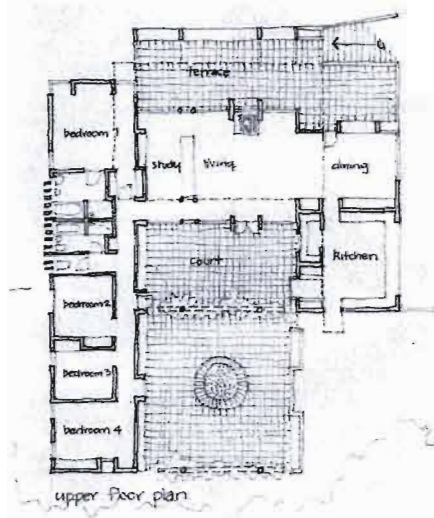


Fig 2.64: B.Lee - House Goga 1967. Section.



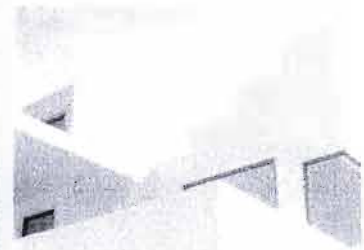
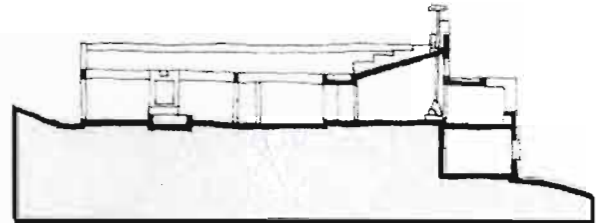
House Naidoo in La Mercy (1967. Fig 2.67-2.70) adopts similar formal gestures, this time addressed in a courtyard solution. The dramatic site, high on a hill overlooking the Indian Ocean dictates the position of the living spaces and view terrace, which take full advantage of the setting.

Fig 2.67: B.Lee - House Naidoo 1967. Section. V



<Fig 2.68: B.Lee - House Naidoo 1967. Plan drawn by D.Jordaan.

Fig 2.69: B.Lee - House Naidoo 1967. Photo: P.Mikula. V



^ Fig 2.70: B.Lee - House Naidoo 1967. Photo: P.Mikula.

Evidence of the Guedes influence is noticeable in the stepped gable parapet of both House Goga and House Naidoo. Reference may have been taken from the family of buildings, self proclaimed by Guedes as his 'Euclidian Palaces' and 'Some bargains in the tropical bush style' buildings. (Guedes -1985 - Fig 2.71)



^ Fig 2.71: P. Guedes - Hostel for student nurses at Chicumbane in Mozambique. The stepped gable was a feature of Lee's Houses Goga & House Naidoo. Ref: *Arquitectura Portuguesa* July / August 1985:p40.

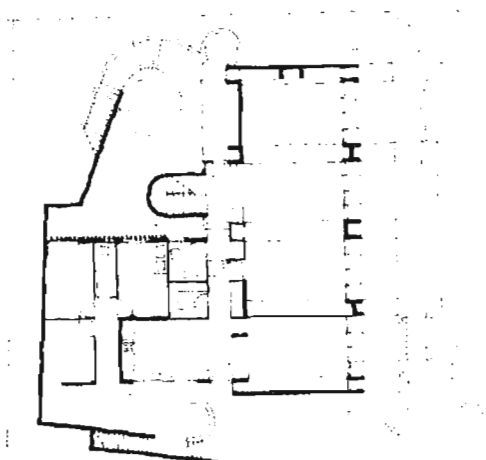
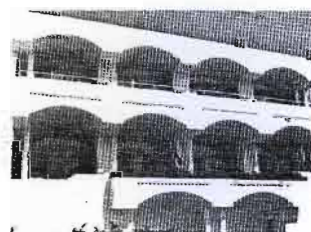


Fig 2.72: Ref: Plan 74.3.74



^ Fig 2.73: Ref: Plan 74.3.74

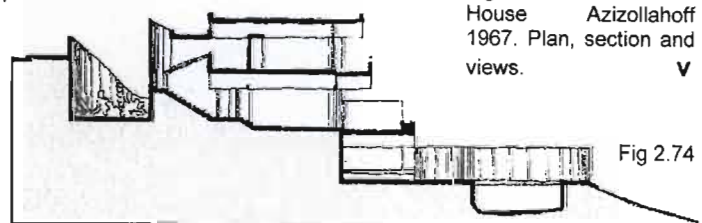


Fig 2.74

< Fig 2.72-75: B.Lee - House Azizollahoff 1967. Plan, section and views. V

Another notable pre-BDG building of Lee's was **House Azizollahoff** in Lamont Road, Durban (1967 - Fig 2.72-76). A dominant order of brick vaults establishes the structural rhythm of the house and strikes a visual reference to the polemical Maison Jaoul of Le Corbusier (1955).

V Fig 2.75: Photo: P.Mikula.



The construction of the vault intrigued Lee, and for technical reference he visited the site of the long spanning brick vaults being employed to construct new brick kilns for the Coronation Brick & Tile Company in Durban (Fig 2.77). Further clarity and advice was sought by way of letter to architect Julian Elliott in Northern Rhodesia, whose vaulted house designs were known to Lee. In the case of House Azizollahoff the horizontal cavity between the brick vault and floor slab was filled with cardboard tubes as void filler and permanent shuttering to reduce the potential load of the slab.

Brian Kearney

Brian Kearney, upon completion of his Bachelor's degree in 1965, continued his studies by registering for a Master of Architecture research Degree. At the same time the department took the opportunity to invite Kearney onto the teaching staff as a temporary lecturer. His application for membership of the NPIA in the Salaried Class was approved by the Provincial Committee on 15/04/1966. Upon request (letter from Kearney to NPIA dated 06/03/1967) this was transferred to the Practising Class of membership on 07/04/1967, his address being the School of Architecture, University of Natal.



^ Fig 2.76: B. Lee - House Azizollahoff 1967. Brick barrel vaults under construction. Photo: B. Lee.

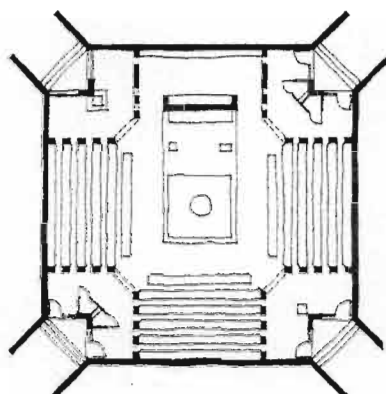
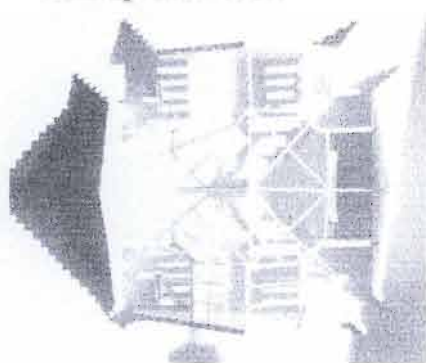


^ Fig 2.77: Brick kilns under construction. Photo: B. Lee.



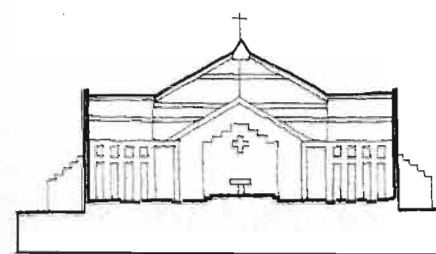
^ Fig 2.78: B. Kearney - Chapel at Eagle's Peak High School 1967. Photo: B. Kearney.

v Fig 2.79: B. Kearney - Chapel at Eagle's Peak High School 1967. Photo: B. Kearney.



< Fig 2.80: B. Kearney - Chapel at Eagle's Peak High School 1967. Plan.

Fig 2.81: B. Kearney - Chapel at Eagle's Peak High School 1967. Section.



Kearney's experience in Church design was to lead to his first major commission which was for a new **Chapel at Eagle's Peak High School** at Qachasnek in Lesotho (1967 – Fig.2.78-2.83). Evidence of an interest with Platonic forms is apparent in the use of the square plan with strong symmetrical discipline. The Chapel is entered from three of the corners, and access to the pews is

Fig 2.82: B. Kearney - Chapel at Eagle's Peak High School 1967. Photo: B. Kearney.



articulated through wall openings from the lobbies. The sanctuary is the focal space and is centrally placed under a pyramidal roof, sharing Lee's concurrent experimentation with this form at the Paruk houses. Also the strong influence of Louis Kahn is apparent; in the case of the Qachasnek Chapel, the plan and formal qualities of Kahn's Jewish Community Centre Bathhouse at Trenton 1955-56 (Fig 2.84). The use of stone masonry is indicative of the area, and demonstrates sensitivity to vernacular architectural language to complement the strong contemporary form.

Fig 2.84: Louis Kahn – Bath House, Trenton Jewish Community Centre, 1955-56. Ref V.Scully, Jr.. 'Louis Kahn' 1962:n72

Paul Mikula

Paul Mikula had worked in various offices during vacations and his year of practical training had included stints in the offices of Hallen & Dibb, Keith Gow & Howes and Fridjhon & Fulford. The latter two experiences had diminished his belief in an architectural apprenticeship, having being reduced to a backroom draughtsman on mundane projects. His desire to be in control of his own architectural decision making was already being partly fulfilled through his designs for speculative housing developers.

"Paul's background with 'Paul Bill Studio' must have given him enormous confidence to set out his own stall". (Jordaan 2001 – personal communication)

In 1965, during his 4th year, he married Maggie Suttie, a ceramic artist and embarked on his first autonomous architectural project, the design for their house, **House Mikula** (Fig 2.85-2.94) in Durban.

"The whole thing was that I wanted to build for myself, that's why we got involved with building 207a whilst I was still a student. I was renting a flat in Lawrence Road with Bill Ellens; the roof was being fumigated and everything burnt down (Fig 2.86). Only three weeks before that, a friend of mine, who was an insurance salesman, had sold me a policy covering the household contents, I don't think that I had even paid the first premium on it. We used the payout from the fire damage to

Fig 2.83: B.Kearney - Chapel at Eagle's Peak High School 1967. Preliminary plan. Photo: B Kearney.

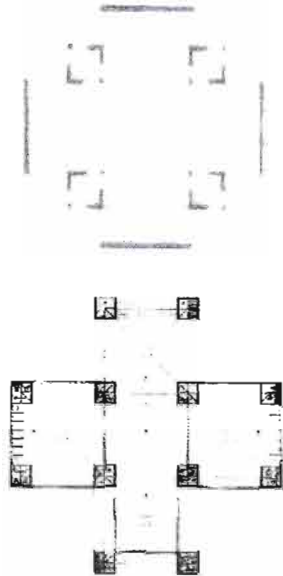


Fig 2.85: P.Mikula – House Mikula (1965). Entrance View. Photo: P.Mikula



Fig 2.86: Mr.G.E. McGuire pictured outside the remains of his house. "Lost in the fire were the belongings, including valuable books, of a university student and his wife who occupy one of the two flats in the large house." From a newspaper cutout (undated).

finance the first stages of the house. My mother-in-law had given us the piece of land as a wedding present; that R7000 insurance money was the budget, that is what architecture was about, making the most from a tight budget.” (Mikula 2001 – personal communication)

Fig 2.87: P.Mikula – House Mikula (1965). Forecourt.
Ref. *SA Garden & Home*, 1971:p20. v

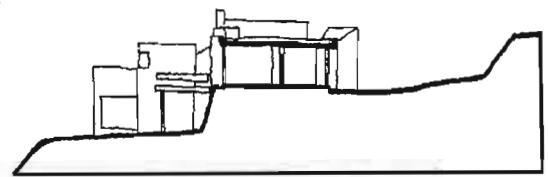
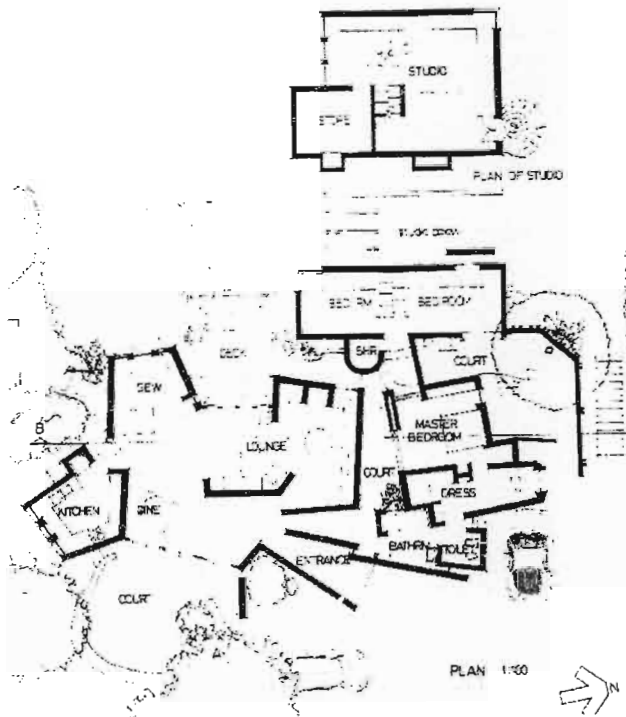


Fig 2.88: P.Mikula – House Mikula (1965). Section ^

< Fig 2.89: P.Mikula – House Mikula (1965). Plan.
Ref. *Lantern* – September 1972:p61.

At a lecture given to students in 1999, Mikula spoke about how in the early stages of the design process for the house, he would spend hours on the site, sketching and examining the sun paths across the west facing slope, the positions of trees and the vistas from different points of vantage. (Mikula 1999 –lecture notes)

This intimate analysis of the site conditions developed into an intuitive exploration of plan and formal conception which resulted in a building of organic and spatial richness.



^ Fig 2.90: P.Mikula – House Mikula (1965). Living room.
Photo: P.Mikula



^ Fig 2.91: P.Mikula – House Mikula (1965). Model.
Ref. *Credo* 1969.

Located on a 30,5 x 27,4m deep pan-handle site, the initial phase of the house was sited above a 2.6m existing retaining wall bisecting the upper and lower halves of the property. The plan was a series of solid planes and masonry enclosures that articulated the entrance, living spaces and main bedroom area. Walls were roughly bagged and

whitewashed brickwork; the floors laid with common 'Coronation' clay bricks laid on edge onto a concrete surface bed. The walls themselves, being non-rectangular and trapezoid, proved quite an ordeal for the contractor to imagine a method of setting out.

'Zank' Zietkiewicz, a structural engineer who would later have a long professional association with Mikula recalls the solution:

"I remember going one Saturday morning with Paul and he had a bucket of whitewash with big brushes and he then proceeded to pace out the position of the walls and splash the paint onto the ground this way and that, to show the builder where he would have to dig the foundations. That was the setting out of his house." (Zietkiewicz 2001 – personal communication).

Mikula states;

"It was wild in plan (Fig 2.89) with the extension of these roofs sticking up into the sky, a tropical thing. When I got to build it I treated all the roofs separately. I was going to do amazing things with the roof, the idea was to make the gumpoles go in circles and things like that and I basically wanted to repeat the same thing on the floor. I was trying things as a student out of hand, the whole idea was to have this organic thing". (Mikula 2001 – personal communication)

"Its not really a functional house, it's exciting; full of little things that happen when you turn the next corner". (Mikula *SA Garden & Home* 1971).

The roofs were originally conceived as flat elements over the underlying spaces, but these forms soon developed into a series of raking elements (Fig 2.92-2.93). Due to the limited budget, an economical solution was proposed which comprised of timber pole rafters supporting tongued and grooved boarding with a mineral-surfaced sheeting membrane as waterproofing, a technology which tested the imagination of the plans examiners at the Local Authority and did not meet with their approval.



Fig 2.92: P.Mikula – House Mikula (1965). Roof view.
Photo: P.Mikula.

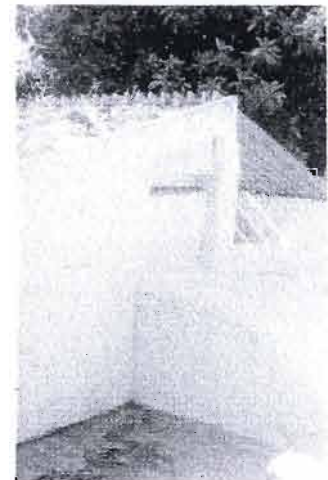


Fig 2.93: P.Mikula – House Mikula (1965). Roof view.
Photo: P.Mikula.

"Paul Mikula's own house continued in the tradition of the Biermann house, but in an iconoclastic manner that appealed to many architects of his generation and students" Theron 2001:p3.

"The corporation wouldn't allow the 'malthoid'¹⁸ roof that I had built. We spent a long time arguing and then Zank designed a concrete roof to go on top of the existing one two or three years later. I wasn't paying rates while it wasn't approved, and that eventually paid for the concrete!" (Mikula 2001- personal communication)

Construction of the house had started in 1965 and was completed the following year, and was partly the reason why Mikula had delayed doing his thesis until 1967. Mikula's first child Hans (Max) was born in April of 1966 during the construction of the house, the expanding family precipitated the need for two further bedrooms to be incorporated into the design: these were added to the west of the plan and were placed astride a cascading staircase which led down to a new studio space at the lower garden level.

"We had to add on a studio for our pottery wheel and kiln, I had to do some crazy things – which resulted in exciting solutions. There were the unexpected bits of architecture just for fun, such as the Greek staircase down to the studio (Fig 2.94)". (Mikula 1971:p21).

Mikula's explanation to the origin of such moments of inventiveness is to suggest that ' I must have seen it somewhere, you don't do things that you haven't seen before'. (Mikula 2001– personal communication).

In April 1969, *Credo*, a national broadsheet edited by Danie Theron, dedicated its four pages to photographs of the completed house, the plan and a model. Theron's introduction is by way of a quotation from Louis Sullivan, "The architect must cause a building to grow naturally, logically and practically out of its condition.... outward appearances resemble inner purposes". Theron continues; "The primary functions of the house spaces are to enclose, protect and create privacy. The living spaces of the house are characterised by the enclosing aspect and intentions. Distinction between the dominant and the residential spaces fade and the in-between spaces sharpen simultaneous perception of multifacetedness and attached heightened sense to the whole. In contrast with the sharp articulation and remote clarity that typifies our architecture of today, this factor of double meanings and

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Malthoid – bitumours roof
sheeting – heat fused
waterproof membrane.

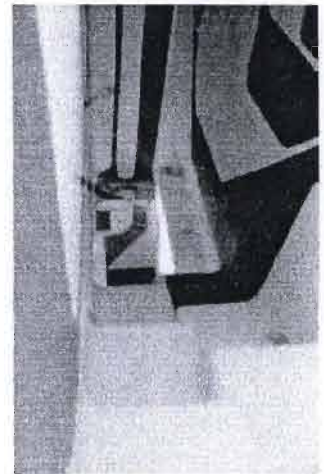


Fig 2.94: P.Mikula – House Mikula (1965). 'Greek' stairs from the studio.
Photo: P.Mikula.

"Entrance a huge funnel
pulling drawing into itself
A hint of the space enclosed
radiating from a spine
holding the living space
together

Form
The enclosure of space
Form
Rough cut timber
Split pole
Rough brickwork
Cemwash
A particular environment
Asking little money
Yet existing generously

Out exists as an extension
of in

Light or dark moulding
defining space

Fireplace introverted

Terraces pulling out into the
interrelation of spaces
always part of a greater
space."

Denis Jordaen
Credo 1969

multiple interpretations heighten the liveability. The generic nature of the spaces aspire to a perceptual quality of changeable rather than physical flexibility and in this way operates to retain toughness and permanence of three dimensional form." (Theron 1969: *Credo* No.16).

House Mikula made an immediate impression on fellow students and launched a reputation for Mikula as a designer of unusual creativity.

Jordaan recalls:

"A fellow student came rushing in one day looking quite wide-eyed. He had stumbled over this 'place' off the beaten track and that I must come NOW. We took off on the scooter and ended up at Paul's house still under construction. Nobody around, so we walked around just taking it all in. A couple of weeks later there was a crit going on for the seniors, which we were eavesdropping. Someone asked Paul to talk about his scheme. A face at last. Talk about first impressions, khaki shorts, old shirt and slops, and he called Barrie (Biermann) by his first name. Heavy!" (Jordaan 2001 – personal communication).

Mikula through the design and construction of his first house, had shown that it was possible to create architecture outside the conventional norms of practice, to experiment with form and reinterpret the use of ordinary and inexpensive materials. His house was intuitive and personal, of no patent precedent, and in the context of local architecture in the mid 1960's stood out as an original work of merit, which gained the due recognition of students and the profession alike.

Also in 1965 Mikula was introduced to Herbie Lazarus, a property developer and estate agent in his father's business, trading as M.B. Lazarus & Son, who had good connections within the Indian Community in Durban.

"Bill Ellens and I were doing perspective drawings for Crofton and Benjamin. Issy Benjamin had left the office at this stage and we were helping out as Crofton was very busy. Herbie had approached him to do a job and he passed him onto us and then basically I got on very

Fig 2.95: Denis Jordaan c 1967
Photo: B.Lee.



Fig 2.96: P.Mikula – House Marian (1965). Garden view.
Photo: P.Mikula.



Fig 2.97: P.Mikula – House Marian (1965). Entrance view.
Photo: P.Mikula.

well with him and we became friends. In a way they kept us in work for years after that, with houses for people who were somehow related. With Herbie being the 'Godfather' figure, he would pass legacies to these young people and as they grew up they got a house, and we came with it" (Mikula 2001 – personal communication).

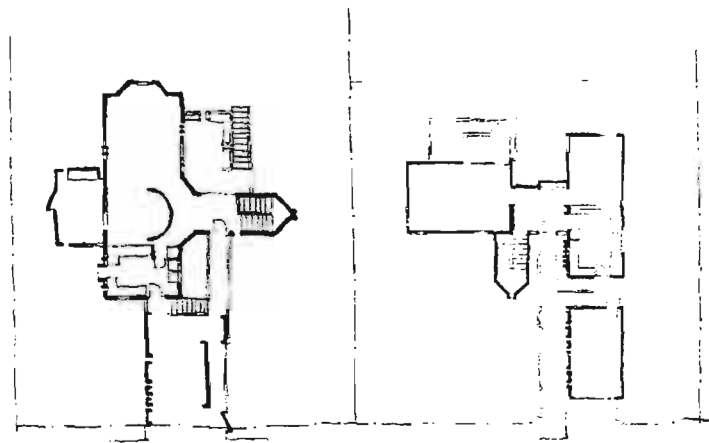


Fig 2.99: P.Mikula – House Lazarus and House Marian (1965). Plans.

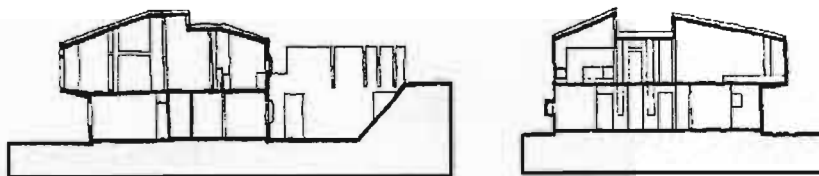


Fig 2.100: P.Mikula – House Lazarus and House Marian (1965). Sections.

2.96-2.104), **House Marian (1965)** and **House Lazarus (1965)**, on the upper sites of a sub-divided plot of land between Villa and Ward Roads in Sydenham. Herbie lived in the original house which occupied the lower southern quadrant (Fig 2.98), the remaining three quadrants were vacant to facilitate the accommodation for the extended family.

As Mikula was still a student, he had to use the offices of a registered architect, Victor Polfreman, to be able to submit the building plans for Municipal approval. This explains why the municipal records of Houses Mikula, Lazarus and Marian carry the name of V. Polfreman M.I.A. as architect.

Mikula designed the houses concurrently; both are strictly orthogonal in plan and double storey in volume, in contrast to his own house. Both

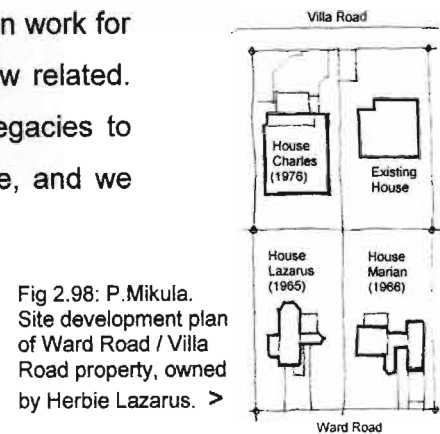


Fig 2.98: P.Mikula. Site development plan of Ward Road / Villa Road property, owned by Herbie Lazarus. >

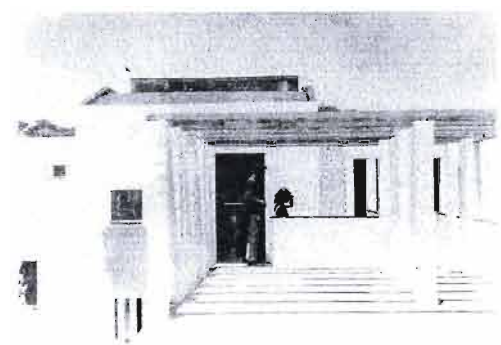


Fig 2.101: P.Mikula – House Lazarus (1965). Entrance view. Photo. B.Lee.

Fig 2.102: P.Mikula – House Marian (1965). Garden view. Photo. D.Jordaan. v



Fig 2.103: P. Mikula – House Lazarus (1965). View from Ward Road. Photo. B.Lee.

are entered from Ward Road via a suspended concrete platform to the upper living level, with sleeping accommodation on the lower floor with access to the garden. "The idea was that they both opened up downstairs to the garden, that is why the staircases were expressed that kind of jumped out of the building". (Mikula 2001- personal communication).

Wall finishes were whitewashed and expressed brick jointing was detailed at the angled junctions of the walls to the lounge bay window, the bricks are uncut and create a distinctive edge.

"Herbie was very keen on his music, in the living room of his house the floor kicked up to improve the acoustics; after he died one of his kids got it and tried to fit it out like a lounge, the furniture had to be adjusted so that the legs tapered to accommodate the slope" (Mikula 2001 – personal communication).

Roofs are mono-pitched and constructed of 'Blaco' panels (standard timber door elements from a local building supplier) suspended between timber rafters with mineral surface sheeting waterproofing over. Mikula had developed this detail with Victor Polfreman; the 'Blaco' panel became the modular unit of the construction and determined the rafter spacing.

Another commission in 1966 was also brought into Polfreman's office; a first of a few alterations to a house in Marine View Avenue, Durban North to **House A.G. (Chic) Steele** (Fig 2.105-2.107).

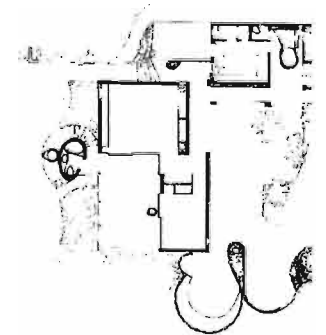
The alteration consisted of a new bedroom wing to the original house. Mikula utilised a similar constructional language as in his previous houses. Additional expressive elements were however introduced; a large curved wall to an intermediate court and a cylindrical and sculptural shower enclosure, the latter reminiscent of the bathroom tower to the lower wing at House Biermann (1961-Fig2.106).



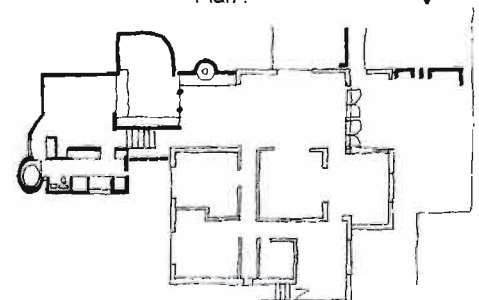
Fig 2.104: P. Mikula – House Lazarus (1965). Garden View. Photo: P. Mikula.



Fig 2.105: P. Mikula – House Steele (1966). Photo by author in March 2003.



^ Fig 2.106: B. Biermann – House Biermann (1961). Part Plan. Ref: *UIA – International Architect* 1985: p47.
Fig 2.107: P. Mikula – House Steele (1966). Plan. v



However, tensions were mounting between Mikula and Polfreman over fee payments and eventually when the situation didn't improve Mikula terminated his association with Polfreman and turned instead to John Edgar to assist with the steady influx of work. Edgar had been gaining experience in England and on his return to Durban was available to assist Mikula. He established an office¹⁹ firstly in West Street (1967) and later in August of the same year in St. Andrews Street, mainly based on Mikula's commissions.

"Then John Edgar came along, somebody had said that he had come back from England, why don't you get him involved, I was still trying to do thesis". (Mikula 2001- personal communication)

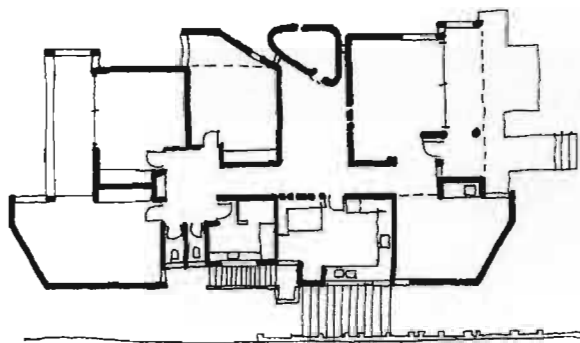


Fig 2.109: P.Mikula – House Sukkuma (1967). Plan.



Fig 2.110: P.Mikula – House Sukkuma (1967). Ref: Plan 74.4.74

Mikula was also working on a design for **House Sukkuma** (1967 – Fig 2.108-2.112) in Overport. Once again an orthogonal plan, with angled adjustments, is counterpoised with articulated mono-pitched roof planes, culminating in an elaborate clerestorey light over the prayer room gallery. Verandas to the east and west are screened to the road by end walls punctuated with large circular openings providing further formal definition.

Edgar explains:

"In 1968 I opened a small practice in Durban. I had very little work but optimism reigned supreme. Paul Mikula was in his final year at university; he had some private jobs at various stages of documentation that required supervision, working drawings, design etc.' (Edgar 2001 – personal communication).

¹⁹ Edgar registered in the practising class of membership of the NPIA Records on 07th April 1967 (NPIA 07/04/67)

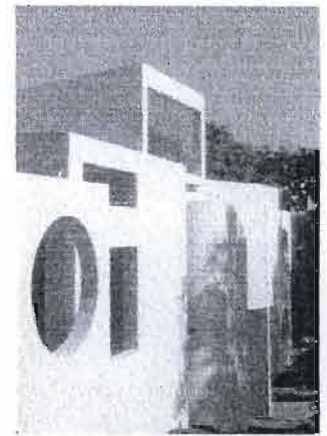


Fig 2.108: P. Mikula – House Sukkuma (1967). Photo: P.Mikula.

Fig 2.111: P.Mikula – House Sukkuma (1967). Section.

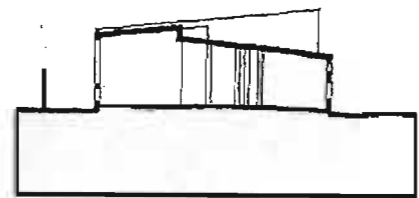
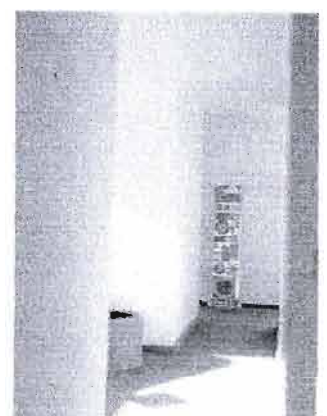


Fig 2.112: P.Mikula – House Sukkuma (1967). Light penetration into prayer room gallery. Photo: P. Mikula



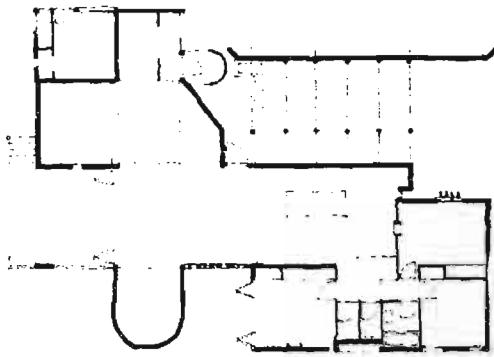


Fig 2.113: P. Mikula – House Shoba (1968) Plan.
Ref: *Plan 74.3*: p6.

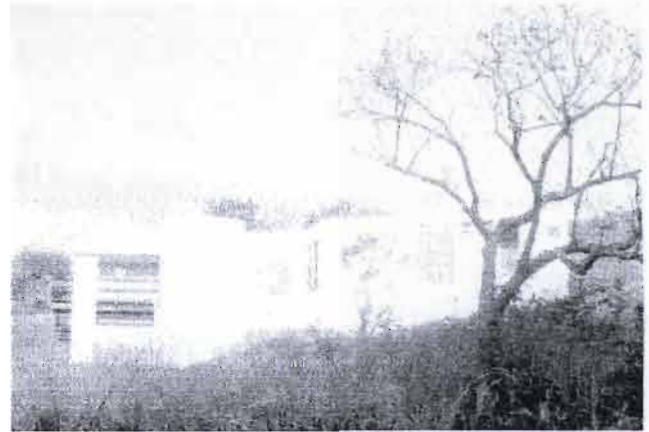


Fig 2.114: P. Mikula – House Shoba (1968). Photo: P. Mikula.

House Shoba (1968 – Fig 2.113-117) in Reservoir Hills is skilful in the way that Mikula introduces a colonnaded entrance court to draw the visitor through to the living spaces. Furthermore the use of a continuously pitched roof which falls consistently with the ground slope is the first apparent occasion where Mikula adopts this roofing typology, which had been so well executed at Barrie Biermann's own house in 1961, thereby setting a clear precedent (Fig 2.117-118). It is also the occasion where Mikula is starting to engage more with reinforced concrete technology particularly the roof itself, where the even fall is interrupted with expressive rooflights and a 'giant' box gutter (Fig 2.115) to catch the rain discharge. The curved brickwork wall enclosure to the living room could also take formal cues from Hallen's House Seedat (1965 – Fig 2.119).



Fig 2.115: P. Mikula – House Shoba (1968) Ref: *Plan 74.3*: p6

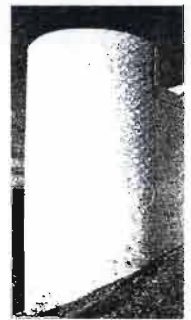


Fig 2.116: P. Mikula – House Shoba (1968) Ref: *Plan 74.3*: p6

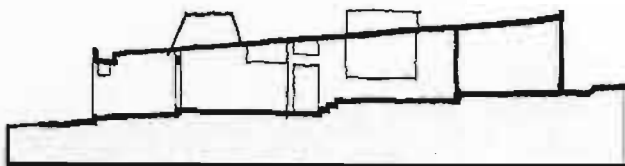


Fig 2.117: P. Mikula – House Shoba (1968). Section.

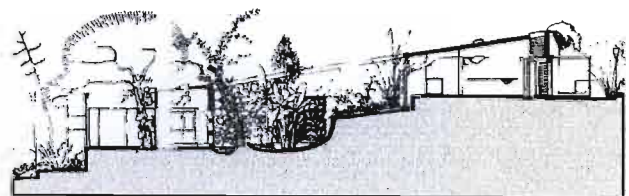


Fig 2.118: B. Biermann – House Biermann (1961). Section.
Ref: *UIA –International Architect* 1985:p47.

Evidence of purposeful roofing solutions are developed further in the pair of houses for the Reddy brothers in Silverglen, Chatsworth; commissions also resulting from the recommendation of Herbie Lazarus. Mikula, having finally completed his degree, gained registration in the practising class of the NPIA on 08th May 1968 and undertook these commissions under the style of Paul Mikula Architect, operating from the University of Natal.



Fig 2.119: Hallen & Dibb – House Seedat (1965).
Ref: *Architecture SA* 1981:p45.

Fig 2.120: P.Mikula – House J.N. Reddy (1968). Photo: P. Mikula >

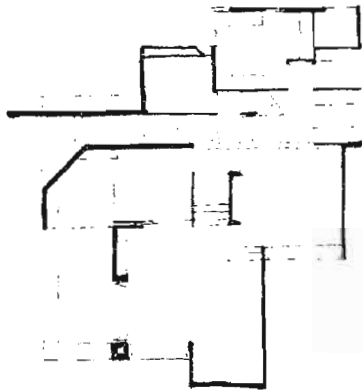


Fig 2.121: P.Mikula – House J.N. Reddy (1968). Plan. Ref: *Plan 74.3*: p6

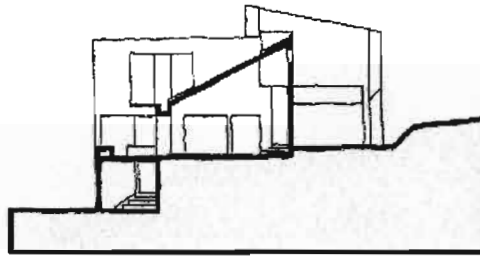


Fig 2.122: P.Mikula – House J.N. Reddy (1968). Section.



Fig 2.123: P.Mikula – House J.N. Reddy (1968). Photo: D.Jordaan

The **House for J.N. Reddy** (1968 –Fig 2.121-123), a politician, is sited high on a steep slope and adopts a strong geometric language with punctuated surfaces, articulated fenestration and dominant mono-pitched roof forms. The **House for M.N.Reddy** (1968 –Fig 2.124-126), who ran the local family trading store, by contrast is a modest statement, sited by a stream, it is a low-scaled building with a unifying mono-pitched roof, as at House Shoba.

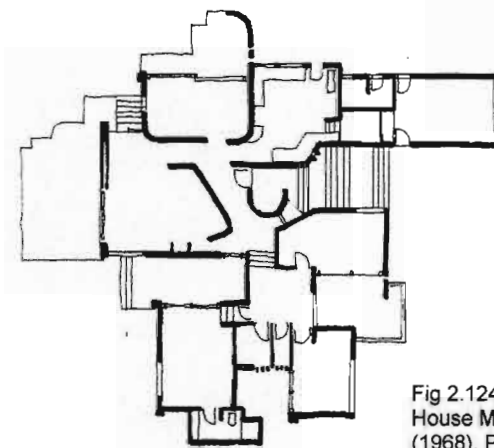


Fig 2.124: P.Mikula – House M.N. Reddy (1968). Plan.



Fig 2.125: P.Mikula – House M.N. Reddy (1968). Section.

Fig 2.126: P.Mikula – House M.N. Reddy (1968). Model. Photo: P. Mikula. v



By mid 1968, Mikula, Lee and Kearney were all practising individually and lecturing collectively at the University of Natal, and John Edgar's association with Mikula through 1967 had greatly assisted with his professional development. Strong synergies between them were emerging. The buildings described so far are pre-BDG (incorrectly attributed to BDG in various publications: eg. *Plan 74.3* & *NPIA 1-1981*) and they establish the architectural themes which were to be developed in the later work of the practice.

2.4 Academia

A contributing factor in the circumstances that led to the formation of BDG, was the convergent experience of Lee, Kearney and Mikula as lecturers at the School of Architecture. Table 2.3 indicates their teaching responsibilities, and shows at which times they were studio colleagues.

Table 2.3 Teaching Duties

	Bryan Lee	Brian Kearney	Paul Mikula
1965 Term 2	½ time studio lecturer (mornings only)	5 th year student	4 th year student
1966 Term 1	1 st year studio master (Frost/Templer/Biermann)	2 nd year studio master (Tollman)	5 th year student <i>Professional Practice 2 only</i>
Term 2	1 st year studio master (Kearney/Biermann)	1 st year studio lecturer (Lee/Biermann)	
1967 Term 1	1 st year studio master (Kearney/Biermann) Winter School	1 st year studio lecturer (Lee/Biermann) Winter School	5 th year student
Term 2	1st year studio lecturer (1/2) (<u>Biermann</u> /Frost/Kearney) 2 nd year studio lecturer (1/2) (Templer/Kearney) 1 st year B.C. Lecturer	1 st year studio lecturer (<u>Biermann</u> /Frost/Lee) 2 nd year studio lecturer (Templer/Lee)	5 th year student
1968 Term 1&2	4 th year studio master (Theron) 3 rd year B.C lecturer 4 th year Theory Lecturer 3 rd / 4 th year trip to Rand with Mikula	1 st year studio master (Biermann/Mikula) 1 st year Theory Lecturer	1 st year studio lecturer (<u>Kearney</u> /Biermann) 3 rd / 4 th year trip to Rand (Lee)
1969 Term 1&2	2 nd year studio lecturer (1/2) (<u>Stewart</u>) 3 rd year trip to Rand with Theron	1 st year studio master (Mikula/Templer Lewcock)	1 st year studio lecturer (1/2) (<u>Kearney</u> /Templer/Lewcock)

Studio master = studio co-ordinator

- names of studio lecturers / facilitators in brackets – studio master underlined

Bryan Lee

Lee was initially involved as a 'half time' studio lecturer at the invitation of Lewcock, for mornings only. Lee was then in the employment of Hallen & Dibb. By the first term of 1966 Lee's appointment had been upgraded to that of Temporary Lecturer²⁰, full time; his new responsibilities being that of 1st year Studio Master with Biermann and Templer assisting in the studio (minutes of staff meeting 16/02/1966: School of Architecture). This arrangement was repeated the following year, the first real change being in 1968 when Lee was asked to run the 4th year studio with Theron assisting.

Lee also lectured in Building Construction to 1st and 3rd years. Lee's enthusiasm for design and technological innovation were instrumental in making the course fulfilling for the students. "Everything I learnt in Building Construction as a student came from Gerald Goldman, I carried on the tradition he had established. He was a solid critic and very good technically." (Lee 2002 – personal communication)

Lee brought examples of his professional experience into his teaching which was appreciated by students who saw this as an exciting departure from the regulation course material. Denis Jordaan recalls "the building construction exam was a revelation, for once it wasn't a slice of Mackay's²¹ but a typical proper job (that I had been doing all year with Bryan). According to Bryan he was approached by Ted Tollman (examining) and asked about the details drawn in the exam, "did they work?" Tollman enquired, "I hope so, we've been using them all year" was Bryan's response." (Jordaan 2002 – personal communication)

In August 1968, Lee and Mikula organised a study tour for 3rd and 4th year students to the Transvaal, primarily to visit the technologically advanced construction sites of the Carlton and Standard Bank Centres in Johannesburg. Time was also spent at the School of Architecture at the University of Witwatersrand, sculptor Eduardo Villa's studio as well

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Lee's appointment was confirmed in July of 1965 (minutes of staff meeting 28/07/1965: School of Architecture)



Fig 2.128: Gerald Goldman was the Building Construction lecturer at the University of Natal between 1961 and 1965.

21
W.B. Mackay : *Building Construction* was first published in 1938 and was the standard reference book for students.

Fig 2.129 : Lee in discussion with Eduardo Villa at his studio in Johannesburg (1968). Photo: B. Lee.



as the offices of Meyer and Gallagher. The expedition was repeated the following year in 1969 and followed a similar agenda, with Theron being the accompanying staff member. Students travelling on these trips who would later work with Lee and Mikula at BDG were Denis Jordaan, Anthony Wilson and Denis Boyd in 1968 and Colin Savage and Roy Owen in 1969.

Brian Kearney

Kearney was appointed as a temporary Lecturer at the same time as Lee in January 1966, and was invited to be Studio master in 2nd year with Ted Tollman assisting. During the course of subsequent terms, Kearney's responsibilities were lightened to accommodate for his MArch research activities, and was occupied in the 1st year studio as supporting lecturer to Lee and later Biermann. Upon completion of his higher degree in 1967 he assumed the duties of Studio master in 1st year, a position which he held during 1968 and 1969 whilst also expanding his theoretical horizons through teaching Theory of Architecture to the 1st year students.

Winter School

The Winter School of 1967 was a major academic event which was convened by Leslie Croft (Fig 2.131) in response to a decision that the 'Natal School of Architecture needed the stimulation of a major design session' (Croft 1967 – University of Natal Winter School '67 report).

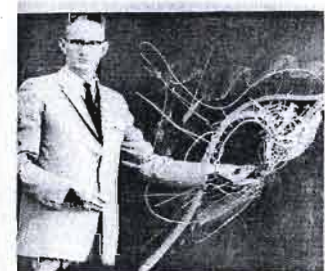
The event was held from " the 3rd to 14th of July with visiting critics, Prof. Gino Valle (Italy), Prof. E.W.N. Mallows (University of Witwatersrand), Prof. Julian Beinart (University of Cape Town), Mr. Revel Fox (Cape Town), Mr. Pancho Guedes (Lourenço Marques), Mr. Peter Whitworth (Pretoria) and Mr. Hans Hallen (Durban)". (*The School of Architecture 1949-1970*: June 1970).

The focus of the Winter School was 'The Point', a peninsula of land separating Durban's harbour and the ocean; the location of the earliest European settlement. The area had fallen into a state of degradation and the objectives of the Winter School were thus to;

Fig 2.130: Brian Kearney outside Centenary Building with a student sculpture for a project set by visiting artist Eduardo Villa. 1967. Photo: School of Architecture records.



Fig 2.131
Leslie Croft had succeeded Connell as Head of the Department of Architecture, in 1965.
Ref: University of Natal Winter School '67 report .



"study a design problem comprehensively; it was a study of the means of overcoming the constraints that generate the fixed urban pattern of our city which is the result of a lack of investigation, unscientific town planning methods and a lack of imagination.

It was our hope that this Winter School was to show that a considerably improved urban environment could result if a problem received the necessary consideration and was attacked energetically and with imagination". (Croft 1967 – *University of Natal Winter School '67 Report*).

Lee joined Croft, Templer and Hallen on the organising committee and was latter responsible for the production and editing of the Winter School report, an account of the research, seminars and proposals which were generated during the working sessions.

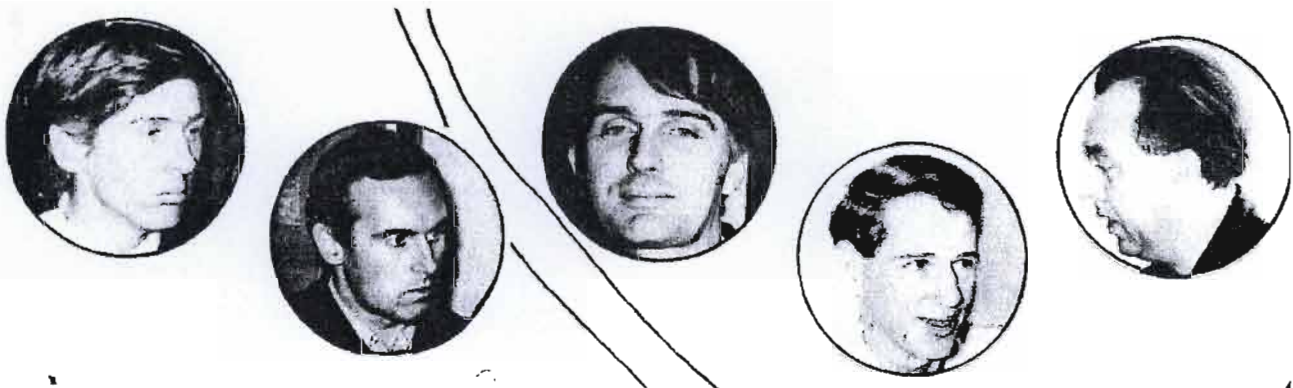


Fig 2.132: Design discussion at the University of Natal Winter School '67. Seated from left to right are Gino Valle, Revel Fox and Pancho Guedes. Hans Hallen, top right is one of those standing lookin on.

Ref: *University of Natal Winter School '67 Report*.

Fig 2.133: The University of Natal project team; from left to right Lee, Cornford, Templer, Kearney and Hallen.

Ref: *University of Natal Winter School '67 Report*.



Lee and Kearney participated in a scheme produced by the 'Natal Group' along with Hallen, Templer and Cornford²² (Fig 2.133). Other designs were submitted by teams from the Universities of Cape Town and Witswatersrand. The delegation from Cape Town included the presence of a young Peter Buchanan (Fig 2.134), who would in later years become the leading architectural writer and critic of *The Architectural Review*.

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Christopher Cornford was a 2nd year student at the University of Natal in 1967.

Fig 2.134: Peter Buchanan at the University of Natal Winter School '67. Ref: *University of Natal Winter School '67 Report*.



"The real value of the Winter School lies in the opportunities it provided for contact and for the testing of oneself and one's attitudes and not in specific solutions. In summing up, Revel Fox said that from discussions and the work produced, it was evident that a new kind of Architect, who thought in terms of the total environment, was being trained and that an older generation of architects, whose thinking did not venture beyond the limits imposed by a particular site, would have to readjust their attitudes towards their work and to the urban environment. If only the Winter School had succeeded in bringing this truth home to all participants, then it had succeeded." (Theron 1967 – *Credo* No.6)

Hallen later added in the published report that "it represented well the present situation in South Africa in regard to our attitudes to the city". (Hallen 1967 – *University of Natal Winter School '67 Report*)

By 1968 Lee and Kearney were establishing a working relationship based on their shared teaching responsibilities, as well as in collaborating as designers during the Winter School.

Paul Mikula

Mikula was appointed as a temporary lecturer immediately upon the completion of his Bachelor's degree and worked in 1st year as studio lecturer with Kearney during 1968 and 1969. Mikula's main contribution was his charismatic presence in the studio. He would have been attracted by the chance to engage with furthering the discourse on architecture, but would have been adverse to administrative duties and the general bureaucratic environment of the University.

Also in 1968 Mikula registered for a MArch degree, his research topic being '*The Hindu Temples of South Africa*'. The Group Areas Act of 1950 had left these buildings distanced from their congregations, and in threat of demolition. The choice of this pertinent research topic



Fig 2.135: Revel Fox at the University of Natal Winter School '67. In the background Cornford and Lee look on.
Ref: *University of Natal Winter School '67 Report*.

Fig 2.136: Paul Mikula at the opening of an exhibition of paintings at the Natal Society of Arts.
Ref: newspaper cutting (undated)



demonstrates Mikula's astute cultural awareness and affinity to the broader South African context.

Ronald Lewcock headed a press release on the situation and referred to the "Unnecessary vandalism" (Lewcock, *Daily News* 11/11/68) of the temple sites. Furthermore attempts to preserve elements of Temples which had already been earmarked for demolition were being planned which included relocating the dome of the Railway Barracks *Shree Emperumal* Temple, circa 1924 (Mikula, Harber & Kearney 1982:p86).

"Mr. Paul Mikula, another architect interested in the preservation of the temples, said one possible reason for the lack of interest in the community was the changing nature of Hindu religion. He had found that the Indian community would rather have a new temple on a new site, than move the old temple." (*Daily News*, 11th November 1968).

Prof. Croft was instrumental in raising R1500 to fund the project; donations were received from prominent members of the Indian Community, as well as the Tongaat Sugar Company and the Natal Estates Limited. (Hindu Temples Research Project File – School of Architecture records).

"It is the Intention in this thesis to establish when and where the first temples were built, by whom, and how they were constructed and how many still survive. This will be accompanied by a cultural, religious and architectural analysis. A typical temple, if still in existence, will have a measured plan and section with a photographic record of elevations, sculptural details and other points of interest." (Mikula 13/02/1968 - Hindu Temples Research Project File – School of Architecture records)

In a letter to Mr. K.P. Desai of Gandhi and Co (Wholesale Merchants) on 04th July 1969, Prof. Croft thanks the "ten trusts and firms who have



Fig 2.137: dome of the Railway Barracks *Shree Emperumal* Temple before demolition. Ref: Mikula, Harber & Kearney- 'Traditional Hindu Temples in South Africa' 1982:p75.

contributed a total of R1000 towards the research project 'The Hindu temples of South Africa'. This work is proceeding satisfactorily and this donation will ensure that it is completed." (Croft 1969 - Hindu Temples Research Project File – School of Architecture records). The research fund was mainly used in the process of recording and surveying existing temples. A sum of R90 was also received from the NPIA towards the costs of employing a student research assistant.

Unfortunately Mikula did not complete the thesis; Croft records his concern regarding the lapse in registration of the study in 1970 (letter 18/03/1970 to Mikula) and it appears that the demise of the research project was concurrent with Mikula's resignation from his lecturing post at the University. Nevertheless, the research material would eventually be promulgated when later published in the book '*Traditional Hindu Temples in South Africa*', co-authored by Mikula, Kearney and Harber in 1982.

2.5 Paarl Competition

In August of 1967, a notice was published in *Architect & Builder* (p32), a national architectural journal, announcing a competition for the design of a new Civic Centre complex for Paarl, in the Western Cape. The brief called for an office and town hall complex with provision for a theatre, library and art gallery. Lee and Kearney were both lecturing and practising at the University, Mikula was in 5th year and in the process of completing his design thesis whilst also practising through the offices of John Edgar. The point of convergence was such that when the suggestion was raised to form a team and submit an entry, the four were 'in place' to collaborate.

The impetus was really ignited with a decision to drive to Paarl to visit the site. Lee, Mikula and Edgar made a non-stop round trip, driving continually in relay through the night some 1500km. The morning was spent viewing the site of the proposed buildings and taking

Fig 2.138: from front to back, Harber, Kearney and Mikula. Co-authors of the book '*Traditional Hindu Temples in South Africa*' 1982:Cover. Photo: P.Newman.



Fig 2.139: Lee on the way to Paarl, to visit the competition site with Mikula and Edgar. 1967. Photo: B.Lee.

photographs, then a seafood lunch of lobster and crayfish was taken at Sea Point in Cape Town, before embarking on the return trip. Breakfast the next morning was taken at Mikula's parents house in Ladysmith, due to a tyre puncture just outside the town, completing the 48 hour expedition later that afternoon. The extreme haste of the trip was due to the various work commitments of the three architects back in Durban.

Edgar recalls:

"Brian Kearney and Bryan Lee were, I think junior lecturers at the University at the time. The Paarl Civic Centre competition came up during that year, and the four of us decided to put in an entry. We hired a car and drove down to the Cape to inspect the site. This trip and the subsequent collaboration in putting in a combined submission was the trigger that set off our partnership. The two Brians had been classmates of mine, so we knew each other well." (Edgar 2001 – personal communication).

"I didn't go down with them, they went on a flying weekend visit to the site to go and have a look at the centre of the town. I remember us saying that we got on quite well together doing that competition; there were a lot of ideas being floated around and a lot of, lets call it 'sparking'. Paarl competition was done in the University's studios over the Christmas vacation; Chris Cornford was involved as a student and helped with some of the drawings." (Kearney 2001 – personal communication)

"The Paarl competition was the first time that we were all saying lets formalise this thing." (Mikula 2001 – personal communication)

"It was a litmus test for working together, to test the relationship. Our scheme however was not brilliant and we were well beaten by the deserved winners²³." (Lee 2002 – personal communication)

Fig 2.140: Mikula at the site for the Paarl Civic Centre competition. 1967.
Photo: B.Lee.



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55 entries were received with the winning submission from the Cape Town based practice of Munnik, Visser and Black. Due to the insolvency of the first contractor the building was only completed ten years later in 1978.

Fig 2.141: Lee at the site for the Paarl Civic Centre competition. 1967.
Photo: B.Lee.



CHAPTER 3:

FORMATION OF BUILDING DESIGN GROUP

3.1 Collaboration and Practice name

The following extract was recorded at a meeting of the Practice sub-committee of the Natal Provincial Institute of Architects (NPIA) on 12th August 1968.

"The secretary advised that in a letter 6th of May, 1968 Messrs. J.M.Edgar, B.T. Kearney, B.H.Lee and P.Mikula had advised that they intend to combine their practice into a group practice to be known and registered as "Building Design Group" temporarily care of the School of Architecture, University of Natal.' (12/08/1968 - Minutes of Practice Sub-Committee of the NPIA)

Building Design Group (BDG) was essentially a collaboration of individual practices that shared common ideals and would share facilities and resources. There was equal responsibility and stake in the co-operative.

The naming of a practice in a non-personal style at that time was highly irregular in the context of the South African profession, although commonplace in other parts of the world²⁴. The work of practices such as The Architects Co-Partnership, Team 4, Tecton, Atelier 5, Archigram and The Architects Collaborative had been widely published in international journals. Perhaps the closest similarities can be found in the names of two British practices, Building Design Partnership and the Architect's Design Group. Indeed there was an increasing trend towards the generic naming of architects practising together, which allowed for changing relationships and associations, which was consistent with emerging social ideologies and avoided cumbersome and lengthy titles.



Fig 3.1: Building Design Group Architects logo.

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It is interesting to record the following comments of the R.I.B.A Library and Information Centre, "although most practices before the 1960's were named after the principal architect(s), there has never been, to our knowledge, any restrictions to the use of non-personal names in the U.K." (Whiteley 2002)

To the conservative South African architectural profession, any change was viewed with considerable suspicion, and although the prohibition of impersonal naming of practices was not yet legislated against, the formation of BDG was frowned upon by the local establishment.

The Secretary of NPIA had written to Mikula on 01st July 1968, the letter concluding with the following paragraph;

"I am directed to advise you that Central Council²⁵ at its meeting held on the 6/7th May 1968, resolved: that the Regulations Committee be requested to frame a regulation prohibiting the use of impersonal names in the Institute". (12/03/1971- Minutes of Provincial Committee NPIA)

Brian Kearney recalls:

"I remember us saying one evening, when we were sitting and talking about 'what do we call ourselves' and we knew we were going to get into trouble with the Institute sticking to Building Design Group as opposed to a name style. I remember us saying "well, which one of us wants to go and work for those 'fuzzy duddies' down town anyway". We were all 'angry young men' in that sense, we didn't feel that we were going to learn anything from anybody else.

Another reason why we went into practice together was that we wanted to short circuit that whole relationship to buildings which we knew we would not be able to do in another kind of office. We would be removed, we would be stuck to a desk, we would be drawing there while some principal was having the enjoyment. We loved architecture and we were passionate about it and we wanted to establish that very close relationship.

We felt ourselves out on a limb in a kind of way, we regarded ourselves as almost pioneers. I suppose we were trying to reinvent architecture, joining together gave us more force, morale and support.' (Kearney 2001-personal communication).

Even the furnishing of the new practice name on a site notice board had not gone unnoticed or without comment;

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Central Council of Institute of
South African Architects



Fig 3.2: Brian Kearney
Photo: *NPIA Journal* 3-1982:
Cover.

House Kearney
"Breeze from the south, Inwards
and out, edge of the view.
Western acacias, Umbilo below,
coucal and hadeda call.
Frame geometry, fairface life,
chaos in store.
Home is a cave, soft bricks
small, enamel and clay.
Red rug soft, cold quarry floor,
concrete is tall.
Darkness is cool, light through
wood, walls fold space.
Switches that glow, cupboards
built out, scale in brick."

Kearney, B (1977)
Ref: *NPIA Newsletter* 1-1977.

"The sub-committee had considered the aspect of the name 'Building Design Group' appearing on an Architects notice board. It had been agreed to recommend to the Provincial Committee that in the opinion of the sub-committee no action could be taken against the members concerned at this stage." (4/10/1968 – Minutes of the Provincial Committee NPIA).

The inclusion of 'at this stage' in the memorandum indicates that the matter was not settled, and indeed it wasn't. Members of the Provincial Committee were anticipating that laws governing the naming of architects practices was soon to be implemented; however it was not until the Government Gazette of 05th March 1971, an amendment to the Architects Act of 1970, where clause 6.23 of Chapter 6 : Improper Conduct, came into effect. It read:

"It shall be improper conduct on the part of an architect:

6.23: to use other than a personal name or names for the title and style of his practice or his firm in association with another firm without the approval of the council: Provided that the title and style may include the name of a person to whom he is the bona fide successor in title." (Government Gazette 5th March 1971).

The Durban firm of John Frost, Pat Holdcroft and RAGS Summerville, had been practising since 1969 under the style of 'Interarc', and were also the target of warning letters from the Institute in regard to their name. It is no coincidence that both John Frost and the partners of BDG would write to the NPIA on the same day, 02nd March 1971 confirming identical sentiments through similarly worded letters:

"Dear Sirs,

As you know, we have been carrying on practice as a partnership for some 3 years under the name of Building Design Group Architects.

We understand that the new regulations to be published under the

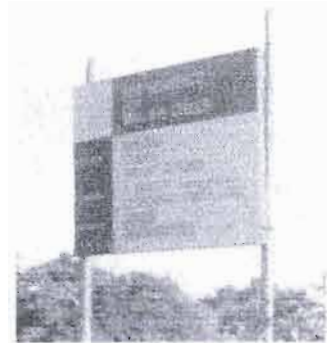


Fig 3.3: Site notice board bearing the name of Building Design Group Durban

Architects Act, 1970, will contain a prohibition against members of the profession carrying on business under any title except their personal names without the approval of Council.

We accordingly wish to record that the existing Council has raised no objection to our carrying on practice in the name of Building Design Group Architects and that we have in fact done so with your tacit approval and knowledge.

We shall be obliged if you will confirm this." (02/03/1971- NPIA files)

Although the letter neglects to acknowledge the Institute's correspondence of 1st July 1968, it is clearly a letter of intent that in the consideration of the writers, the new regulations could not be retrospectively applied. This was eventually acknowledged by Council and noted at a meeting of the Provincial Committee of the NPIA on 29th September 1972, under the heading 'Letters from Registrar to members using Impersonal Names:'

"It was noted that the Registrar had written to Building Design Group, Interarc and Interplan advising that as the styles of their practices had been adopted before the coming into force of the new act and because the legislation and rules were not retrospective, these firms may continue to use their present style of practice." (20/09/1972 – Minutes of Provincial Committee NPIA).

Although this resolution met with the disapproval of some of the Committee members, the matter had been finally although reluctantly settled.

3.2 Anti-establishment

The altercations with the NPIA were not just confined to the debacle over the simple naming of the practice; the apparent disdain between the parties would continue. The impression was that the senior members of the profession held Building Design Group in some form of contempt. They had by-passed the traditional convention of apprenticeship, while seemingly snubbing the established practices in the process. With Lee and Kearney 27 years old, Edgar at 30 and Mikula 28 and straight out of University; the four were particularly young to be setting up practice.

Kearney comments:

"After Sharpeville there was a significant building slump in the early 1960's. It was a time when Dennis Claude, John Frost, Pat Holdcroft and others went to Britain in droves²⁶, whole classes of students sought employment elsewhere. Many of them stayed over there for quite some time which left a vacuum. So when work did pick up in the mid 1960s we were the next generation who were employable and to some extent, that caused some conflicts in the profession. That probably explains why there was some animosity towards the concept of BDG, not that they were against young architects being in practice at that age, although I remember some of the older guys implying that we didn't know what we were doing, saying that we 'lacked experience' and our slightly arrogant retort would be 'what experience!' Some of the animosity towards us was the fact that we weren't going to be the 'cannon fodder' in established practises, we weren't setting out to be employed." (Kearney 2001 – personal communication).

²⁶ Dennis Claude (1960), John Frost (1961) and Patrick Holdcroft(1961) were graduates of the University of Natal. (School of Architecture Student records).

Within a month of establishing the partnership, Kearney was advised by his father, a Director of Local Government in Pietermaritzburg, to submit a letter to the Director of Building Services of the Natal Provincial Administration, requesting to be put on the roster for

Provincial work. This was duly done on 07th June 1968, was signed by all partners and copied to the NPIA Secretariat for good measure. It read:

"Dear Sir,

We wish to have our firm included on the current roster of Architects available for work from the Natal Provincial Administration. We further wish to have recorded that our present complement of staff is eight of whom four are qualified architects.

Yours faithfully

Building Design Group"

(12/08/1968 – minutes of Practice Sub-committee NPIA).

Unwittingly this contravened a rule²⁷ of the Architects and Quantity Surveyors Private Act No.18 of 1927 relating to Improper Conduct. The letter was discussed at a meeting of the Practice Sub-Committee (meeting on 26/11/1968) of the NPIA at which the Secretary informed the Committee that whenever he was informed of a new members registration, a letter was written to the member which included the following advice:

"Members are reminded that it is a breach of the unprofessional conduct regulations on their part to write to any public authority asking for their names to be placed on a roster or considered for any commissions." (12/08/1968 – minutes of Practice Sub-committee NPIA).

The committee recommended that an explanation be sought from the members of BDG, and the Secretary wrote a letter to this effect dated 26th September 1968. A joint affidavit signed by Mikula, Kearney, Lee and Edgar was returned on the 05th October 1968. (08/11/1968 – Minutes of Provincial Committee NPIA).

At a subsequent meeting of the practice sub-committee on 26th November 1968 the affidavit was reviewed and recorded as follows:

²⁷
Regulations 87(n) (1) and 87 (n) (2) of the Architects and Quantity Surveyors Private Act. No.18 of 1927.

"The sub-committee noted that in their affidavit the aforementioned members admitted having sent copies of the letters which formed the basis of this enquiry to the Secretary of the Natal Provincial Administration and the Director of Building Services. The affidavit advised that they understood they were anxious to be placed on the Administrator's roster which they understood they were entitled to be and were ignorant of any alternative method by which this could be achieved. The affidavit went on to advise that they believed they were acting quite correctly and had no intention of contravening the regulations. If it were found that their actions did constitute a contravention of any regulation, they apologised and recorded that this would not happen again". (26/11/1968 – Minutes of Practice Sub-Committee NPIA).

The sub-committee were not in a sympathetic mood, and were of the opinion that the actions of BDG constituted a contravention of the Regulations 87(n) (1) and 87 (n) (2) of the Architects and Quantity Surveyors Private Act. No.18 of 1927, which was still in force, and recommended that an enquiry be held into their conduct. The sub-committee also raised its concern that Lee, Mikula and Kearney were members of staff at the University, and queried their lack of knowledge of the regulations and expressed concern for students who were under their care and guidance. At a meeting held on 10th December 1968 a committee of Enquiry was established, comprising of Messrs. M.M.F. Poole (Chairman), F.W. Powers, and G.T. Chalmers.

The Committee of Enquiry convened on 17th January 1969 and its findings were reported to the Committee of the NPIA on 07th March 1969 whereby it was recorded that:

'The Committee of Enquiry had found these members guilty of contravening Regulations 87(n) (1) and 87 (n) (2) and had issued a caution against them. The order as to costs in the hearing of the enquiry was that each member shall bear a proportionate cost of the

enquiry, such costs not to exceed R15:00 per member.' (07/03/1969 – Minutes of Provincial Committee NPIA).

Kearney reflects:

"I think that they enjoyed putting the screws into these young guns. It was a way of whipping us, trying to stop us. The letter was a little naive on our part but at the same time we had sent a copy to the Institute; we were only asking to be put on a roster. That particular incident, as trivial as it was, was symptomatic of that set of issues; we recognised that we weren't always acceptable in the eyes of the wider society." (Kearney 2001 – personal communication).

Altercations with the establishment had also occurred on a previous occasion, when the Master Builders and Allied Trades Association had lodged a complaint against B.H.Lee to the NPIA on 22nd March 1967 (01/09/1967 – Minutes of Provincial Committee NPIA). It was the practice of the association to insist that its members submit their tenders in envelopes bearing the hallmark of the M.B.A and furthermore not to participate in tenders with non-members. This was a somewhat covert policy aimed to secure contracts for its members whilst alienating those outside of the organisation. This was a convention to which most architects were complicit. Lee however resented this form of monopolisation and entertained tenders from non-members alike, drawing the wrath of the M.B.A. Mr. Fridjhon acting on behalf of the NPIA had intervened but had concluded that no action could be taken, and the matter was not taken any further.

3.3 Academia v Practice

By 1969 a rift was apparent in the balance between the development of the practice and the demands of academic life. Lee and Mikula were bringing in an increasing volume of work and the intensity of running the practice was consuming both time and energy. Furthermore the

limitations of the teaching environment were being felt, and the enthusiasm to instigate change in the studio had waned.

Conversely Kearney, having graduated in March 1968 with Distinction for his MArch thesis (Student records – School of Architecture), had established his credentials as an historian and was gaining an affinity with academia and in August 1969 made a decision to withdraw from BDG. This was confirmed by way of a letter dated 22nd September to the NPIA 1969 advising:

“that as from the 1st September 1969, Mr. B.T. Kearney had withdrawn from the partnership of Building Design Group and would practice on his own account c/o The School of Architecture, University of Natal.”(29/09/1969 - Minutes of Practice Sub-Committee NPIA).

Kearney recalls:

“I remember feeling a bit of unease and discussing it with the others and saying that we will work it out as it goes along. I think that we were all reasonable enough to understand that partnerships are not always equal, that some people would bring more work in and some people would probably do more work and others would have a more loose affiliation. Ultimately I decided that I couldn't cope, it was like being married to a Harem; very different kinds of people. It was also interfering seriously with family life, in a sense that they were working all week around, including weekends, I would hardly see my family during the week and I just felt that it wasn't right. Everyone was very reasonable about it and we remained good friends”. (Kearney 2001-personal communication).

Kearney was appointed to the permanent academic staff of the University of Natal on 01st January 1970 (*The School of Architecture 1949-1970*, June 1970) at the same time that Lee and Mikula resigned from their temporary posts as lecturers. Lewcock left South Africa the same year, to become Whitehead Research Fellow at Clare College,

Cambridge (01/08/1970 Daily News) vacating his teaching portfolio in History of Architecture.

In 1971 Lee registered for a M.Sc in Town and Regional Planning, a part-time course at the University of Natal, completing the coursework requirements of the degree in 1973. Thereafter Lee was unable to produce a thesis dissertation, probably due to the mounting workload in the office, another indication of the tension between practice and academia and the resultant pressures on available time. Lee's registration for the M.Sc was indicative of a trend towards the diversification of architects into the fields of Planning and Urban Design: the theories of Lynch and Alexander were by now standard texts, and the scope of architectural concern was broadening. Even though Lee did not complete the degree, he certainly would have benefited from the intellectual investment that would be applied in future years as the complexity of incoming projects increased.

Eventually an attitude of indifference had developed between the teaching staff at the University and those in the office at BDG.

3.4 Partnership changes

Within eighteen months of the formation of BDG a change in the Partnership structure had already taken place. Kearney, having withdrawn from the collaboration, conscientiously felt that a fourth member was necessary, partly to cover and share the financial overheads, and that he was in some way obligated to find a replacement.

"I put Peter Stewart into it because I felt there was still a need for a fourth element. I sensed that our premises²⁸ and everything had been set up in relationship to four people. Peter was a very circumspect sort of guy; he would never jump into anything very quickly. Eventually he

²⁸
The premises at 4a Glenroy Road is discussed in Chapter 4 : Working Environment

joined and thereafter I had almost nothing to do with the practice.” (Kearney 2001-personal communication).

Peter Stewart

Peter Stewart was a student at the School of Architecture in Natal between 1951 (First year class lists – History of the School of Architecture file) and 1959 at which time he obtained his BArch Degree (Institute registration document - NPIA records). Following a period of working in the UK he returned to set up practice in 1965 and join the staff as a temporary lecturer. In 1967 he was appointed to the post of Lecturer/ Studio master at the School of Architecture and was therefore well known to Mikula, Lee and Edgar. He had registered for a MArch research topic in 1966; ‘An Investigation into Urban Climate and the Siting of Buildings on the Natal Coast’ which was completed in 1973 (School of Architecture Student Records).

Three of Stewart’s residential projects had been published in *Credo*, House Stewart²⁹, his own residence in Stafford Road in Woodside, Cowies Hill, appeared in *Credo* No.8 in 1967 and shares similar concerns in form, language and detail to Mikula and Lee’s early houses.

Stewart explains:

“My house is not merely a ‘living machine’ but a place for family activity and refuge – a ‘safety valve’ from city hustle and the accompanying thrombosis. It is a retreat, fortified against the rigours of the never-ending week. Although form follows in the footsteps of function it is in this case tempered and livened with a little of Zorba’s madness....it is an experiment with space, the modulations of which assist in usurping the stark realities of the form.” (Stewart 1967 – *Credo* No.8)

Credo No.12 in 1968 published further works under the title



Fig 3.5: Peter Stewart. Was a partner at BDG between 1970 – 74.

Photo: NPIA Journal 3-1982

29 House Stewart was subsequently incorrectly accredited to BDG in Theron’s Guide to Buildings of Architectural Interest in Greater Durban – *Credo* No.36/1972 and the NPIA– 1 Newsletter of 1981.

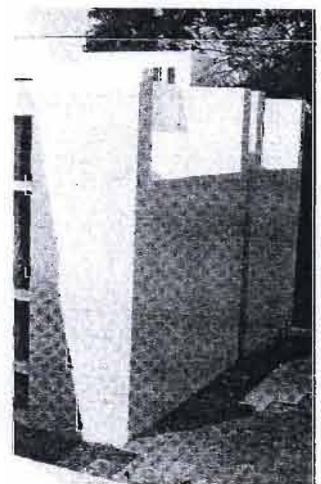


Fig 3.6: P. Stewart - House Stewart (1967).

Photo: *Credo* No. 8 Dec 1967.

'Two recent buildings by Peter Stewart'. Musgrave Terrace, where ten duplex units were arranged in a linear fashion on a south-easterly facing site is featured, along with a private house for a client in Westville.

The initial terms of Stewart's relationship with BDG was as an associate partner for certain projects only, taking effect from 1st March 1970; this was confirmed in a letter to the NPIA on 24th March 1970 (03/04/1970 – Minutes of Practice Sub-Committee NPIA).

In a further letter dated 08th October 1970 (06/11/1970 – Min Practice Sub-Committee NPIA), Stewart wrote again to the NPIA informing the Institute that he was now a full partner in the practice with immediate effect.

Stewart confirms:

"Brian Kearney had just left the practice. I was asked to join – whilst a full time member of staff at the School of Architecture and involved in a Masters Degree. When I joined BDG there were a large number of overdue client accounts. I was instrumental in getting the practice, through the office's lawyer, to get a Client/Architect contract. The number of office debts seemed to reduce after this." (Stewart 2002 – personal communication).

Stewart's involvement with BDG would be peripheral and sporadic, with interruptions for study leave and sabbaticals, as the only full-time teacher in the practice. By February 1974, the conflict of interests between partnership in practice and teaching had also led Stewart to decide to withdraw from BDG (03/07/1974 - BDG letter to ISAA – NPIA records) to resume his private practice at the School of Architecture.

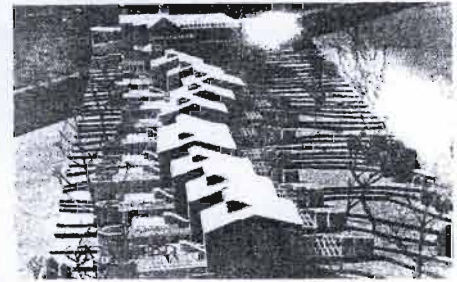
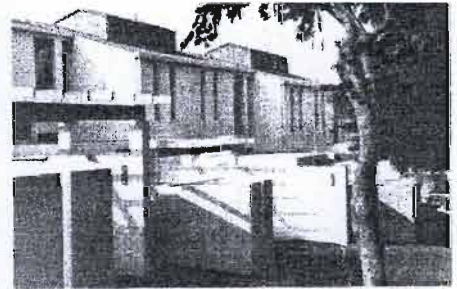


Fig 3.7: P. Stewart -Musgrave Terrace .
Photo: Credo No.12 Aug 1968.

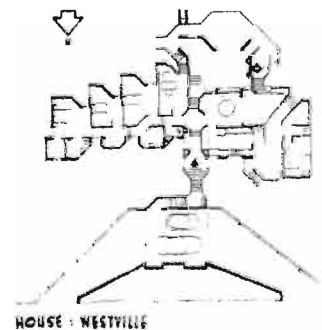


Fig 3.8: P. Stewart –House in Westville. Plan.
Ref: Credo No.12 Aug 1968.

Tony Wilson

Tony Wilson had entered first year at the University of Natal in 1966 and graduated in 1971, having excelled particularly in his final two years of study. In his 4th year he received the NPJA Book prize and Senior History Prize. (Student records – School of Architecture)

Wilson's design Thesis in 1971 had been an investigation into 'A School Building System for Kwa Mashu Township', and is a patent example of where architectural study can inform the social agenda in the face of a politically unjust system. South Africa under Apartheid had perpetuated gross imbalances in social facilities between racial groups.

Wilson states:

"The basic premise of this thesis is that it is necessary to provide an education for everyone, and that the level of education which each person is able to attain should be free from arbitrary limits imposed for economic, political or social reasons....until this ideal is achieved no country can hope to advance economically, politically or socially.

In South Africa, Bantu Education provides primarily for literacy training, and simple vocational skills, and facilities are at present, insufficient to cope with the existing Black population. The provision of educational facilities is becoming increasingly urgent as the population expands, and it appears that the type of education required is an education based on Liberal principles, geared to the promotion of an understanding of the technological age.

This thesis attempts to examine the implications, in terms of school buildings, which would result from a decision to provide educational facilities for the whole Black population. The need for buildings which can adapt and change, as the educational system changes through experimentation and research, is recognised." (Wilson 1971 – BArch Thesis).



Fig 3.9: Tony Wilson, c1967. Photo: School of Architecture records.

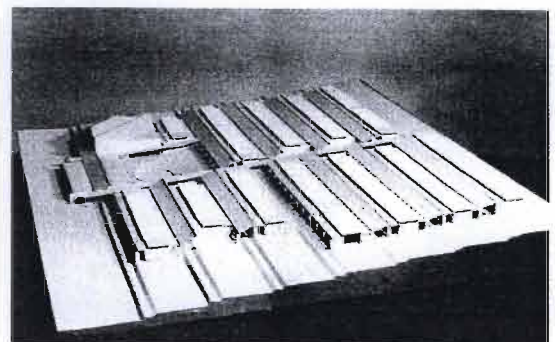


Fig 3.10 : T.Wilson, Thesis design for 'A School Building System for Kwa Mashu Township' 1971. Model.

Wilson uses the township of Kwa Mashu as a case study to deliver proposals for a school building system which would provide a physical environment for primary, secondary and adult education and that which could adapt to a variety of site conditions.

Fig 3.11: T.Wilson, Thesis design for 'A School Building System for Kwa Mashu Township' 1971. Site Plan. V

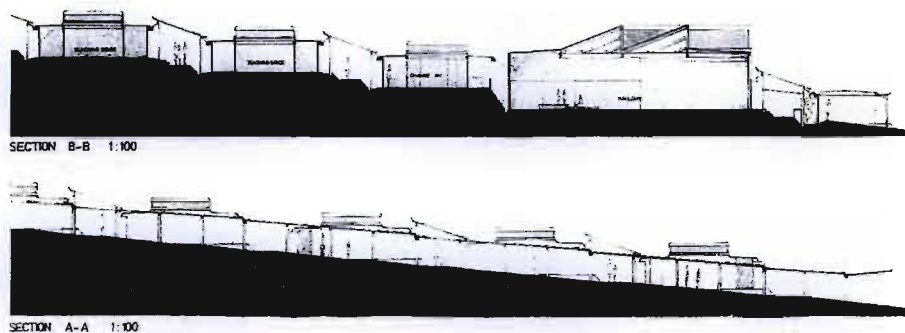


Fig 3.12: T.Wilson, Thesis design for 'A School Building System for Kwa Mashu Township' 1971. Sections.

The premise of the design was that the site conditions would invariably be a sloping site and therefore layout and structural system were proposed consistent with this constraint. Wilson was influenced by the industrialisation of the building process and considers pre-fabrication of elements in terms of site operation, skill levels and economy.

The principal consideration was the development of the cross section, allowing for spinal circulation routes along contours with learning spaces to the upper and lower levels. The full extent of the layout creates an imposing labyrinth.

The technological concerns are innovative and examine alternative applications for available building materials, a shared concern in the offices at BDG, and demonstrates an architectural commonality.

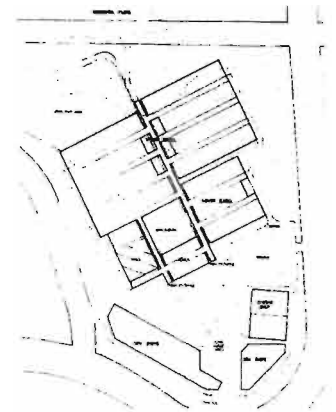
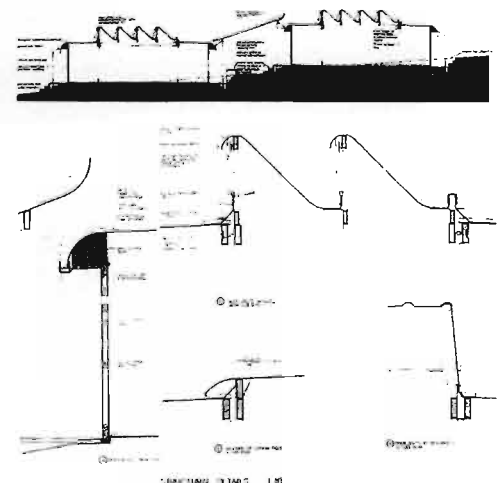


Fig 3.13: T.Wilson, Thesis design for 'A School Building System for Kwa Mashu Township' 1971. Sketch. V



Fig 3.14: T.Wilson, Thesis design for 'A School Building System for Kwa Mashu Township' 1971. Roof Details. V



Wilson's interest in education continued beyond the completion of his degree. At the Architectural Education Conference in Cape Town in 1972 Wilson presented a paper on student / staff relationships at Schools of Architecture which was reproduced in edited form in the July edition of Plan 1972. Wilson calls for creative thinking on the built environment as well as courses free from obsolete curricula.

"Students do not believe that what is being built in terms of both individual building and the urban environment in general, is meeting the needs of the ordinary people... this scepticism has led to the rush to other disciplines such as Sociology and Psychology in an attempt to find relevant data to form the basis of a more humane approach to design." (Wilson 1972: p11)

In Plan.11.1974 it was reported that Wilson had undertaken a study of architectural education in underdeveloped countries in Southern Africa and that it was possible that his report might be presented by Dr.Doreen Greig³⁰ at a RIBA ad hoc committee meeting into architectural education in Africa. Hallen confirms; " We also submitted a study by Tony Wilson (*Some aspects of Architectural Education*, 1975). We (ISAA) had commissioned him to investigate how those with a variety of backgrounds and otherwise limited education could find their way into the profession." (Hallen 2001:p9)

On joining BDG, Wilson recalls:

"I Joined BDG in late 1972, I was teaching part-time 3rd year design studio at the University and working for Bill Vos but had been keen to join BDG since graduating at the end of '71. I had helped with the final presentation drawings on Paul Mikula's thesis and Bryan was our Building Construction lecturer in my 3rd year, so I knew them both. I joined to work with Paul and through my time at BDG didn't work on any projects with Bryan. As I joined BDG, Peter Stewart, who was a

30
Dr. Doreen Grieg was President
in Chief of the ISAA between
1972-74.
Ref: Radford 1990: p28.



Fig 3.15: T. Wilson. Partner at BDG between 1974-77.
Photo: P.Mikula

partner at the time, left on a year's sabbatical, during which he travelled and worked in the UK. I don't know the details, but his absence apparently presented an opportunity to re-structure, and Peter Stewart didn't return to the practice after his year away. I was offered a 5% share of the practice the same as John Edgar – Paul and Bryan having 45% each. So, my role in the partnership was nominal.” (Wilson 2001 – personal communication).

Official notice that Wilson had been made a partner at BDG came through a letter to the ISAA (03/07/1974 - BDG letter to ISAA – NPIA records) which recorded that the change in partnership had been effective from February of the same year.

Associations

The indication that by 1974 Mikula and Lee were the major stakeholders in BDG is interesting and is indicative of how various complexities in the practice had evolved. The explanation lies in the situation that BDG had just moved into their own new office premises in Julia Road³¹, Overport which had been largely financed personally by Mikula and Lee. Furthermore associations were being forged in other national centres with architects of like mind.

“One of the aims of BDG was to amalgamate with other architects who had strong design philosophies. To this end relationships were struck with JC Laederach in Lesotho, Italo Lupini and Tony Harrington in Johannesburg, and Pieter Smoor in Cape Town.” (Edgar 2001 – personal communication)

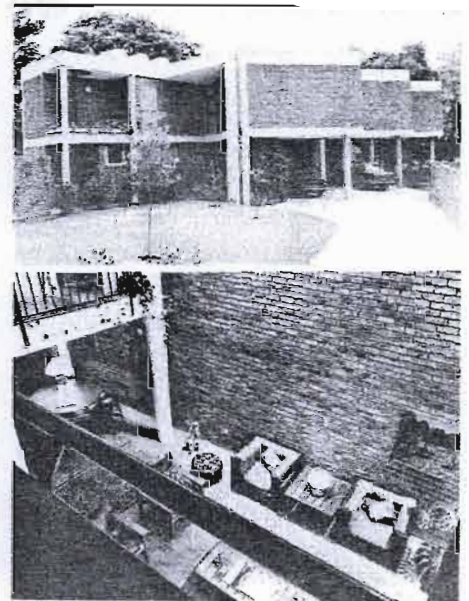
In January 1972 the ISAA was officially notified of an association with Italo Lupini in Johannesburg (25/01/1972 – letter from BDG to The Secretary NPIA / ISAA : NPIA records).

Lee had designed and was building a house for Alan Gerson in Houghton and was introduced to Lupini through the Italian builder.

31

The new office building for BDG in Julia Road will be discussed in more detail in Chapter 4: Working Environment and in Chapter 5: Selected Buildings

Fig 3.16: I. Lupini – House Lupini 1970.
Photo ref: *Artlook* Nov 1970:p35.



Lupini himself had been influenced as a student by Roelof Uytenbogaardt, at the University of Cape Town, and the transmitted teachings of Louis Kahn. He had established a practice with Tony Harrington and work was characterised by an approach of “pared down minimalist design” (Lupini 2002 – personal communication). An example of Lupini's work at the time is the design of his own house in Bramley, Johannesburg (*Artlook* November 1970: pp34-36.).

An immediate collaboration was through a joint submission for the La Lucia Civic Centre competition in early 1972 (Fig 3.17-3.18).

“The association was established to work together on certain projects but mainly we visited each other's offices for mutual encouragement and support, it was an interactive thing.” (Lupini 2002 – personal communication).

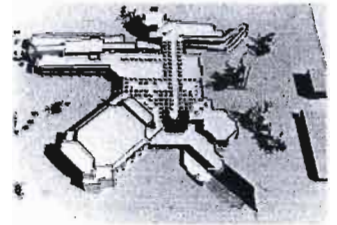


Fig 3.17: BDG & Italo Lupini, La Lucia Civic Centre Competition (1972).
Photo: I. Lupini.

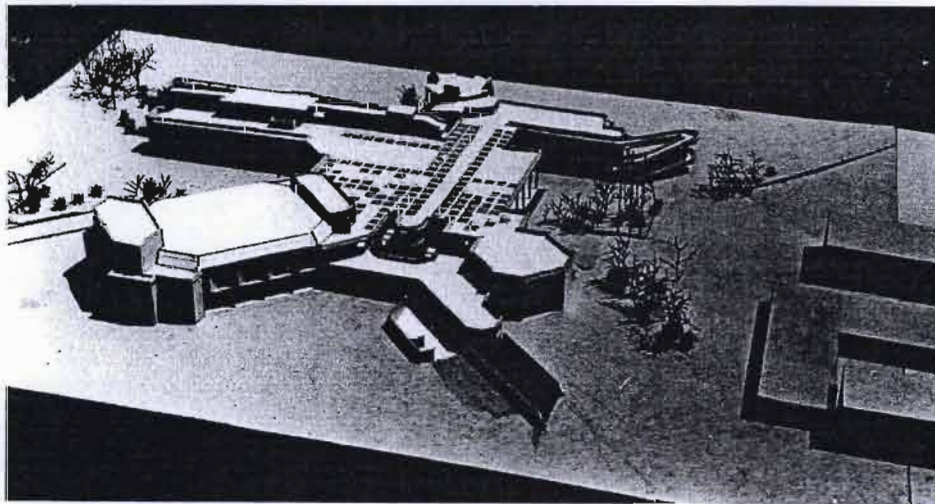


Fig 3.18: BDG & Italo Lupini, La Lucia Civic Centre Competition (1972). Photo: I. Lupini.

On 1st April 1974 a new practice was established in Maseru under the title “Building Design Group Architects”, the partners were Mikula, Lee, Edgar, Wilson, Lupini, Harrington and Laederach, with the latter “responsible for the supervision, control and routine administration of

the Lesotho branch." (Deed of Partnership 1974).

Edgar explains:

"The establishment of BDG Lesotho was the result of a chance meeting on Durban Beach. We had a Swiss client by the name of Schmidt for whom we were doing extensions in Essex Grove. One Sunday he was on the beach and overheard Swiss French being spoken nearby. This was in fact Jean-Christophe Laederarch (JC). They struck up a conversation and 'JC' mentioned that he had just landed the commission for the first phase of the Training for Self Reliance project in Lesotho where he had a one-man practice, and that he was looking for support. The Republic (of South Africa) was in the throes of one of the building industries periodic downturns, and BDG were short of work. A deal was set up whereby I went to Lesotho to help 'JC'. This was on the basis of one practice covering both Durban and Lesotho, and one pot financially. The practice later split, financially. I stayed on in Lesotho. Italo Lupini and Tony Harrington in Jo'burg were also involved with BDG Lesotho. They did a lot of the early work there." (Edgar 2001 – personal communication).

32

Not until the formation of the Urban Foundation in 1976 and Mikula's involvement in this organization did BDG start to get socially related architectural work. (Discussed in Chapter 5)

JC Laederach's connections with the World Bank had led to a flow of socially orientated developmental work and Lee recalls how this was an attraction to BDG, who themselves were being frustrated in their own efforts to break into the same field in Natal.

Lee confirms:

"We could not get involved with schools or even low cost mass housing in those days³², as the government of the time had their standard plans!" (Lee 2002 – personal communication).

The association with Pieter Smoor was not formalised. Having left Cape Town, Smoor spent some time in the Lesotho office before he established his own practice in Mbabane under the title BDG Swaziland. The name suggests a formal relationship with the Durban office, although they were to operate completely independently.

However they did maintain an intellectual and amicable acquaintance.

Mikula explains:

"We formed BDG as a horizontal partnership after I qualified in 1968 and have been in and out of partners ever since then. We today exist in Durban, Johannesburg and Lesotho. We hope to one day be a multidisciplinary, many-partnered operation large enough to be full of contrasts, opinions and to have a wide variety of turnover of work and still structured in such a way that each person fully contributes to the making of buildings." (Mikula c1976 – hand written notes).

The desire to develop a multi-disciplinary team was to be partly fulfilled on 1st July 1977 (26/05/1977 BDG letter to The secretary NPIA – NPIA records) when BDG became an Incorporated Company owing to the merger with the national multi-disciplinary firm of Zakrzewski Associates Incorporated (ZAI). This agreement came into effect after a short period of association between BDG and ZAI spanning from 2nd May 1977 to 1st July 1977.

Mikula and Lee remained Directors of the renamed Building Design Group Architects (Incorporated); However Edgar, remaining in Lesotho and Wilson, having left to the UK, ceased to be partners in the group. This effectively was the end of BDG as an independent entity, although BDG (Inc) did remain in their Julia Road premises until relocating to ZAI's offices in 245 North Ridge Road in November 1979 (22/11/1979 - Minutes of Provincial Committee NPIA).

CHAPTER 4: WORKING ENVIRONMENT

There were two distinct eras of BDG in terms of working premises for the practice; the establishments in Manor Gardens at 4A Glenroy Road and 39 Helston Road, and the purpose-built offices at 78 Julia Road. Both locations were unconventional in professional character inasmuch that a non-hierarchical spirit was adopted in the layout of the working spaces.

Following the formal establishment of BDG after the Paarl Competition entry, the practice operated temporarily from the offices of Lee, Mikula and Kearney at the School of Architecture, University of Natal (NPIA records). Premises for their first collective operation were established in derelict and vacant rooms that were situated over garages forming the outbuildings to a large house at No 4 Glenroy Road, Manor Gardens. "We looked all over the Berea for suitable and cheap accommodation" (Lee 2002 – personal communication); the choice for the location was partly the proximity to the University, but mostly its affordability.

"The working environment arose out of a studio milieu at University, which was one of small classes where we knew each other quite well. We were reliant on each other, respected each other's design ideas and Paul was never scared of being forthright about something. John was highly sensitive, but we all went to each other for crits, so from that point of view it was extremely virile and a stimulating kind of practice to be in. We shared premises, we shared overheads; however we mostly worked on our projects running it as a studio system. That was the character of the office. Almost as if we were sad not to be students any more." (Kearney 2001-personal communication).

4.1 Office at 4A Glenroy Road

BDG set up office in Glenroy Road in October 1968 (18/10/68 – minutes of Practice Sub-committee NPIA records). Four inter-connecting rooms were located over garages directly overlooking the Glenturret Road corner of the property. The garages and rooms were set into a steep bank, resulting in retaining walls at the northern edge, with large timber framed windows to the south overlooking the road being the only source of light and ventilation.



Fig 4.1 : Office at 4A Glenroy Road.
Photo by author, March 2003.

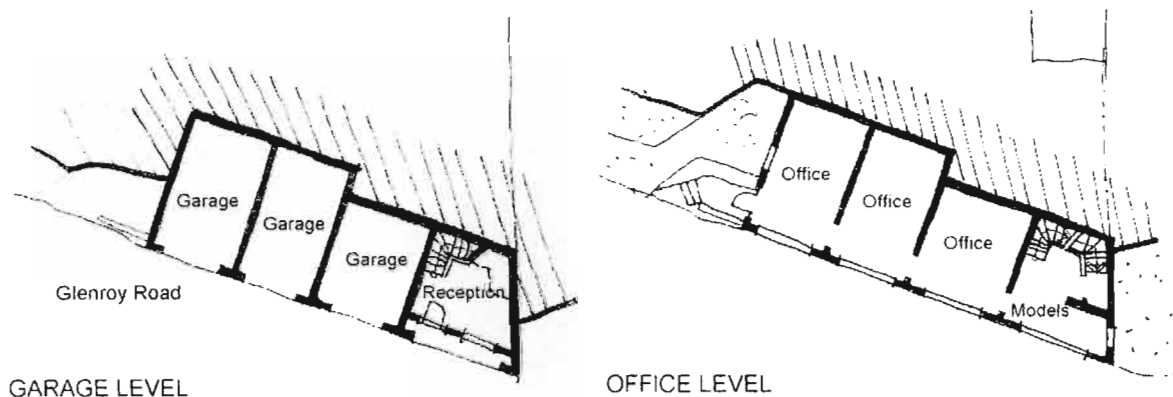


Fig 4.2: Glenroy Road offices. Plans

The most eastern garage was converted into a rather cavernous ground floor reception area, from which a tight masonry stair connected the entrance to the studios above. The garage door was removed and replaced with a re-cycled door and circular window that had been set into a tilt-up precast concrete panel.

"We had the studios above the garage, quite nice office space. Bryan was into tilt-up technology at that stage, there was a wall panel that had a door and circular opening in it. Pre-cast things would become a very important part of the BDG technology". (Kearney 2001-personal communication).

Upstairs space was limited, so the four partners shared the two central rooms, with ends that were occupied by support staff and model makers.

Glenroy Road

Oct 1968 – March 1970

Receptionist downstairs
coffee station at top of stairs
with Agrippa and Happy (his brother).

Lee and Kearney in first bay
with Mikula and Edgar in the second.

End office for student
employees. Jordaan, Savage,
MacGarry etc.

Mar 1970 – Aug 1974

Macgarry & Wilson in the first
bay with Mikula and Edgar in
the second.

Last bay - Students models etc.

Downstairs – teas & lunches.

(Compiled from communication
with Jordaan & Lee.)

"Generally the amount of work accumulating meant that there wasn't any time to hesitate or reflect and wonder about 'what if'. Given the degree of self-belief emanating from the pack it was undoubtedly a hothouse; this no doubt resulted in people like Brian Kearney choosing a more considered lifestyle." (Jordaan 2001-personal communication)



Fig 4.3: Savage at work in the Glenroy Road office.
Photo: P.Mikula

4.2 Office at 39 Helston Road

BDG encountered the bureaucratic difficulties of the Town Planning Scheme in effect at the time, as the premises at 4A Glenroy Road did not have business rights. To achieve a semblance of compliance, BDG opened a second office at No 39 Helston Road (01/09/1968 - Minutes of Practice Sub-Committee of the NPIA). This neighbourhood commercial node (within walking distance of 4A Glenroy Road) comprised a public library and various shops. A double storey building on the site provided the necessary space for BDG, with a small reception area at ground floor with two offices above; this led to a slight fracture within the working relationship of the practice.



Fig 4.4: Office at 39 Helston Road.
Photo by author, March 2003.

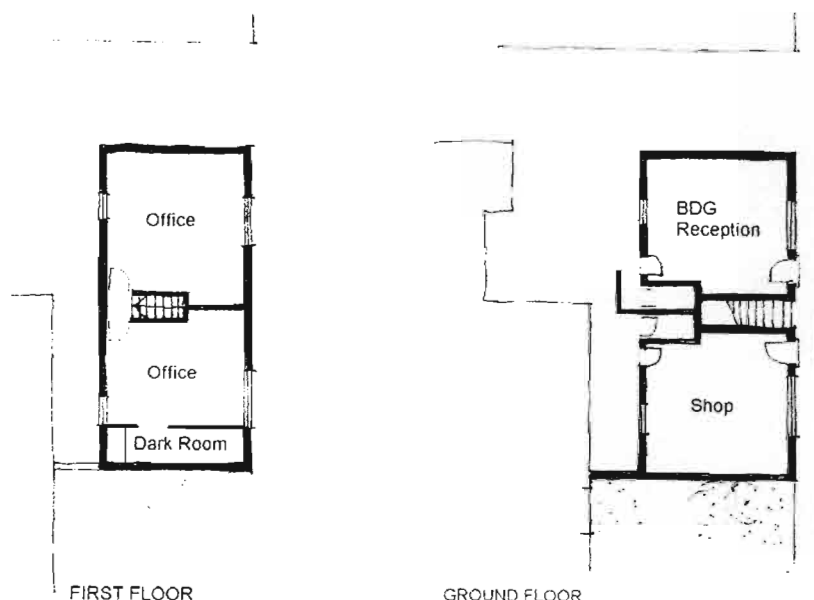


Fig 4.5: Helston Road offices. Plans

"Up the stairs, turn right Lee. Up the stairs, turn left Jordaan, the last five feet of my patch had a light weight metal screen wall – and lined up on a work top was the photocopier (wet process ask BH for dtls) and then a dyeline machine. The last quarter was a darkroom." (Jordaan 2002 – personal communication)



Fig 4.6: Dawn Jordaan, wife of Denis, at his workspace at the Helston Road Office.

Lee relocated to the Helston Road Office and mostly worked with Denis Jordaan and at times Roy Owen. Mikula and Edgar remained in the Glenroy Road studios with Kevin MacGarry and Colin Savage. Kearney by this time had left and Peter Stewart's presence would be intermittent in the Glenroy Road office.

"At Glenroy Road the definitive triangle was Paul, Kevin and Colin – everyone else clipped on to that triangle." (Stafford 2002-personal communication).

"Glenroy Road had a hot house atmosphere but didn't have the shared space that the practice needed for the bouncing of ideas, the studio down the hill (Helston Road) was a nice office but too isolated from the group." (Jordaan 2001-personal communication).

The main business reception was now located at Helston Road with the ground floor space at Glenroy Road taking on a new role as a venue for office lunches. This daily gathering would soon become an institutionalised event at BDG at which the members were able to congregate and debate the salient issues.

On account of the prospering practice, the limited working space became an issue; projects were becoming larger and required additional staffing. As a temporary measure, further space was rented in an outbuilding close to Glenroy Road, owned by a friend Delsey Shaw. Similarly, the Billiard Room at Lee's home at Trevean, 258 Wakesleigh Road in Bellair, was used as overspill space.

The proximity of the Glenroy Road offices to the University made it a regular destination for students; either prospective work seekers or for general interest. In the mid 1970s there was student unhappiness at the School of Architecture, and BDG's offices were used as an off campus centre to discuss their concerns. There was a sympathetic audience at BDG that encouraged radical thinking.

"Many of the staff at BDG had anti-establishment tendencies, they were talented but failed students: Kevin MacGarry, Colin Savage, Bob Barwise and Denis Jordaan were some who were experiencing difficulties at University." (Lee 2002 – personal communication).

"There was unhappiness in the Department and there was a pending revolution at the school. The old BDG offices were used as a kind of caucus place. Lone Poulsen and Pedro Buccellato instigated a number of meetings with Bob Barwise and others'. (Savage 2001 – personal communication).

"In the early '70s, the School of Architecture at the University was in a bad way and was generally held in contempt by everybody at BDG. Ron Lewcock and the Templers³³, who were enormously influential had left, and apart from Biermann who was respected for his intellect and his own house, Brian Kearney and later Denis Claude, the staff were thought to be a bland lot who had nothing to offer as teachers. Partly, this was because of the bad experiences at University of Bob Barwise, Denis Jordaan, Kevin Macgarry and Colin Savage as students and the frustrations of Paul and Bryan as teachers. BDG were in turn regarded with some suspicion by the university staff." (Wilson 2001-personal communication).

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Joan Templer, wife of lecturer John, was an artist who was appointed, in the School of Architecture, on a part time basis to assist Hope Brandt.

The student unrest finally surfaced in May 1975 ('History of the School' file - School of Architecture records) when the student representative body, the Architectural Association, in protest at the educational standards and high failure rates throughout all years, staged a one day boycott of lectures. The protest demanded the establishment of a Commission of Inquiry, which was eventually held the following year. (1976 – 'Commission of Inquiry into education and training of architects' file – School of Architecture records.)

4.3 78 Julia Road Office

In 1972/73 BDG bought a property³⁴, on the recommendation of Herbie Lazarus, consisting of an existing small corner shop to Julia Road and Arcadia Roads, on the western slope of Durban's Ridge.

The subsequent design and construction of the office accommodated a ground floor reception and boardroom area and at first floor, an open plan steel portal framed studio with mezzanine and terraces. BDG were the first architectural practice in Durban to establish a major office out of the Central Business District, in a custom-designed environment to foster their particular modus operandi. The fragmentation of the dispersed accommodation in Glenroy and Helston Roads was now resolved, with a working environment within a single unified space.

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The principal investors in the Julia Road project were Lee and Mikula who co-owned the offices through Alexander Agencies. (Lee 2002 – personal communication).

Fig 4.7: BDG. Julia Road Office 1974. Main entrance from Arcadia Road.
Photo: D. Jordaan.

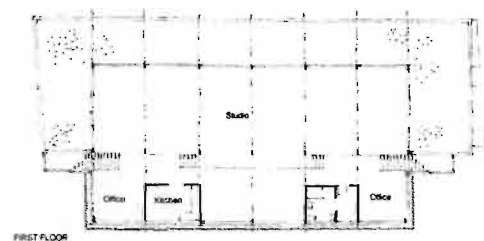
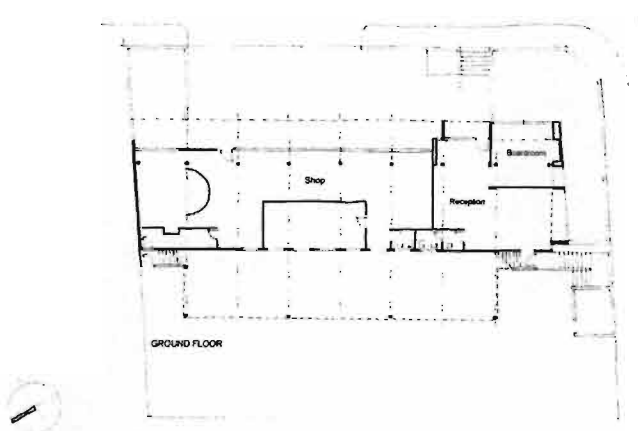


Fig 4.8: BDG. Julia Road offices. 1973. Plans

"Julia Road really offered a glimpse of how a practice could be. It was certainly a challenge to a mind set to most who came to work or visit. The transparency of the office layout was a tough one and ultimately a threat to those who wished to work on their own. However as probably the only person to live there it was astonishing, although the Bantams probably had something to say about my choice of music in the evenings." (Jordaan 2001- personal communication)

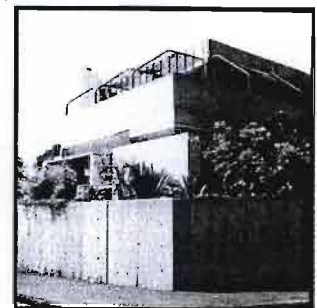


Fig 4.9: BDG. Julia Road offices. 1973. Corner view from Julia Road.
Photo: D.Jordaan.

The Bantams were a sign of the informality that still pervaded within the new home; they roosted on the terrace and generally had free range through the office “we’d be working and that thing would start pecking your toe, wandering through the place.” (Stafford 2002- personal communication).

The office lunches at Julia Road soon became a daily ritual and an important event, where most members of the practice would converge and discuss and debate the issues of the day. Meals would be prepared by Benjamin Muianga, the office assistant, with enthusiastic help from Peter Boon, an architectural technician.

“Benjamin would cook in the kitchen and the lunch would be put on the table at one o’clock. There would be this stampede to the table and the guys lost all decorum. BDG lunches were legendary, the energy levels at those lunches was fantastic.” (Stafford 2002 – personal communication).

“Julia Road – especially with the lunches for ‘shooting the breeze’ and general banter worked well. Disputes could be settled with a game of table tennis, or in MacGarry’s case best of three, or if really necessary, a best of five games!” (Jordaan 2001 – personal communication).

“There used to be vicious table tennis games, that was a whole another culture of BDG, that was a spirit thing. Denis (Jordaan) was a good player, the guys used to get angry, we used to play all day if necessary. If at eight o’clock in the morning you felt like a game you’d go and play. There was never an eight to five work ethic, you came when you liked and left when you liked, no-one abused it, at night we were all there.” (Stafford 2002 – personal communication).

“The office at Julia Road was a very tense and emotional place but extremely stimulating. (Noero 2001 – personal communication).



Fig 4.10: Bantam chicken perched on a drawing board .
Photo: D. Jordaan

“The office was a concrete frame, with a tall (storey height plus mezzanine) steel portal frame at first floor. A planted terrace with a light weight steel canopy with shade cloth wrapped around three sides, with “Z” louvres to the west to provide relief from the afternoon sun. The environment provided home for a couple of Bantams. These would roost on the terrace walls at night., On a night of strong winds they might be blown off - to be found in the morning waiting impatiently to be let in or being chased up the road by local dogs.”

(Jordaan:
www.ephemera.demon.co.uk)

Fig 4.11: BDG. Julia Road offices. 1973. Studio.
Photo: D. Jordaan.



"Intense is not the word to describe the atmosphere at BDG, I think that the word is passion!" (MacGarry 2000 – personal communication).

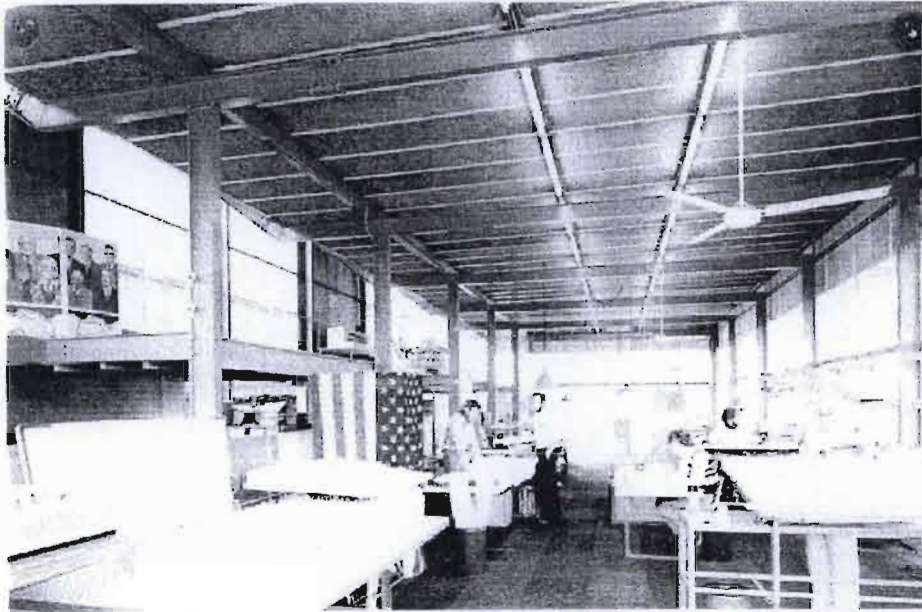


Fig 4.12: BDG. Julia Road offices. 1973. Studio. Lee and MacGarry in discussion, centre picture. To the right, front to back, Stafford, Pullon and Savage. Photo: B.Lee.

4.4 Personalities

"BDG was definitely a Philosophy, a family of people." (Savage 2001 – personal communication).

The BDG family can be defined primarily as the partners (those qualified as architects) and the group of students and technicians who were at various stages of their studies; those given the opportunity at BDG to develop their architectural experience. The partners have already been recorded as firstly Lee, Mikula, Edgar and Kearney, then subsequently Stewart and Wilson.

There was certainly a BDG image. "The BDG thing was beards, Gauloise cigarettes and leather jackets". (Stafford 2002 – personal communication)

Julia Road

A lot of musical chairs -. Mikula after his return from Europe sat in NW Lee had a horizontal filing system in two bays at the top of the short half flight.

Owen took up a position in the model corner SW,

Jordaan was on the window wall one bay from the north end. Boon just behind. Wilson in the SW corner. Library in centre two bays between bathroom and kitchen. The last bay to the north terrace had the table tennis table.

Macgarry sat opposite Jordaan near the kitchen. Stafford behind John Edgar, Wilkinson near Macgarry .

(Jordaan 2002 – personal communication)

"Every year the practice accountant used to berate the partners for their refusal to wear ties, and beards were virtually *de rigueur*." (Wilson 2001 – personal communication).

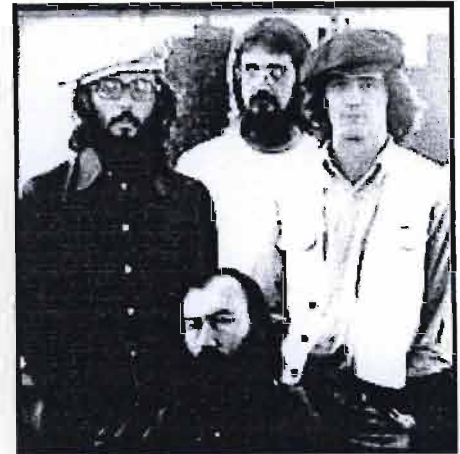


Fig 4.13: Group photo. Right to left – Jordaan, Thompsett and Boon with Edgar seated. Photo: D.Jordaan.

4.4.1 BDG stalwarts

Of the supporting architectural students and technicians the following people made significant contributions at BDG.

Denis Jordaan

Studied architecture at the University of Natal between 1965 and 1975 without completing his degree. He encountered severe difficulties in the Department, failing 5th year thesis in 1971 and 1975. Initially worked for Lee during second year vacation December 1966 to February 1967 and from that point onwards became an important member of BDG.

An exceptional draughtsman who in the later days of BDG began an A3 archive set of sketch design drawings; although not completed, the collection of drawings defines the BDG drawing style. The drawings mostly focus on plans and sections, which confirms BDG's view that these were the essential communicators of a design, as had been the case with the special edition of BDG in Plan 74.3.74. Designed a house for his mother, House Jordaan, in Hillcrest between 1970-74.

Left South Africa in 1977 and spent a year in Greece before settling in the UK where he completed his degree at the South Bank Polytechnic, London, in 1986.

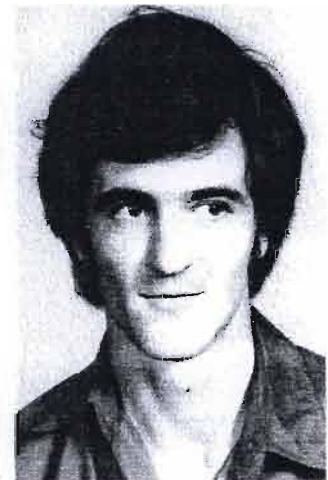


Fig. 4.14: Denis Jordaan. Photo: School of Architecture records.

Kevin MacGarry

Studied architecture at the University of Natal from 1968, graduating in 1975 having withdrawn from studies the previous year to work on the Hulett's Research and Development Laboratories at BDG. Formed a close working relationship with Paul Mikula that was sustained beyond the dissolution of BDG into the present partnership of Architects Collaborative, Durban.

Colin Savage

Studied architecture at the University of Natal from 1967, hitting a plateau in 4th year in 1971, and repeatedly failed at this level until being excluded in 1974. Relocated to Cape Town where he completed his BArch degree at University of Cape Town. Worked on a number of artworks for various BDG buildings whilst studying before becoming more involved in the design aspects during a full year in the practice in 1972.

As an architect has developed a private practice that is nationally recognized for good design, particularly in the area of social housing. Is presently a Lecturer in the School of Architecture at the University of Witwatersrand.

Bob Barwise

Registered for first year in architecture at the University of Natal and failed all subjects taken both in 1968 and 1969. Was readmitted to first year in 1971 and although passed design and technology failed two further subjects and was excluded.

Made an impact at BDG through his immense craftsmanship. Apart from being a superb model-maker he became BDG's 'inhouse builder' and was responsible for the construction of two of BDG's most organic buildings. Barwise built the extensions to House Schmidt in Westridge followed by a year on site in the Pineta Forest outside Ixopo, building the farmhouse for Marshall Cooper.

Fig 4.15: Kevin MacGarry.
Photo: School of Architecture records.



Fig 4.16: Colin Savage.
Photo: School of Architecture records.



Peter Wilkinson

Worked for BDG for a year before commencing study at the University of Natal in 1973. Apart from a trip overseas at the end of first year he worked for the practice every vacation including his Practical Year in 1976 which included a seven month stint with BDG Lesotho. Wilkinson graduated in 1978 after which he joined Mikula at the Urban Foundation. Assisted on Pendenis Gardens (model), House Wilson, House Burgess and Sunningdale Houses.

In later years was partner in the successful Durban practice of MaCaffery, Wilkinson & Little.

Fig 4.17: Peter Wilkinson.
Photo: School of Architecture records. V



Bruce Stafford

Studied architecture at the University of Natal from 1967 and graduated in 1976 with a first class pass. Joined BDG in his practical year during 1973 and stayed associated with the practice until 1979 through to their relocation and Incorporation into ZAI. Initially worked on models for Cowey Centre and Sunningdale Housing and later involvement as a project architect on House Charles and House Tony Lazarus.

Left BDG to form a partnership with Luis Ferreira da Silva and Lance Smith before running the successful Durban practice of Bruce Stafford Associates.

Fig 4.18: Bruce Stafford
Photo: Paul Mikula. V



Roy Owen

Studied architecture at the University of Natal from 1967, spending three years registered in final year due to illness. He eventually graduated in 1974. Initially worked with Lee and Kearney in 1967/68 prior to the formation of BDG, and remained associated with the practice during his studies. Worked mostly with Lee on a variety of projects.

"He was a superb draughtsman, poet and artist". (Lee 2003 – personal communication).



Fig 4.19: Roy Owen, foreground, in relaxed mode with Peter Boon.
Photo P.Mikula.

"The atmosphere at BDG was originally of an unfocused but passionate commitment to architecture. This was the currency of the office discourse and people were prized and respected for their ability and individuality. Kevin MacGarry, Bob Barwise, Colin Savage, Denis Jordaan and later Roy Owen were all talented, strong personalities all of whom had had difficulty fitting into the mould defined by the School of Architecture at the time. They were drawn to BDG because their individual ability and commitment was recognised and encouraged in different ways." (Wilson 2002 – personal communication).

The list of people who made contributions over a shorter period than those above is lengthy, the following is a selection of personalities whom worked for a short period at BDG and took their experience forward in developing their own careers; Luis Ferreira da Silva; Jo Noero; Christopher Dale; Lindsay Stapleton; Dennis Boyd; Johann Wessels; Peter Thomsett; Richard Pullon; Mohideen Abdul 'Gaf' Gafoor; Peter Malefane and Yusef Patel.

Important input of technical and support staff came from, Arthur and Jill Lane, Peter Boon, Agrippa and Happy Nymbe, Benjamin Muianga and Prisilla Dindar.

" To live within a body –
coloured in warm,
white to the crush,
vertebrae binding
under the HEAVY
of rhythmic fkush.
Secured in the flavour
Of muscled corpuscle..straining
at lightspeed selctron collision.

To live within a body –
flash down as artery
explode in a heart,
into a lung... and out,
out among air !
to bloodrush along
in so riotoustouch,
up – around – thrust
suddenly shut !

To LIVE within a body –
neverdoubtending down hills,
floatlazying round corners,
and back –
to wombcupped bright
pressure of glow
inside earth-tight.
A safe little cell
Partinside.....CLOSED."

Roy Owen

House D'avice
Artlook April 1972: p27.

CHAPTER 5: SELECTED BUILDINGS

The oeuvre of Building Design Group is extensive over the nine years of practice, accounting for over ninety completed buildings as well as several un-built projects and competition entries.

The formation of the practice had been on the strength of the domestic buildings that Lee and Mikula had designed in their private capacities. The interest in residential work continued at BDG and would later broaden to include maisonette, apartment and grouped townhouse developments, and involvement in low cost community housing.

Diversification of the work profile of the practice also occurred through various commercial and industrial commissions; however these were relatively limited in number. Likewise several community projects were undertaken which included schools and churches.

A representative selection of buildings will be discussed in this chapter under the sub-headings; Domestic Architecture; Group Residential Buildings; Commercial and Industrial buildings; Community Buildings and Community Housing.

In each of these sections an overview of the typological grouping of buildings precedes a diagrammatic analysis.

The methods of analysis have been derived from R.Clark and M.Pause's *'Precedents in Architecture'* (1996, Van Nostrand Reinhold).

Additional analytical criteria devised for this study include methods to examine the buildings climatic performance through mapping building mass, orientation and positions of important spaces; reference is made to Marschall & Kearney's chapter on *'Environmental Design'* in their book, *'Opportunities For Relevance'* (2000, University of South Africa).

The cross section is employed to observe the relationship between ground slope and roof form as well as volumetric development in living areas.

Note has also been taken of H. Allen Brook's essay *'Frank Lloyd Wright and the destruction of the box'* (JASH March 1979) and the identification of overlapping spaces.

Architectural language has been analysed in the comparison of wall and roof materials as well as window, door and stair details.

The intention of this chapter is to discuss the architecture of BDG in broad terms so as to identify design traits and commonalities.

5.1 Domestic Architecture

5.1.1 Overview

Approximately 65% of BDG projects were domestic dwellings. Of the forty one completed houses recorded, all but ten are in the Durban Metropolitan District, with only two outside of KwaZulu-Natal, confirming BDG's status as a practice of strong regional focus.

Mikula explains;

"Our domestic architecture was mostly about nature and environment and freedom of expression and special places and ways of making things. The best commissions were the ones when you really got into those families and together with them developed amazing places." (Mikula 2000- personal communication).

5.1.2 Clients

The characteristics of BDG's client profile for domestic buildings can be summarised as follows; clients from within the Indian community;

clients for whom BDG were undertaking commercial or industrial work; commissions from BDG family members and commissions from professional people.

Houses within the Indian Community

Clients from within the Indian community had already provided Lee and Mikula with a predominant proportion of their early commissions. This association continued with BDG, providing the practice with a regular source of work. Notwithstanding the restriction of the Group Areas Act, expanding residential suburbs in Durban had given rise to the opportunity for new houses on well located sites.

"Given the political disenfranchisement of the Indian community, it was logical that those successful individuals would confirm their status in the built environment." (Jordaan – extract from www.ephemera.demon.co.uk)

The practice of acquiring neighbouring properties and creating family enclaves is a characteristic of the culture of the extended family system. With the Lazaus / Marian and Paruk Houses of 1965 & 1966, Mikula and Lee had already engaged with buildings relating to this phenomenon.

Herbie Lazarus subsequently commissioned **House Lazarus / Charles (1976)** (Fig 5.1-5.4), a third house on the Ward & Villa Road properties in Overport, for his daughter Hersellene, completing the quadrant of family dwellings on this site (see Fig 2.88). The house is considerably simpler in form than the earlier houses, with internal spaces gently terraced under a mono-pitched roof. The living room is interesting for the introduction of an exposed structural steel frame, the use of which was a characteristic of the later BDG repertoire, of commercial and industrial work. House Lazarus / Charles was published in the *NPIA Newsletter* 1-1980.

House Lazarus / Charles (1976)

Brief: "A home for a young Durban couple. He is a Doctor and she is a commercial artist, both love entertaining, gardens and other beautiful things."

Design concept: A small road separates the home from a Municipal park with marvelous distant views of the Berea hills. The home has been raised above the road in order to visually extend the whole living space onto the park and view. Conceived as an open plan home the various functions of the living space such as living, studio and master bedroom are defined and separated by a tight bathroom core occupying the centre of the house."

(*NPIA Newsletter* 1-1980)



Fig 5.1: BDG - House Lazarus / Charles (1976). Family Room and Dining Room. (*NPIA Newsletter* 1-1980)

Fig 5.2: BDG - House Lazarus / Charles (1976). External view. (*NPIA Newsletter* 1-1980)



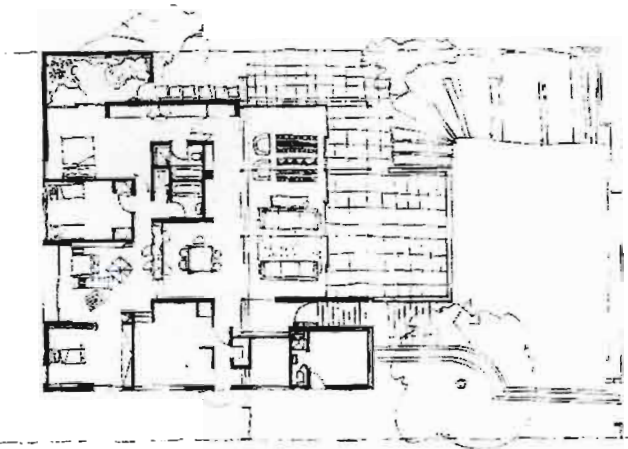


Fig 5.3: BDG - House Lazarus / Charles (1976). Plan - (NPIA Newsletter 1-1980)

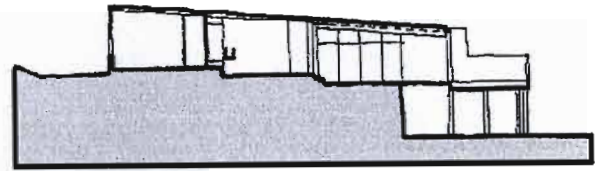
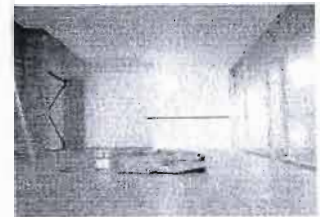


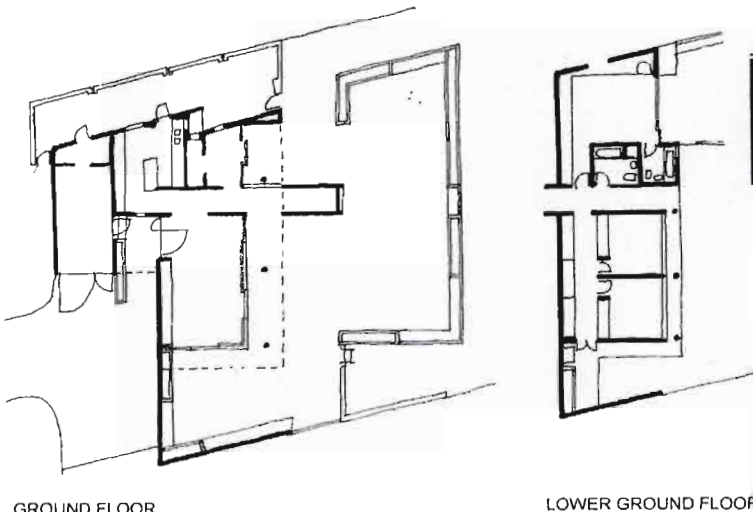
Fig 5.4: BDG - House Lazarus / Charles (1976). Section

Fig 5.5: BDG - House T. Lazarus (1975). Living Room.
Photo: P.Mikula. v



House T. Lazarus (1975) (Fig 5.5-5.8), in Burlington Heights, was designed for Herbie's son Tony Lazarus, and shares similar architectural concerns to House Charles, although the column structure is in this case of concrete construction.

Fig 5.7: BDG - House T. Lazarus (1975). Section. v



GROUND FLOOR

LOWER GROUND FLOOR

Fig 5.6: BDG - House T. Lazarus (1975). Plans.

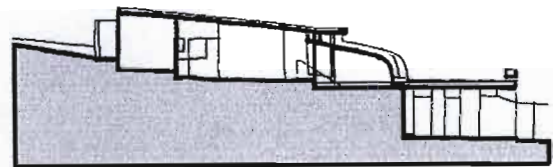


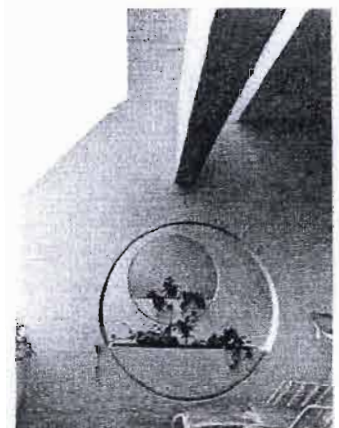
Fig 5.8: BDG - House T. Lazarus (1975). View from terrace. Photo: P.Mikula. v



Fig 5.9: BDG - House A.E.Paruk (1968). Circular openings in upper terrace.

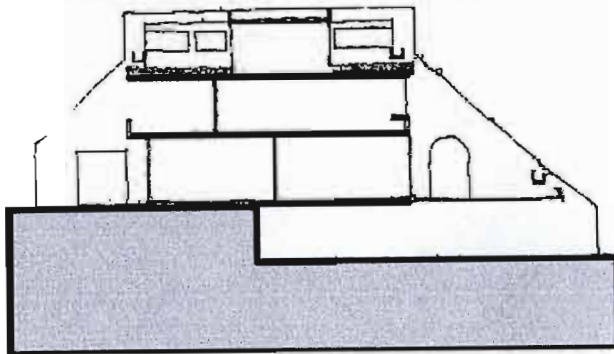
Ref: *Architect and Builder*, October 1971:p17. v

House A.E. Paruk (1968) (Fig 5.9-5.13) extended the portfolio of houses for the Paruk family. Situated closely to the pyramidal houses in Meerut Road, Westville, this house is sited on a ridge overlooking the valley into which the earlier houses had been built. The design establishes a strong geometric form of raking facades capped by a roof terrace. The floor plans are bisected by the central stair and circulation, with living spaces enjoying a northerly aspect and view.





^ Fig 5.10: BDG - House A.E.Paruk (1968). View from Devon Terrace. Ref: *Architect and Builder*, October 1971: p14.



^ Fig 5.12: BDG - House A.E.Paruk (1968). Section

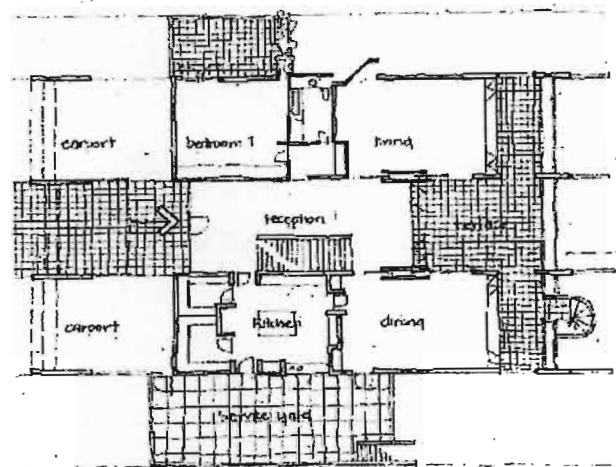
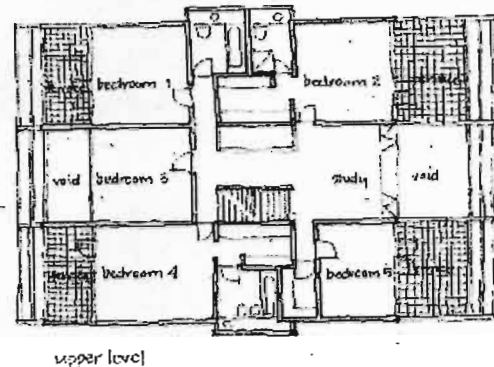
House A.E. Paruk was featured in *Architect and Builder*, October 1971, over six pages of plans, section and photographs.

"Planning: The house is for a three-generation Moslem family; grandparents, two married sons and their children, and domestic servants.

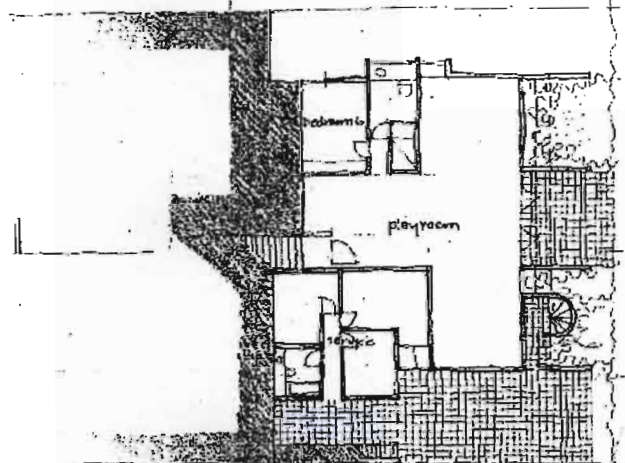
Design: The steep and narrow stand and large accommodation requirements, precluded any direct interrelation of site and house. A cellular cross-wall solution evolved, with blinkered sides to east and west neighbours, and deep terraces with concrete planting boxes to screen sun from the north and traffic noise from the south." (*Architect and Builder*, 1971:p14).

Adjacent houses were also built in Kenville, **House Dr. Timol (1970)** and **House Dawood Timol (1971)** (Figs 5.14-5.18). The first house was designed for Dr.Timol, commanding the upper reaches of a steep site. The house carries expressive off-shutter concrete detailing on the West elevation, with a canted projecting sill. The plan is conceived around an open sided courtyard that allows for connectivity to the adjoining House Dawood Timol.

< Fig 5.11: BDG - House A.E.Paruk (1968). North view. Ref: *Architect and Builder*, October 1971: p14.



entrance level

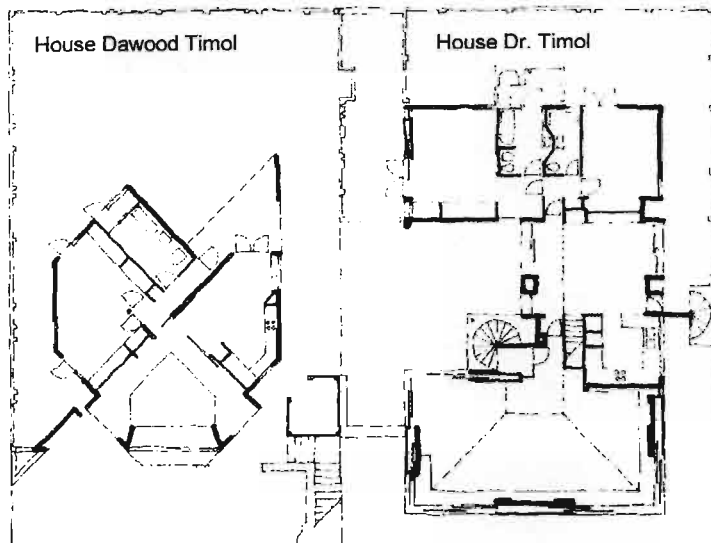


lower level

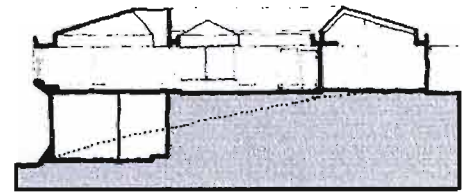
^ Fig 5.13: BDG - House A.E.Paruk (1968). Plans. Plans drawn by D. Jordaan.

Fig 5.14: BDG - House Dr. Timol (1970). View from street. Photo: P. Mikula. v

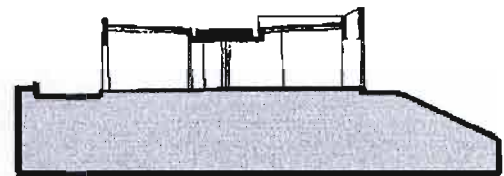




^ Fig 5.15: BDG - House Dr. Timol (1970) & House Dawood Timol (1971). Plans. Ref: *Plan 74.3*: p8.



^ Fig 5.16: BDG - House Dr. Timol (1970). Section



^ Fig 5.17: BDG - House Dawood Timol (1971). Section

Houses for Commercial and Industrial clients

Houses were also designed for BDG's commercial and industrial clients. Alan Gerson, a Johannesburg based property developer, was responsible for several commissions and was BDG's first major commercial client. He was the Director of the holding company Inland Property Investment, whose subsidiary operations included Inland Construction and later York Estates. Gerson contacted BDG on the recommendation of his secretary, who had visited House Azizollahoff and had reported on her favourable impressions. Gerson, who was seeking to start developing property in Durban, arranged for a meeting with Lee at the Edward Hotel and as Gerson recalls;

"despite his informal appearance, long hair with black sweater and jeans, we hit it off immediately and started looking around at properties to develop." (Gerson 2002 – personal communication)

House Gerson (1972) (Fig 5.19-5.23), in Houghton, Johannesburg is a tour de force of geometrical discipline based in a 60 degree grid, a device heavily borrowed from Frank Lloyd Wright's own designs for the Hanna House (1936), Unitarian Church (1949) and Jorgine Boomer House (1953).

Fig 5.18: BDG - House Dr. Timol (1970) View from courtyard. Photo: P. Mikula. v



^ Fig 5.19: BDG – House Gerson (1972). View of balcony to main bedroom. Ref: *Plan 74.3*:p7

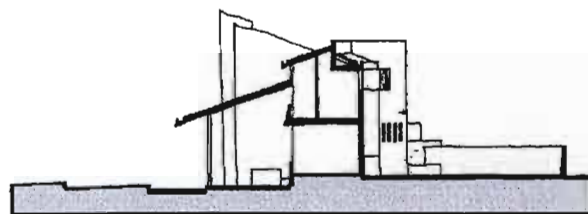


Fig 5.20: Frank Lloyd Wright – Hanna House (1936). Plan. Ref.: R. McCarter, 1997: p258.

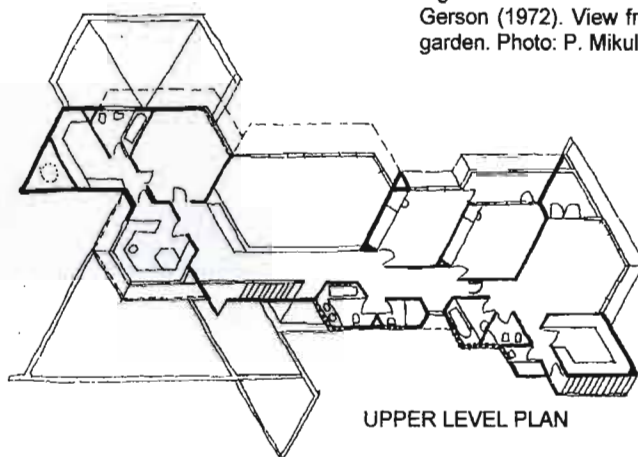
Gerson continues “I was looking for someone to design my home and so Bryan came up to Johannesburg to view the triangular site which I had acquired. He then went off to Portugal and came back with a design which we really liked, we only made a couple of small changes.” (Gerson 2002 – personal interview)



^ Fig 5.21: BDG – House Gerson (1972). View from garden. Photo: P. Mikula.

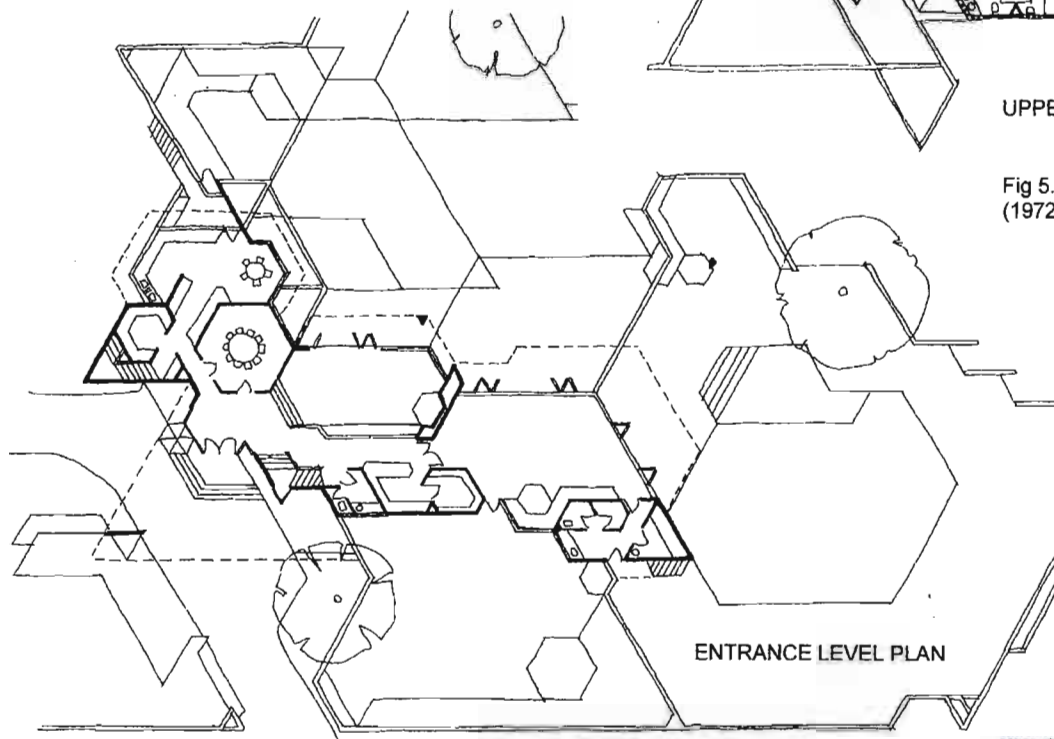


^ Fig 5.22: BDG – House Gerson (1972). Section



UPPER LEVEL PLAN

Fig 5.23: BDG – House Gerson (1972). Plans.



ENTRANCE LEVEL PLAN

Charles van Eck was a builder Gerson had employed to establish Inland Construction in Durban. The company was responsible for building the low rise, high density residential development in Pinetown called Barbeito (1972 – see Chapter 5.2): he too approached BDG to design his home.

House van Eck (1971) (Fig 5.24-5.26) is situated at the upper end of Methven Road, Westville, and commands extensive distant sea views.

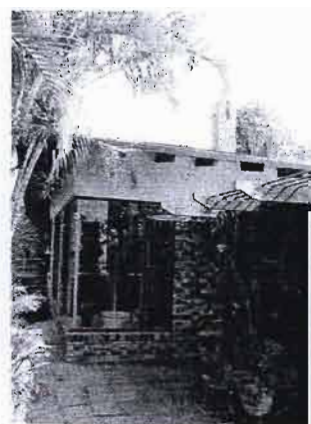


Fig 5.24: BDG – House van Eck (1971). Photo by author, March 2003.

The house plan is interesting in the way the bedrooms are offset from each other as they cascade down the slope under a roof of parallel pitch to the ground. The same Transvaal Primrose facebrick, used at House Gerson and Barbeito, was selected for the house.

Fig 5.25: BDG – House van Eck (1971). Section.

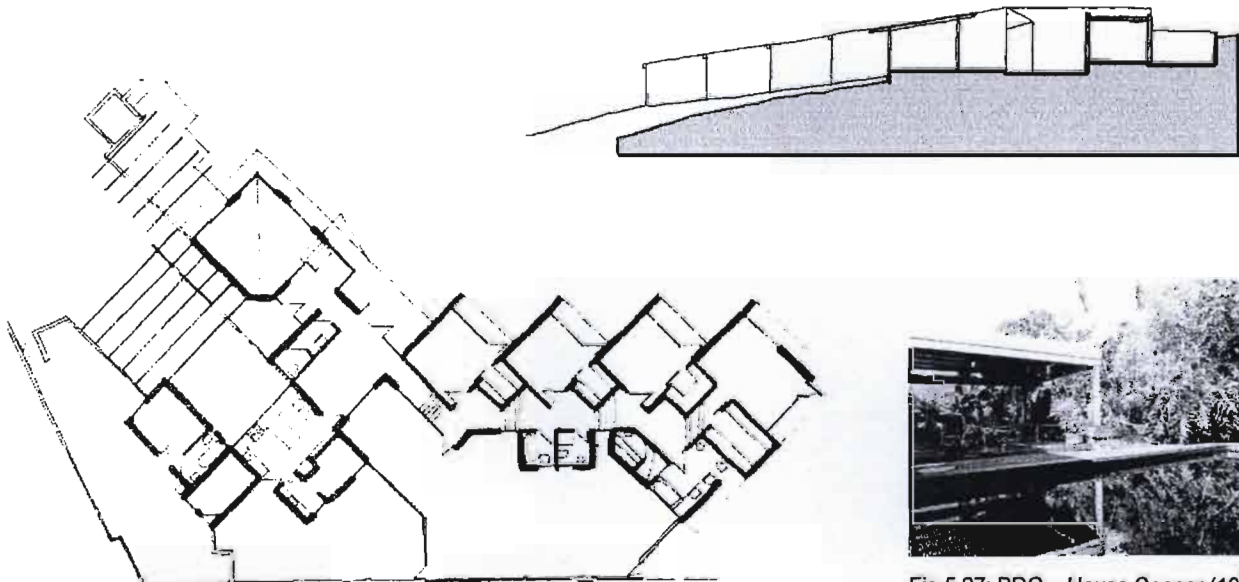


Fig 5.26: BDG – House van Eck (1971). Plan. Ref: Plan 74.3: p10.



Fig 5.27: BDG – House Cooper (1974). View from garden. Photo: M. Cooper

Marshall Cooper, a scrap metal merchant based in Port Elizabeth, was also recommended to contact BDG based on their architectural reputation. He was planning to establish a scrap metal plant in Durban, and subsequently commissioned the design for the Chicks scrap plant and office complex (1974) in Jeffels Road, Prospecton. Lee recalls that “he was a demanding but charismatic client, he would march into the office for a design meeting armed with a bottle of brandy and coke! And would leave only when both were finished!” (Lee 2001 – personal communication)

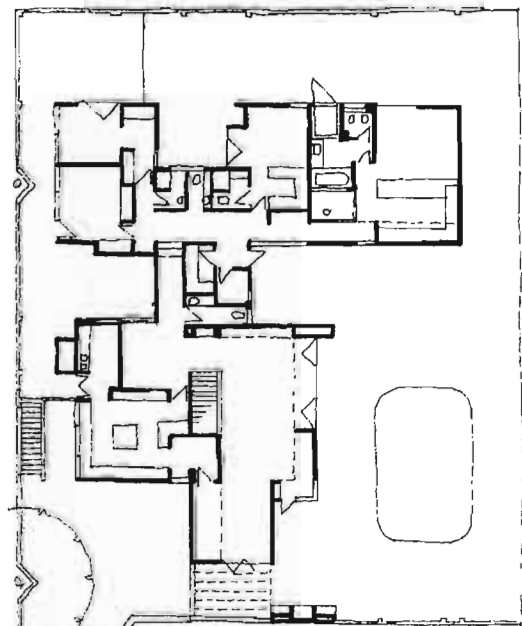


Fig 5.28: BDG – House Cooper (1974). Plan

Cooper subsequently relocated to Durban and commissioned two houses, a town house in Durban and a farmhouse near Ixopo, in the Natal Midlands. **House Cooper (1974)** (Fig 5.27-5.29) is a large

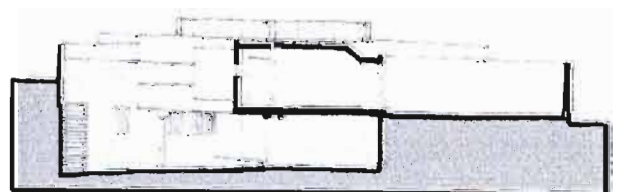


Fig 5.29: BDG – House Cooper (1974). Section

dwelling on a modestly sized pan-handle site in Madeira Road, Morningside. The house bears the strong Brutalist language of brick and concrete construction with internal spaces relating to external perimeter courts.

Farmhouse Cooper (1977) (Fig 5.30-5.35) is set into Pineta Forest outside Ixopo, and is the most extravagant house undertaken by BDG. The site commands northerly views over the Umkumkulu Valley and the presence of such a majestic natural landscape prompted the designers to respond by setting the buildings into the sloping ground.

The appearance of the house is therefore concealed on approach due to the expansive turfed roof; the arrival point is an enclosed courtyard surrounded by the accommodation wings of the farmhouse.

"Its an underground house, a bunker home, its got these things that pop out of the sky, little turrets which stuck up above the ground almost like follies in the landscape." (Savage – personal interview 2001).

Due to the remoteness of the site, formal contracting was not considered and so Bob Barwise was dispatched from the BDG office, and lived on the site for a period of a year building the house with a team of local labourers. Concrete blocks were manufactured on site and the concrete slabs were cast onto rough sawn local timbers supported on gumpoles as permanent shuttering.

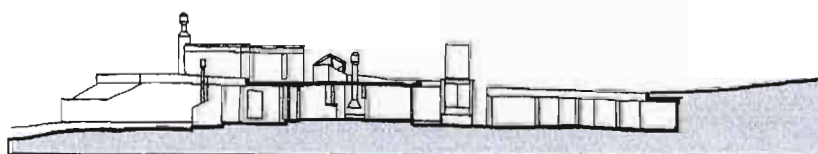
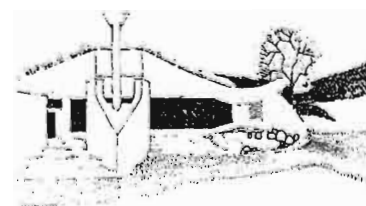


Fig 5.35: BDG – Farmhouse Cooper (1977). Section.



^ Fig 5.30: BDG – Farmhouse Cooper (1977). Ref: *NPIA Newsletter* 1-1980.



^ Fig 5.31: BDG – Farmhouse Cooper (1977). Ref: *SA Garden & Home*, 1981: p145.

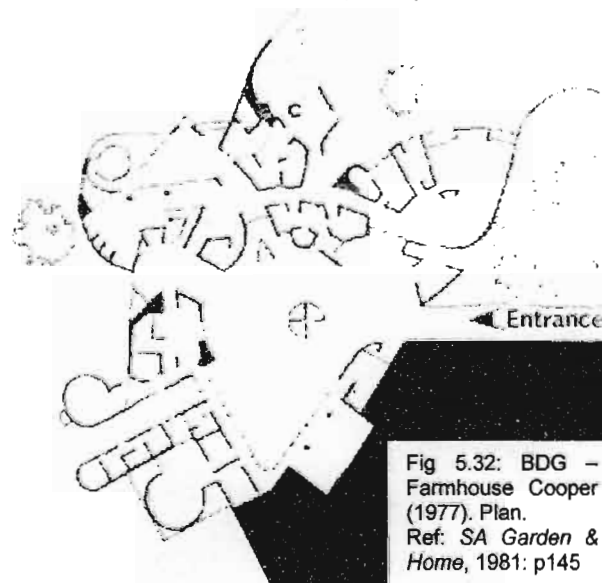


Fig 5.32: BDG – Farmhouse Cooper (1977). Plan. Ref: *SA Garden & Home*, 1981: p145



^ Fig 5.33: BDG – Farmhouse Cooper (1977). Ref: *SA Garden & Home*, 1981: p144.

Fig 5.34: BDG – Farmhouse Cooper (1977). Dining Room. Ref: *SA Garden & Home*, 1981: p147. v



Ian Sutherland, a director of Richards and Barlow, the architectural aluminium window manufacturers in Durban, was also responsible for the construction of his own home, **House Sutherland (1970)** (Fig 5.36-5.38).

Due to high tender quotations, he decided to undertake the bulk of the work to reduce costs; further measures were the inclusion of architectural product supplied by his business. Hence the building has many aluminium and glass features, particularly the patent glazed glass-roofed walkways.

"The idea of this was to give the effect of a well-lit street, running through the centre, with rooms as separate 'houses' on either side." (Sutherland 1973, *Daily News Property Supplement*: p8.)

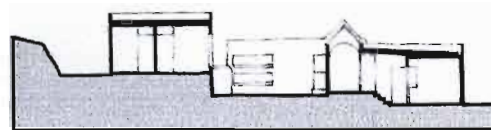
The plan is a series of square pavilions linked by the walkway and set around a central courtyard. The separation of the accommodation into elements also facilitated the construction of the house in phases.

In 1973 BDG designed the factory and offices for Richards and Barlow in Prospecton (see Chapter 5.3).

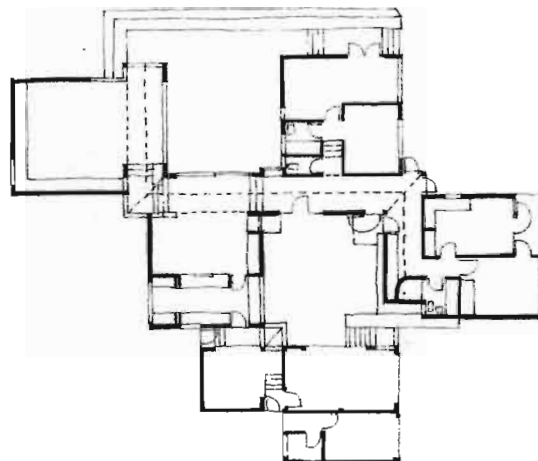
Houses for Professional clients

Several houses for Doctor's were designed by BDG. House Dr. Goga (1967) was designed prior to the formation of the group and House Dr. Timol (1970) has already been mentioned in the context of extended family dwellings.

Dr. Ramkisson commissioned Mikula to design houses for his two daughters, **House Shoba (1968)** and **House Ramkisson (1969)** (Fig 5.39- 5.42). Whereas House Shoba (discussed in Chapter 2.3) has a modest form that follows the site slope, House Ramkisson is impressively set along the site contour, with mono-pitched roof forms



^ Fig 5.36: BDG – House Sutherland (1970). Section.



^ Fig 5.37: BDG – House Sutherland (1970). Plan.

Fig 5.38: BDG – House Sutherland (1970). Internal passageway. Ref: *Daily News Property Supplement* 1973: p8.



Fig 5.39: BDG – House Ramkisson (1969). Photo: P. Mikula.



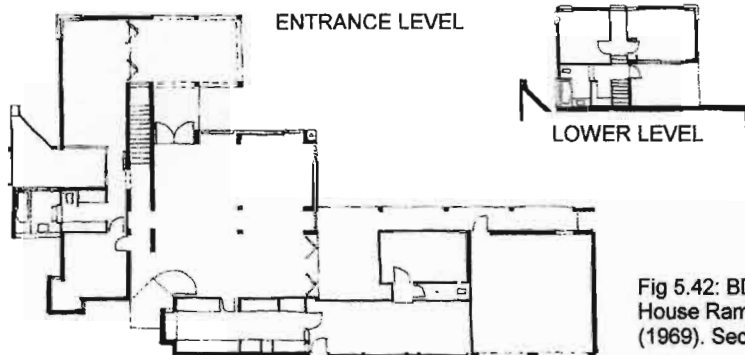


Fig 5.42: BDG – House Ramkisson (1969). Section.

Fig 5.40: BDG – House Ramkisson (1969). Photo: P. Mikula.

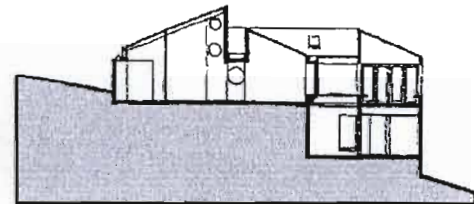


Fig 5.41: BDG – House Ramkisson (1969). Plans.

House Dr. Chetty (1969) (Fig 5.43-5.47) was commissioned for a corner site in Overport, directly opposite House Sukkuma (1967). Entry to the house is via a cascading terraced entrance, the landscaping integrated with cantilevering concrete and timber beams forming the carport enclosure. An extensive volumetric living area opens onto a



Fig 5.43: BDG – House Dr. Chetty (1969). Ref: *Architect & Builder*, July 1972:p10.

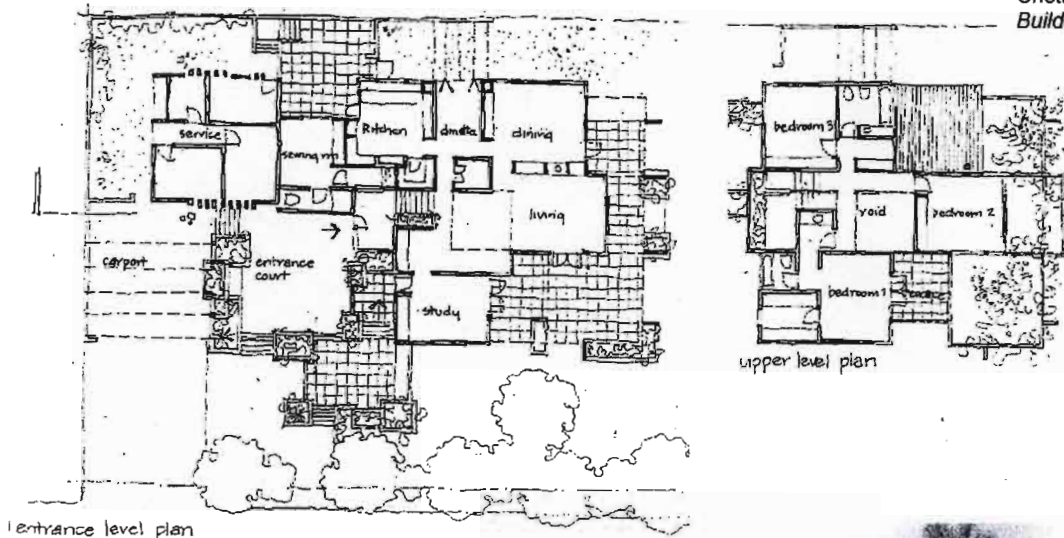


Fig 5.44: BDG – House Dr. Chetty (1969). Plans. Drawn by D. Jordaan.

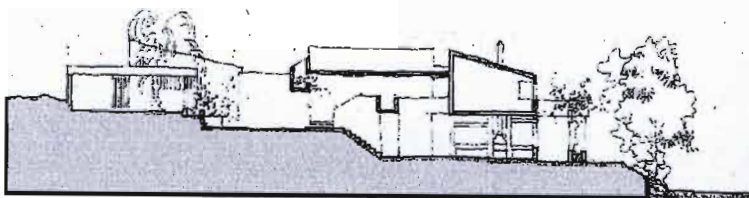


Fig 5.45: BDG – House Dr. Chetty (1969). Section. Drawn by D. Jordaan.



Fig 5.46: BDG – House Dr. Chetty (1969). Entrance view from Glenearn Road. Ref: *Architect & Builder*, July 1972: p10.

“A rigid envelope formed by building lines un-compromisingly dictated the positioning of the house, and the fact that it would have to be of more than one floor. The problem therefore became one of integrating outside spaces cut off by the artificial barrier of municipal legislation.

This was done by extending the envelope to the boundary by means of a 6 ft. (1,83m) boundary wall, and the utilisation of building elements in the form of flower boxes, pergolas and paved areas. Conversely the garden was allowed to clamber over and penetrate the outside skin of the house. The private cell-like elements of the house cluster about a central double volume family room, which links the whole." (Architect and Builder, July 1972: p10.)

House Zietkiewicz (1975) at Trafalgar Beach on the Natal South Coast, is a house designed for 'Zank', a Structural Engineer with whom BDG consulted extensively. A 'mini competition' was held in the office, "Paul did a proposal, Bryan did a proposal and Tony Wilson, whose scheme was a very modern, stand on columns sort of thing, at a high level with lots of glass." (Zietkiewicz 2001 – personal interview).

Eventually an extravagantly planned proposal emerged, with sloping turfed concrete roofs over radial projecting rooms situated around a central courtyard.

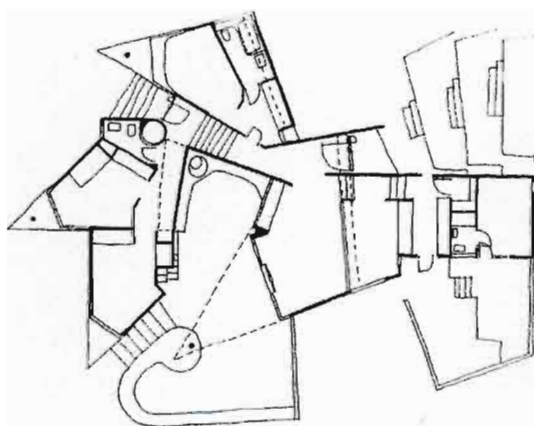


Fig 5.49: BDG – House Zietkiewicz (1975). Plan.

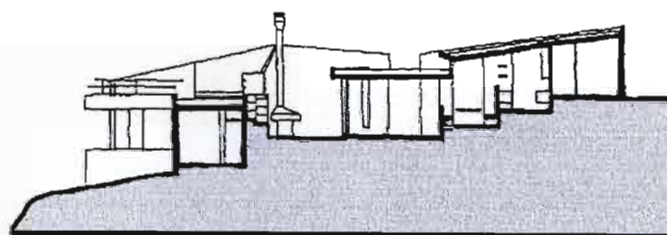


Fig 5.50: BDG – House Zietkiewicz (1975). Section.

Houses for BDG family members

Paul Mikula had notably designed his own house in 1966 and comments, "I can count the number of architects who have actually bothered or had the guts to build their own home on my 10 fingers. If they can't commit themselves, or if it's not meaningful enough, how can we experiment with others? How many architects have created their own working environment? These architects might find out and take their own decision making more seriously." (Mikula from lecture script, undated)



Fig 5.47: BDG – House Dr. Chetty (1969). Family Room. Photo: P. Mikula.



Fig 5.48: BDG – House Zietkiewicz (1975). Photo: Zank Zietkiewicz



Fig 5.51 & 5.52: BDG – House Zietkiewicz (1975). Photo: Zank Zietkiewicz

Fig 5.52



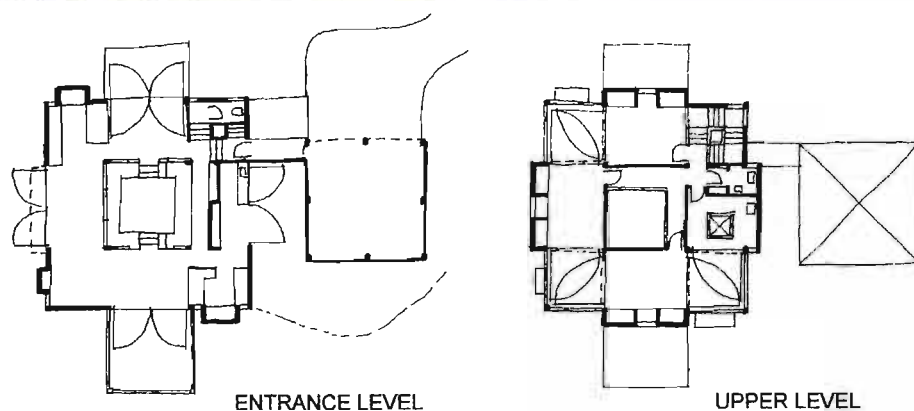


Fig 5.53: BDG – House Kearney (1969). Plans.



Fig 5.54: BDG – House Kearney (1969). Photo: B. Kearney.

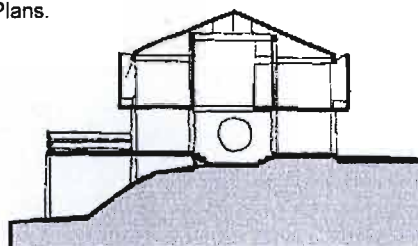


Fig 5.55: BDG – House Kearney (1969). Section.



Fig 5.56: BDG – House Kearney (1969). Photo: B. Kearney.



Fig 5.57: BDG – House Kearney (1969). Photo: B. Kearney.

House Kearney (1969) (Fig 5.53-5.57) in Glenmore, is a studied design in geometrical discipline, symmetry and balance; continuing the themes established in his Qachasnek Chapel (1967, Chapter 2.3). A square plan is trisected along each axis yielding nine spaces within this grid. The central zone is a sunken living room with double volume, under a sky-lit pyramidal roof. The surrounding spaces alternate between functioning areas and verandas, enabling a constant inside and outside interaction of space.

House Edgar (1971) (Fig 5.58-5.61) in Westridge, was constructed in two phases. The initial construction provided for a modest single level unit under a pitched roof. An abundant provision of patent glazing indicates Edgar's interest in the penetration of natural light. This interest was continued into the second phase.

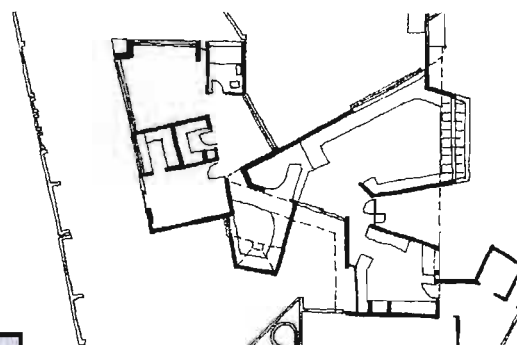


Fig 5.58: BDG – House Edgar (1971). Photo: P. Mikula.

"The house was designed to fit between a grove of old mango trees and had a turfed concrete roof, and sloping windows liking the grass of the garden with that of the roof." (Edgar 2001-personal communication).



Fig 5.60: BDG – House Edgar (1971). Plan. v



< Fig 5.59: BDG – House Edgar (1971). Section.

The edges of the roof are cleverly detailed to give the impression of a hovering mass, the lightness to which Edgar discusses later in Chapter 6.5. The two phases of construction appear to represent a changed architectural vocabulary, and are juxtaposed with some degree of awkwardness.



Fig 5.61: BDG – House Edgar (1971). Photo: P. Mikula.

House Suttie (1969) (fig 5.62-5.65) is a large beach cottage designed for Mikula's mother-in-law at Salt Rock on Natal's north coast. The living and sleeping accommodation is dispersed around a sheltered courtyard, offering protection from the sometimes volatile coastal weather conditions.



Fig 5.62: BDG – House Suttie (1969). Photo: P. Mikula.

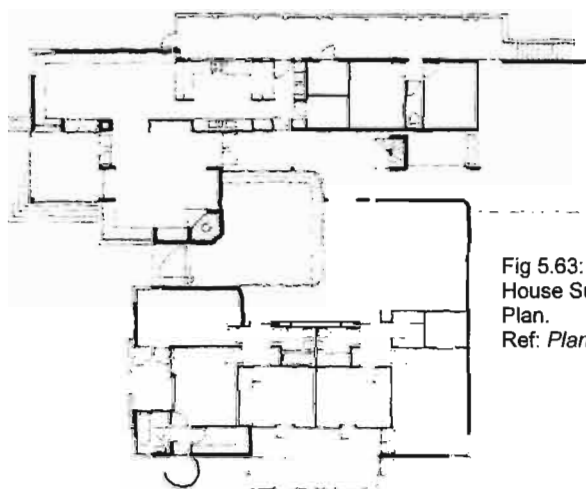


Fig 5.63: BDG – House Suttie (1969). Plan. Ref: *Plan 74.3*: p7.

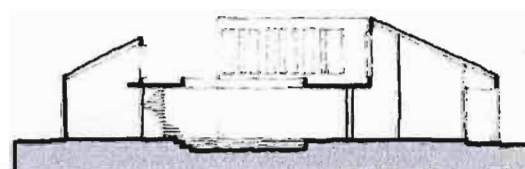


Fig 5.64: BDG – House Suttie (1969). Section. Ref: *Plan 74.3*: p7.



Fig 5.65: BDG – House Suttie (1969). Ref: *Plan 74.3*: p7.

Mikula also designed **House Hawke (1972)** (Fig 5.66-5.69) in Eshowe, for his sister-in-law's family. The house is constructed from facebrick throughout, and is noted for its predominant roof whose steep angle allows for a clerestorey window over a castelleted concrete beam, bathing light into the living spaces below.

Fig 5.66: BDG – House Hawke (1972). Plan.

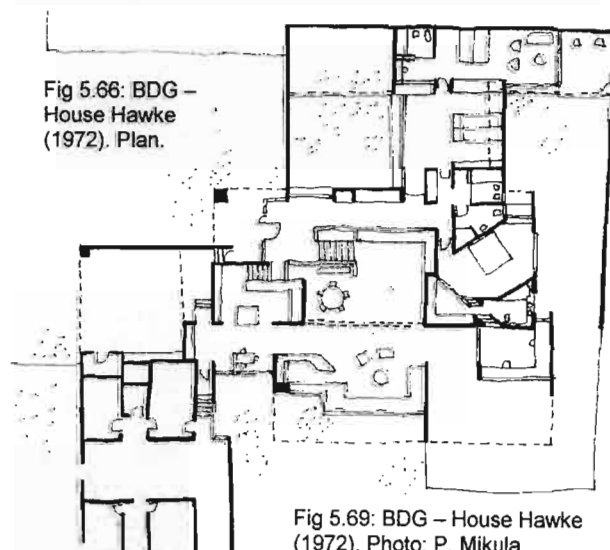
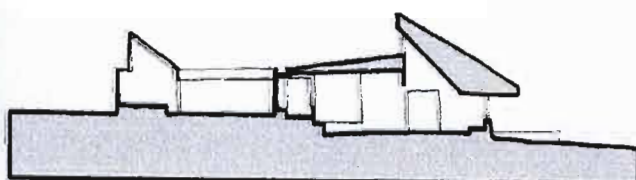


Fig 5.69: BDG – House Hawke (1972). Photo: P. Mikula



< Fig 5.67: BDG – House Hawke (1972). Photo: P. Mikula

Fig 5.68: BDG – House Hawke (1972). Section. v



Denis Jordaan designed a house for his mother in Hillcrest, **House Jordaan (1973)** (Fig 5.70-5.74). The building is experimental in the relationship between internal and external space. A courtyard space dominates the plan and relates directly to the living and sleeping rooms. The building responds to climatic change through the mechanical devices of a retractable roof over the courtyard and a giant pivoting enamel door to the living room.



Fig 5.70: BDG – House Jordaan (1973). Entrance view. Photo: D. Jordaan

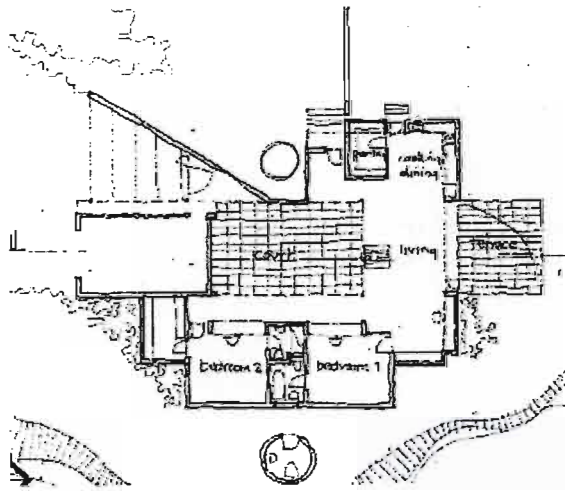


Fig 5.71: BDG – House Jordaan (1973). Plan. Drawn by D. Jordaan

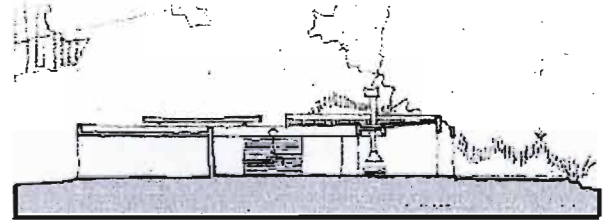


Fig 5.72: BDG – House Jordaan (1973). Section. Drawn by D. Jordaan

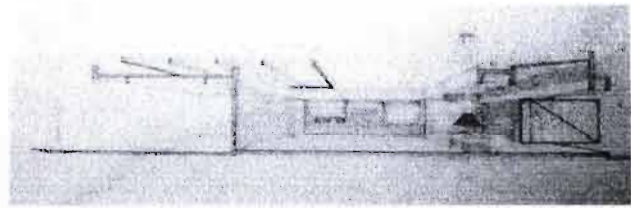


Fig 5.73: BDG – House Jordaan (1973). Perspective. Drawn by D. Jordaan

Fig 5.74: BDG – House Jordaan (1973). Photo P. Mikula.



Jordaan recalls;

"A house for a parent is a test of major proportions. A modest budget helped, combined with a simple brief. 1: Security 2: Low maintenance 3: A courtyard 4: No fees (but that's by the bye.) Plus the confusion of the child being the architect shifted the notional direction of power. Very confusing for a mother. By handover any communication was difficult. Her friends at first were shocked by the starkness of it all and would suggest what could be planted in pots etc., by the third visit the friend would be comfortable but the friend that they brought would start the process all over again."

(Jordaan – extract from www.ephemera.demon.co.uk)

Other notable houses

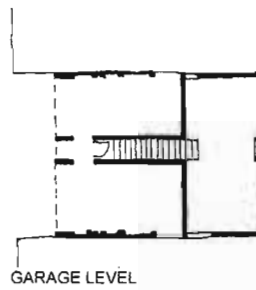
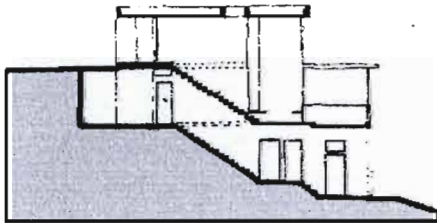
House Herrington (1968) (Fig 5.75-5.78); sited on a very steep slope in Glenroy Road, a few properties away from the BDG offices, the house is a compact exercise in planning around a central stair.

Fig 5.75: BDG – House Herrington (1968). Photo B. Kearney.>

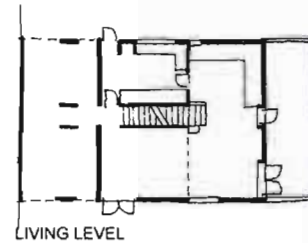


Entering between a double carport at street level, the stair descends sharply to a double volume dining and living room. Daylight penetrates into the stairwell from a rooflight above, and is allowed to filter further down between the open treads of the top flight to the lower stair that gives access to the bedrooms below.

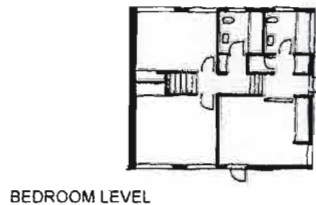
Fig 5.76: BDG – House Herrington (1968). Section. Ref: *Plan 74.3*: p5.



GARAGE LEVEL



LIVING LEVEL



BEDROOM LEVEL

Fig 5.76: BDG – House Herrington (1968). Plans.

Fig 5.78: BDG – House Herrington (1968). Stairwell. Photo B. Kearney



Fig 5.79: BDG – House van Schalkwyk (1969). Photo B. Kearney

House van Schalkwyk (1969) (Fig 5.79-5.83) in Kloof, is indicative of BDG's departure from the aesthetic of rough white rendered walls to the Brutalist rawness of 'flush jointed reject facebricks'. (working drawing 20/3/69 : Brian Kearney personal archive)

The rooms in plan are a series of stepping spaces that descend the slope under the constant fall of the roof. The children's bedrooms are contained within a single space that is subdivided with purpose designed screens that define the three individual areas.

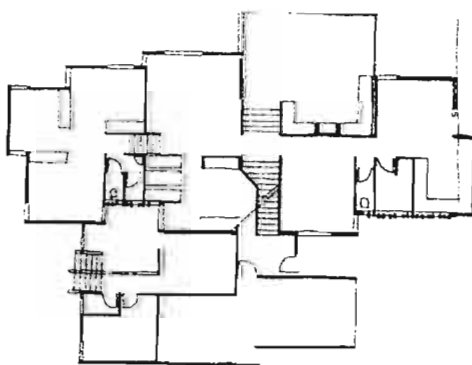


Fig 5.82: BDG – House van Schalkwyk (1969). Plan.

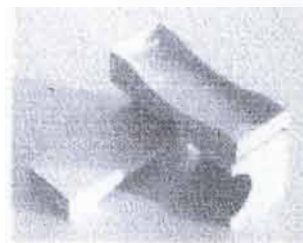


Fig 5.80: BDG – House van Schalkwyk (1969). Photo B. Kearney

Fig 5.81: BDG – House van Schalkwyk (1969). Model: Bedroom furniture. Photo B. Kearney

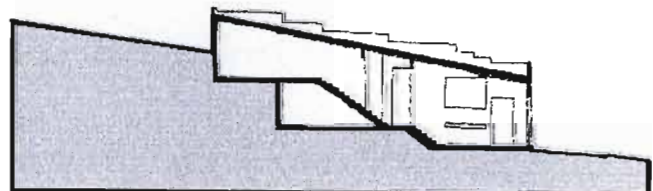


Fig 5.83: BDG – House van Schalkwyk (1969). Section.

House Griffith (1969) (Fig 5.84-5.88) in Westville continues in the language of House van Schalkwyk, with walls constructed from flush jointed common bricks and offshutter concrete beams. The plan is orthogonal with spaces located either side of an open court and main living room that is roofed by bisecting rafters from the opposing mono-pitched elements, creating a dynamic volume over this space.

ENTRANCE LEVEL



Fig 5.86: BDG – House Griffith (1969).
Plan. Ref: *Turnall Topics* May 1970:p4.

LOWER LEVEL

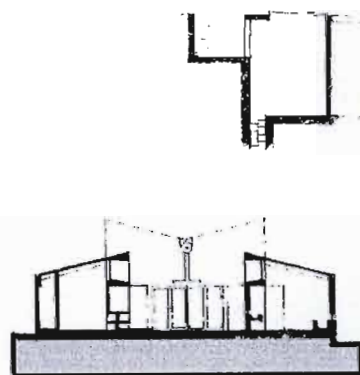


Fig 5.87: BDG – House Griffith (1969).
Section. Ref: *Turnall Topics* May 1970: p4.

The reoccurring “Greek staircase” (see Plate 5.6.P2), that had been developed at House Mikula (1965) and would be repeated at House D’Avice (1970), was used to connect the bedroom spaces to a secluded studio at the lower ground level.

House D’avice (1970) (Fig 5.89-5.93) is a fine example of where space has been manipulated within a simple building enclosure. The pitched roof provides shelter to the living accommodation split over two levels, with a central double volume connecting the upper and lower floors. The south east corner of the building is modulated, whereby an external volume penetrates the eaves of the roof to create an imposing verandah. French doors allow for the flow of space from the living room onto the verandah, and an enormous pivoting timber door engages the ground floor guestroom with the covered terrace.

Enamel panels and applied graphic motifs at House D’avice, are discussed in Chapter 6.4.



Fig 5.84: BDG – House Griffith (1969).
Photo P. Mikula



Fig 5.85: BDG – House Griffith (1969).
Photo P. Mikula



Fig 5.88: BDG – House Griffith (1969). Living Room.
Photo: P. Mikula.



Fig 5.89: BDG – House D’avice (1970).
Plan. Ref: *Artlook* April 1972:p26.

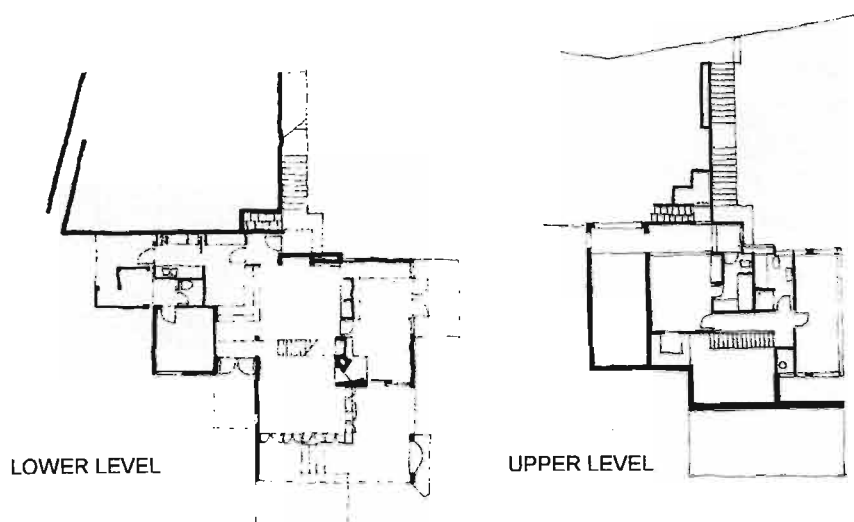


Fig 5.90: BDG – House D'avice (1970). Plans.
Ref: Lower Level – Plan 74.3: p7.

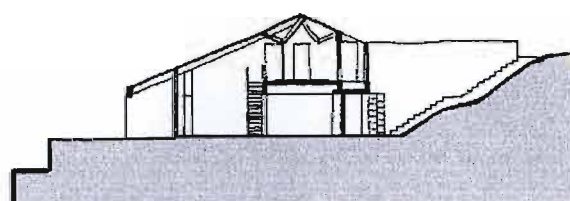


Fig 5.93: BDG – House D'avice (1970). Section

House Wilson (1973) (Fig 5.94-5.97) in Cowies Hill, is a linear building with spaces distributed either side of a central circulation spine and open courtyards. A concrete flat roof unifies the building form with gumpoles used as permanent shuttering contrasting with the smooth plastered walls. A series of inclined rooflights capture and disperse light into the internal spaces below.

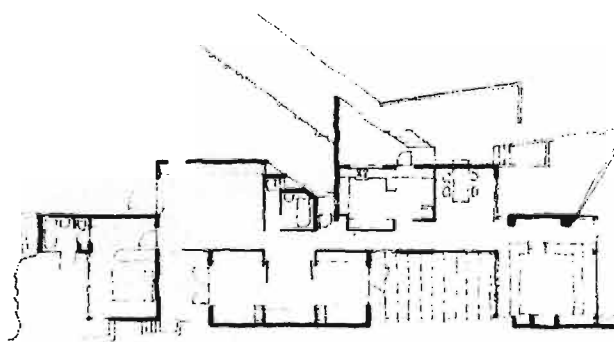
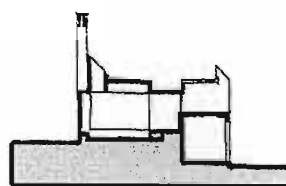


Fig 5.95: BDG – House Wilson(1973). Plan. Ref: Plan 74.3: p9.

Fig 5.96: BDG – House Wilson(1973). Section.



At **House Burgess (1973)** (Fig 5.98-5.102) in Westville, a flat roof is also designed to unify an expansive plan arrangement. Roughly rendered curved elements with high level strip windows articulate the corners of the buildings and are references to the concrete military



Fig 5.91: BDG – House D'avice (1970). Photo: P. Mikula.



Fig 5.92: BDG – House D'avice (1970). Ref: *Daily News property supplement* -undated.

Fig 5.94: BDG – House Wilson(1973). Photo: P. Mikula.



Fig 5.97: BDG – House Wilson (1973). Photo: P. Mikula.

structures constructed by the German forces during World War II. Some of these constructions were visited by Mikula during a vacation in Europe at the time of the commission for the house. Upon return to the Durban office, the image of these structures was incorporated into the design for the house. (Mikula 2001-personal communication)

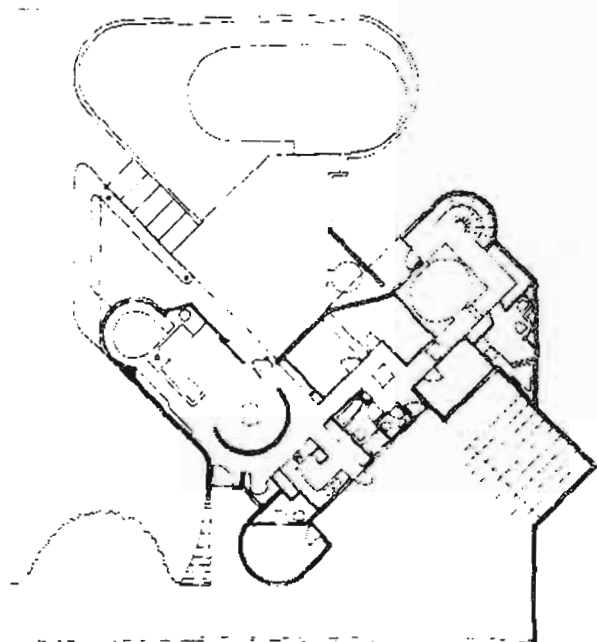


Fig 5.101: BDG – House Burgess (1973). Plan. Ref: *Plan* 74.3: p11.



Fig 5.99: Military tower in Jersey. Ref: Raeburn 1980: p267.

Fig 5.98: BDG – House Burgess (1973). Photo: P. Mikula.



Fig 5.100: BDG – House Burgess (1973). Photo: P. Mikula.

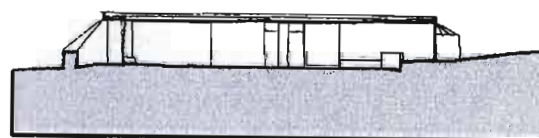


Fig 5.102: BDG – House Burgess (1973). Section.

Alterations and additions

Two notable alterations to existing dwellings were carried out in 1972. The remodelling of **House Schmidt** (Fig 5.102-5.106) in Westridge involved the redefinition of internal spaces as well as a newly constructed bathroom extension. Whilst the internal conversion is skilful in its articulation of the ceiling plane and use of contrasting materials, it is the bathroom wing that gave the house a unique identity.

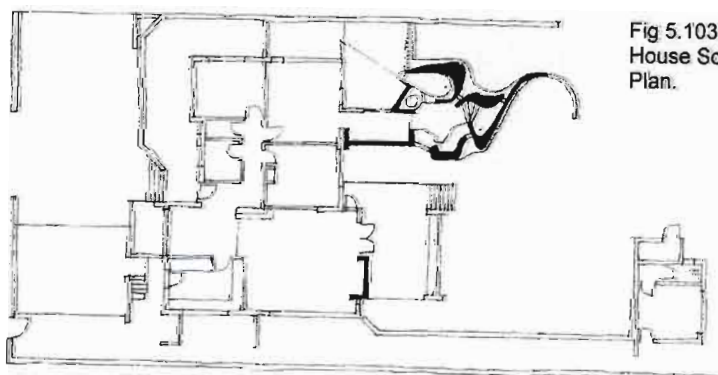


Fig 5.103: BDG – House Schmidt (1972). Plan.

Fig 5.104: BDG – House Schmidt (1972). Ref: *Plan* 74.3: p3.



"The highlight of the house is without doubt the bathroom addition. From the main bedroom a short covered passageway leads to the bathroom complex, which has been built in the shape of three adjoining beehives. Inside, curving walls and undulating floors lead to three defined areas consisting of a sunken bath, a toilet and a basin." (*Daily News Property Supplement*, September 7th 1973)

Because of the immensely sculptural qualities of the extension, Bob Barwise was asked to build the structure. The elongated vaulted domes are constructed with common brickwork and capped with skylights. The upward view within one of these domes was used in the front-page collage of Plan 74.4 special feature on the work of BDG, and thus became a representative symbol of BDG's architecture.

House Bestall (1972) (Fig 5.107-5.111), Overport, also transforms an existing conventional townhouse by exploiting the fall of the site by demolishing floors so as to create stepping levels around a central double volume, allowing for spatial continuity between the upper and lower floors. The entrance to the house is interestingly set perpendicular to the direction of arrival. Behind a blank-faced street elevation, a discreet front door leads through to a ramp that descends to the living area.

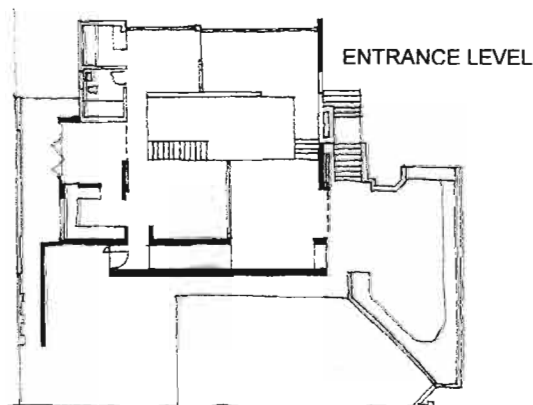


Fig 5.108: BDG – House Bestall (1972). Plans.

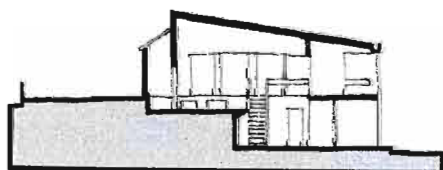


Fig 5.109: BDG – House Bestall (1972). Section.



LOWER LEVEL

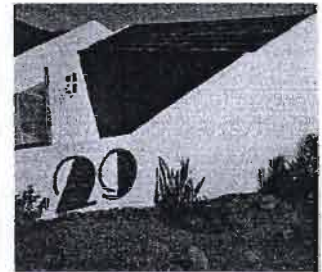
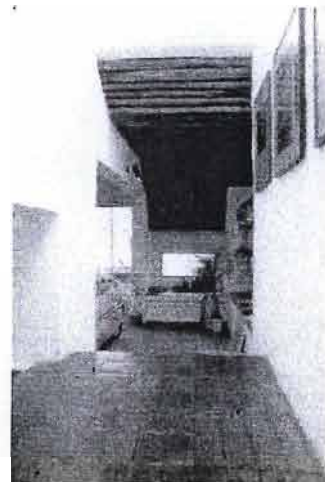


Fig 5.105: BDG – House Schmidt (1972). Ref: *Daily News property supplement*. Sept 1973

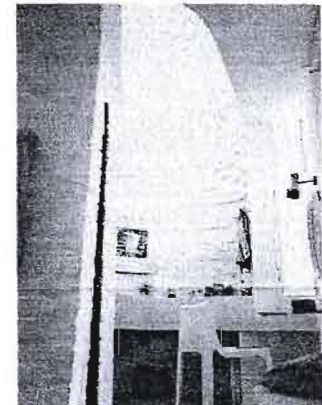


Fig 5.106: BDG – House Schmidt (1972). Ref: *Daily News property supplement*. Sept 1973



Fig 5.107: BDG – House Bestall (1972). Photo P. Mikula



Fig 5.110: BDG – House Bestall (1972). Photo P. Mikula

Fig 5.111: BDG – House Bestall (1972). Photo P. Mikula

5.1.3 Analysis

Orientation & natural light penetration.

An essential aspect of good residential design in the Southern Hemisphere is the planning of living spaces with a northerly orientation, whereby the interior can enjoy the variant qualities of natural light. North orientation also ensures that the principal living spaces can be protected from thermal discomfort associated with mid-day solar penetration through the use of roof overhangs; furthermore the invasive late afternoon westerly solar insolation can be avoided.

With respect to environmental design, Kearney has recently written; "Since the sun is the primary driving force in climate it will be rewarding to pay particular attention to the selective control of sunlight in and around buildings. Thus orientation is cardinal, the most important natural gift being the way a north-facing structure has a built –in sun control system by providing insulation in winter and protection in summer with a roof overhang" (Marschall & Kearney 2000: p78). The roof overhang in the case of the BDG houses was often overlooked in preference for an architectural language of clipped eaves or parapet roofs, negating the protection an overhang would afford.

Kearney continues, "One should not attempt to face everything north – rather plan activities with the sun and without the sun. Then consider how orientation may work with plan and building form, how orientation may contribute to the design of outdoor spaces, shaded and sunlit; how orientation may contribute to devising window distribution and size; verandahs and overhangs; tree positions, plants and other screens and the nature of the windows themselves." (Marschall & Kearney 2000: p78). This would serve well as a BDG manifesto, as house plan forms were rarely banally rectangular, and each internal environment was manipulated through the plan with considered care for its specific relationship to the external environment. Windows were regarded as more than mere ventilators; they would be carefully arranged to balance the demands to filter natural light and frame views.

Lee concurs with Kearney's view that it is not always essential to face northwards, as in some cases their may be benefit from viewing a landscape which is itself bathed in sunlight, as opposed to a view hindered by excessive glare. (Lee – personal communication 2002).

Plates 5.1.P1 & 5.1.P2 map the location of living spaces within a large selection of the houses designed by Lee and Mikula and latterly BDG. On Plates 5.1.P3 & 5.1.P4 the sections examine the spatial qualities of the living areas as well as natural light penetration into the buildings. In most cases cognisance has been taken to present a degree of northerly exposure to the living spaces, although the climatic preference was often moderated by siting considerations such as a predominant view, as at House Naidoo (1967), House Suttie (1969) and House T. Lazarus (1975).

In cases where the location of living spaces is to the south of the plan, an adjacent courtyard to the north moderates this condition by allowing day lighting to penetrate the interior through the open space. This planning device can be found at House Suttie (1969), House Dr. Timol (1970), House Wilson (1973) and at House Jordaan (1973).

In all houses the living spaces relate directly to external terraces illustrating an importance placed on indoor and outdoor spatial relationships, a direct concession to the South African climate and way of life. Living spaces were the dominant elements in the plans, off which other activities would engage, receiving special attention in volumetric development which is described in the photographic illustrations on Plate 5.1.P5.

At House Mikula (1965) the unfavourable disposition of living spaces due to the predominantly westerly aspect was partly compensated by the inclusion of clerestorey windows. Roof apertures were a common feature in the houses where the manipulation of natural light was required, usually to allow light to penetrate a deep plan as was the case at House Lazarus (1965), House M.N. Reddy (1968), House Griffiths (1969) and House Zietkiewicz (1975).

Patent glazed skylights were a feature of the later work of BDG as a device to allow light to wash wall edges as at House Dawood Timol (1971), House Edgar (1973), House Wilson (1973) and at Farmhouse Cooper (1977).

The diagrams on Plates 5.1.P6 & 5.1.P7 illustrate the orientation of building mass of the selected houses with the predominant axis highlighted in red, with the secondary axis in orange. In the BDG houses, building orientation is generally associated with the direction of ground slope, with few examples revealing a purely east / west axis relating to a north / south orientation.

In the majority of examples the predominant building mass orientation occurs midway from the desired north/south axis to the unfavourable east/west. It is apparent that priority was not placed

on achieving optimum built form orientation; instead the particular site conditions and restrictions weighed higher in BDG's design criteria.

Interpenetration of space

As indicated in Chapter 2.1, the School of Architecture at the University of Natal had imbued a modernist doctrine that strongly influenced the planning discipline of its graduates, with Ronald Lewcock an enthusiastic advocate of the architecture of Frank Lloyd Wright (Lee 2003 – Personal communication). Kearney confirms "I was always intrigued with the double volume and interpenetration of spaces." (Kearney –personal communication 2001).

The interpenetration of space that he refers to can be related to H. Allen Brooks' observation of overlapping spaces in his article '*Frank Lloyd Wright and the Destruction of the Box*' which appeared in the *Journal of the Society of Art Historians*, March 1979: pp7-14.

"Wright attacked the traditional room at its point of greatest weakness – at the corner. He dissolved the corner between the dining and living rooms at the Ross House by permitting one room to penetrate into the other. The area of overlap serves as a connecting space (the corridor or doorway) between the rooms." (Allen Brooks, 1979: p7)

Plate 5.1.P10 illustrates the examples of where interpenetration or overlapping of spaces has occurred in BDG house designs. In the case of House Herrington (1968) and House Jordaan (1973) a singular overlap is apparent and this ranges through more complex arrangements to the example of House van Schalkwyk (1969), where multiple overlapping occurs.

Only at House J.N. Reddy (1968), House Dr. Chetty (1969) and House van Schalkwyk (1969) does the corner of rooms bi-sect in the way the Allen Brooks describes at Wrights own Ross House (1902).

In most of BDG house designs, the spaces are contained as singular entities without contradiction from another, therefore the interpenetration of spaces, although an interest did not feature strongly.

Further reading of Allen Brooks does however reveal other traits in Wrights' architecture that also resurfaces in BDG's work.

"Outside corners were more difficult for Wright to eliminate, yet once he got rid of them his "invisible corners" became one of the hallmarks of the modern movement. When Wright completely freed the wall from its corners, it did become a slab, and once it became a slab he was free to move it around or divide it up at will. When this happened, the room as a box was destroyed." (Allen Brooks 1979: p8).

Plan Morphology

A re-occurring pattern is evident in the plans of BDG residential architecture, where walls are placed as a combination of straights, U shapes and L shapes that sometimes extending into zigzag shapes. The U shape is particularly characteristic of screening elements, containing elements and those that penetrate beyond the line of external enclosure. Plate 5.1.P11 maps the distribution of these elements on a selection of building plans. What emerges is a common language of planning technique that forms a strong characteristic of BDG's work.

Ground slope to roof profile relationship

The observation that the roof profile at House Biermann (1961), with a roof slope parallel to the ground, was an influence on some of Mikula's early designs (inferred in Chapter 2.3), led to an investigation to examine whether there was repetition of this aspect in other BDG houses.

Plates 5.1.P12 and 5.1.P13 highlight the roof profile in a heavy red line against the general ground slope in green. A regular reference to this particular roof / ground relationship is evident throughout the span of the practice, from House Shoba (1968), House M.N.Reddy (1968), House van Schalkwyk (1969), House van Eck (1971), House Zietkiewicz (1975), House T.Lazarus (1975) through to House Charles (1976). This study confirms the importance of House Biermann as a key precedent in the residential architecture of BDG and other practices in the Durban region.

Another predominant roof form that is illustrated on these particular plates is the proliferation of the concrete flat roof. Evidence of this is as early as House Randeria (1966), through House A.E.Paruk (1968), House Herrington (1968), House Dawood Timol (1971) to a predominant preference in the later designs of House Edgar (1973), House Wilson (1973), House Burgess (1973), House Jordaan (1973), House Cooper (1974) and Farmhouse Cooper (1977). The flat roof with upstand edges was a clear concession in detail to the language of International modernism that prevailed in the practice.

Mono pitched roofs were also utilised consistently, either as disparate inclined planes articulating strong sculptural forms sometimes incorporated with areas of flat roof as at House Lazarus & Marian (1965), House Goga (1967), House Naidoo (1967), House J.N. Reddy (1968), House Ramkisson (1969), House Suttie (1969), House Griffith (1969), House Dr.Chetty (1969) and House Gerson (1970).

Sloping roofs were only rarely allowed to overhang the perimeter walls, an aesthetic consideration which is in conflict with the environmental logic of shedding rainwater and solar protection. "The primary purpose of roofing is to provide shade and protection from rain. A form developed as an appropriate sunshade may also be suitable as a shape which sheds rain – to take rainwater to the perimeter of the structure as rapidly as possible and disperse water over a large area." (Marschall & Kearney 2000: p79) Substantial roof overhangs are only in evidence at House D'Avic (1970), House Gerson (1970) and House van Eck (1971).

The experimentation with the pyramidal roof was limited to the two examples of Houses I.M. & Y.M. Paruk (1966) and House Kearney (1969).

Materials : Roof – Plates 5.1.14 & 5.1.P15

In most cases where pitched roofs were designed, natural slate or asbestos cement tiles were used as roofing material, either laid conventionally on battens and underlay or utilised as a finish to a reinforced concrete roof. Alternatively at House Naidoo (1967), House J.N. Reddy (1968) and House Dr. Chetty (1969) clay tiles were used. At House Jordaan (1973) and House Charles (1976) clay tiles were laid on a metal sheeting deck allowing for a shallower roof pitch.

Flat roofs were generally waterproofed with a mastic asphalt on concrete slab, at House Azizollahof (1966) and House Burgess (1973) clay blocks or tiles were laid as a finish onto a flat concrete roof.

Sodded earth roofs were a common feature of later BDG houses, providing a green garden space at roof level culminating in the extensive roof to Farmhouse Cooper (1977).

Materials : Walls – Plates 5.1.16 & 5.1.P17

Brick masonry was the exclusive form of wall construction for the residential architecture of BDG, with only the living room section of House Charles (1976) being a steel framed construction.

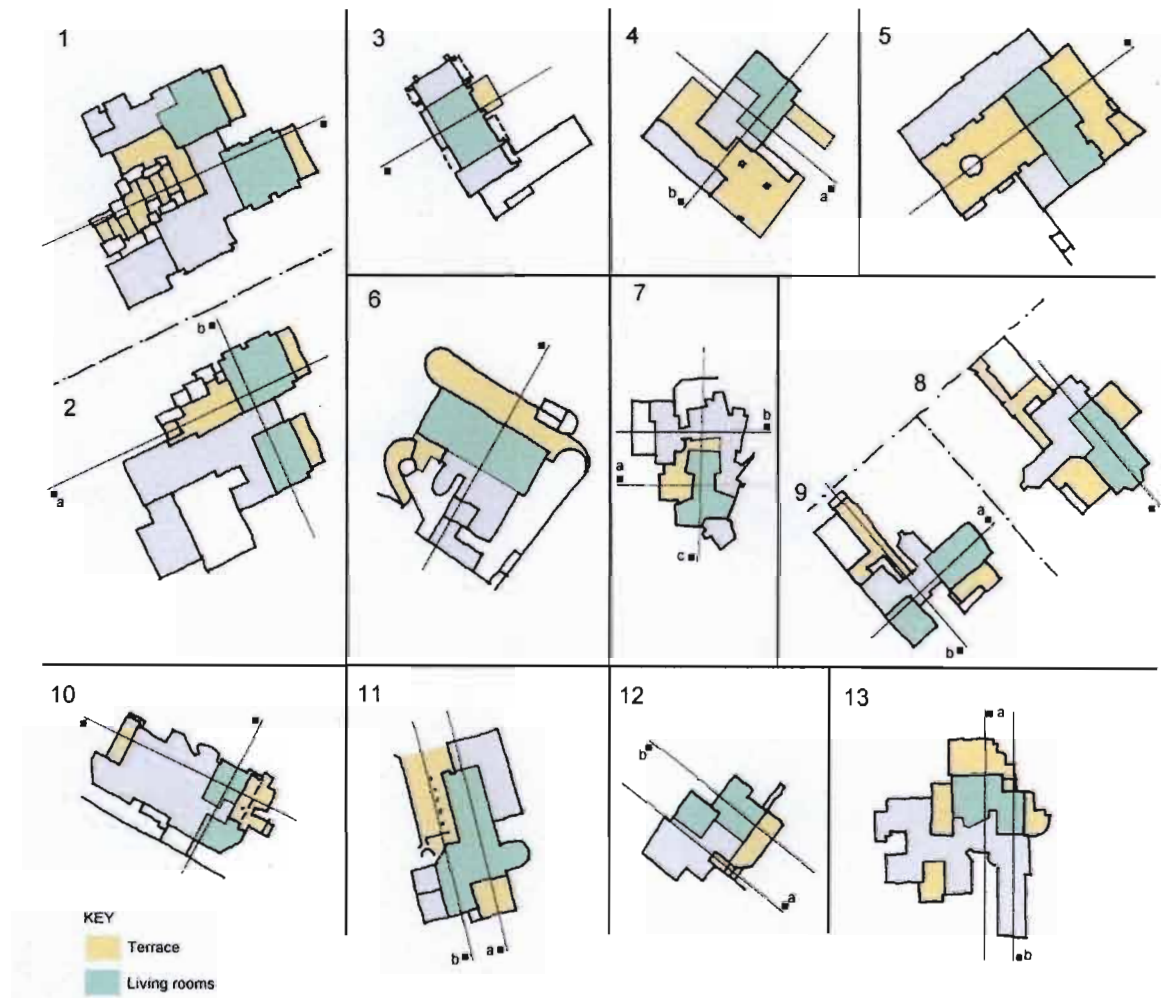
Bricks were articulated in the detail design process to create aesthetic embellishment. Window framing and patterning, filigree screens and corbelling were elements often incorporated to modulate the rich texture of the walls.

Wall finishes were predominantly a white painted rough bagged plaster onto stock bricks, allowing a visible texture of the brick bonding. The white bagged walls continued in the tradition of local architecture at the time, which had been started locally at Barrie Biermann's own house in 1961, and had been continued in the early houses of Hans Hallen.

Occasionally the plaster render was smooth as at House Dr. Timol (1970) and House Ziekiewicz (1975) or a heavy rough plaster as at House Burgess (1973) and Farmhouse Cooper (1977).

Flush jointed stock bricks, a recognised trait of Brutalist architecture, were specified at House van Schalkwyk (1969), House Griffiths (1969), House Jordaan (1973) and House Cooper (1974). These houses demonstrated a rawness of expression, stripped of any applied decoration; the strength in the visual qualities in the architecture rested in the skilful composition of the forms and fenestration.

Facebrick was only considered in a few of the later BDG houses. The Transvaal Primrose facebrick was specified at House Gerson (1970) and House van Eck (1971) and the Natal red facebrick was used at House T. Lazarus (1975) and House Charles (1976).



B.H.Lee

- 1 House Y.M. Paruk (1966)
5 House Naidoo (1967)

- 2 House I.M. Paruk (1966)
6 House Azizollahof (1967)

- 3 House Randeria (1966)

- 4 House Dr. Goga (1967)

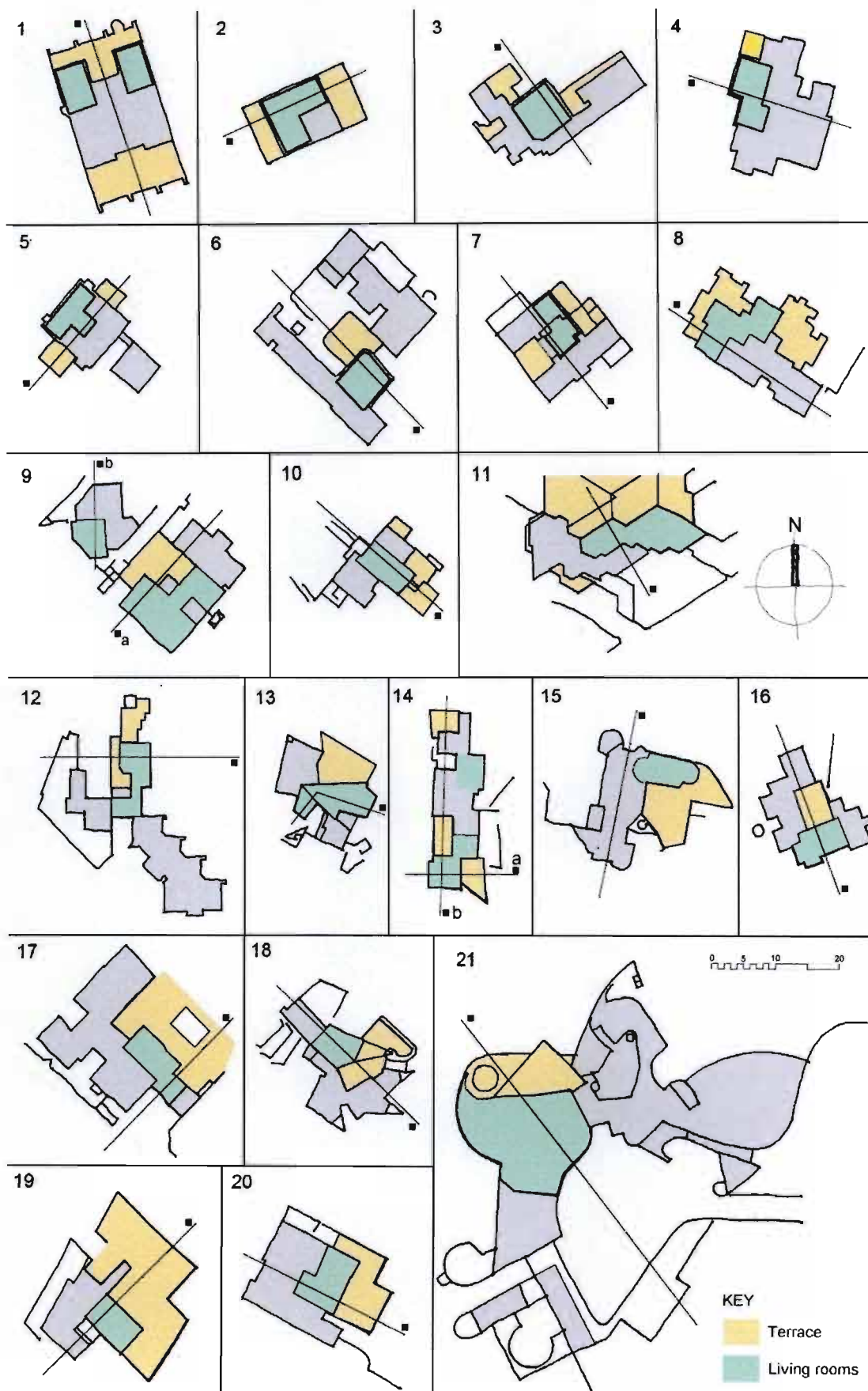
P. Mikula

- 7 House Mikula (1965)
11 House Shoba (1968)

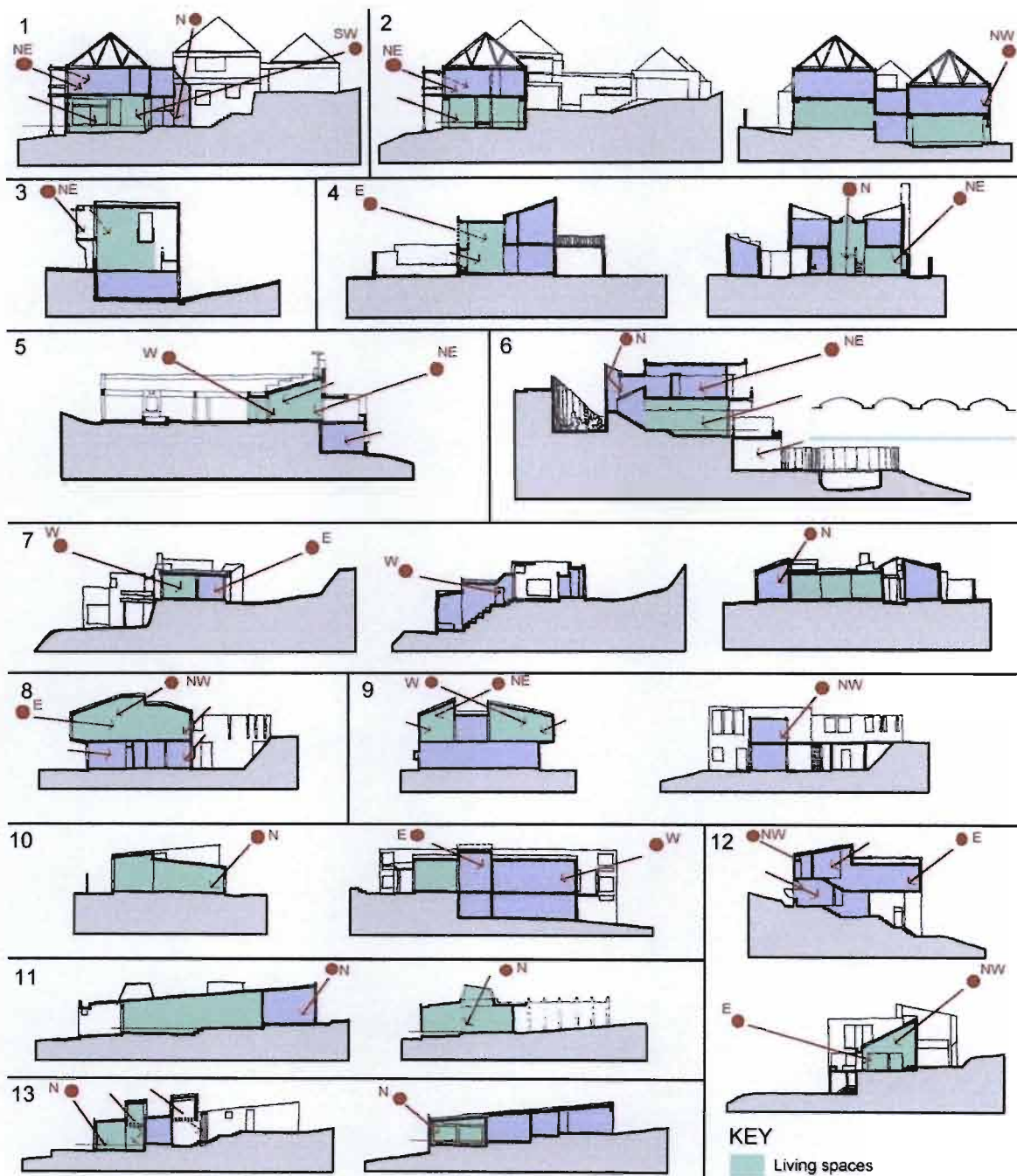
- 8 House Marian (1965)
12 House J.N. Reddy (1968)

- 9 House Lazarus (1965)
13 House M.N. Reddy (1968)

- 10 House Sukkuma (1967)



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|---------------------------|---------------------------|---------------------------|------------------------------|------------------------------|
| 1 House A.E. Paruk (1968) | 2 House Herrington (1968) | 3 House Ramklisson (1969) | 4 House van Schalkwyk (1969) | 5 House Kearney (1969) |
| 6 House Suttie (1969) | 7 House Griffiths (1969) | 8 House Dr. Chetty (1969) | 9 House Dr. Timol (1970) | 10 House Dawood Timol (1971) |
| 11 House Gerson (1970) | 12 House van Eck (1971) | 13 House Edgar (1971) | 14 House Wilson (1972) | |



B.H. Lee

1 House Y.M. Paruk (1966)
5 House Naidoo (1967)

2 House I.M. Paruk (1966)
6 House Azizollahof (1967)

3 House Randeria (1966)

4 House Dr. Goga (1967)

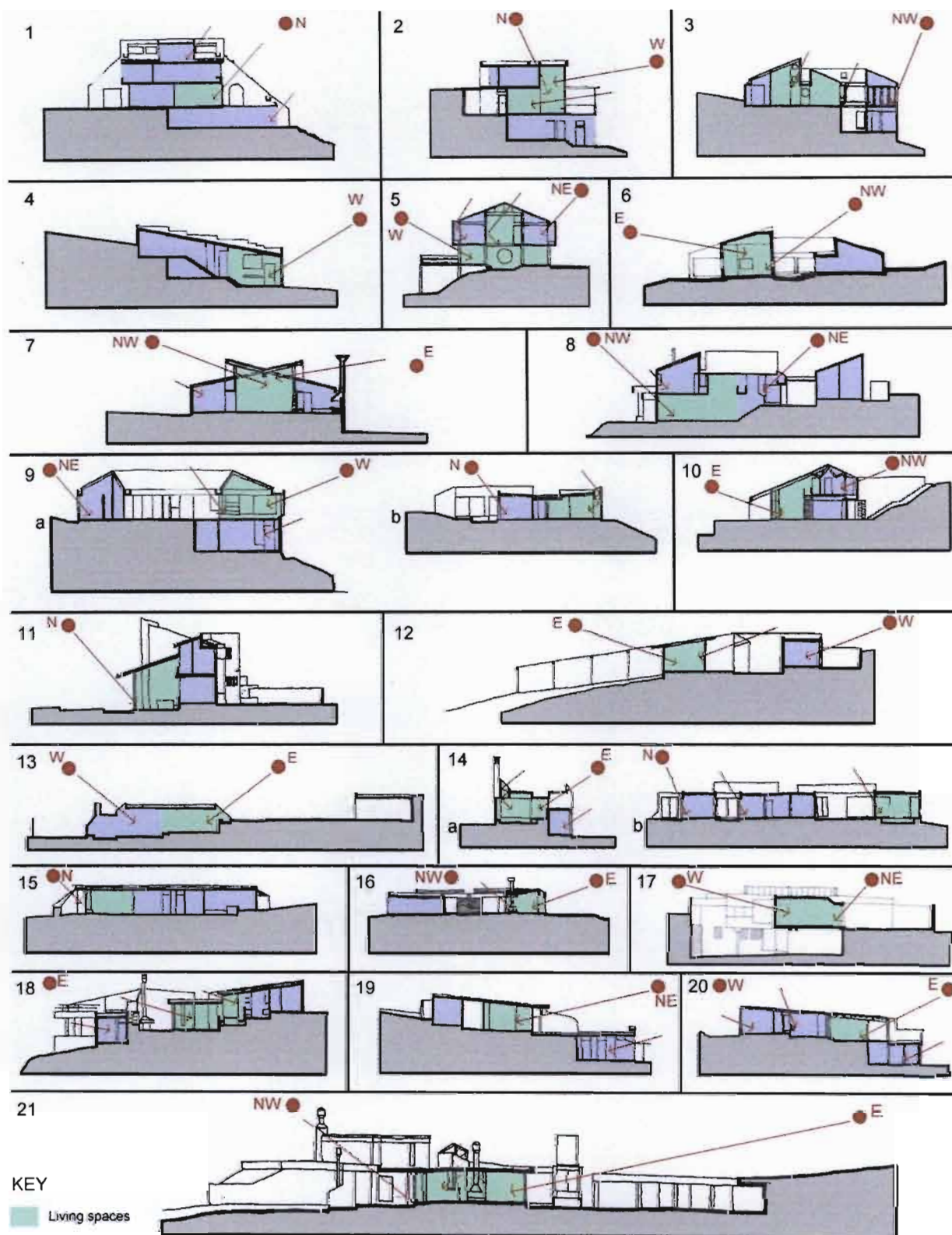
P. Mikula

7 House Mikula (1965)
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8 House Lazarus (1965)
12 House J.N. Reddy (1968)

9 House Marian (1965)
13 House M.N. Reddy (1968)

10 House Sukkuma (1967)



- 1 House A.E. Paruk (1968)
- 5 House Kearney (1969)
- 9 House Dr. Timol (1970)
- 12 House van Eck (1971)
- 16 House Jordaan (1973)
- 20 House Charles (1976)

- 2 House Herrington (1968)
- 6 House Suttle (1969)
- House Dawood Timol (1971)
- 13 House Edgar (1971)
- 17 House Cooper (1974)
- 21 Farmhouse Cooper (1977)

- 3 House Ramkisson (1969)
- 7 House Griffiths (1969)
- 10 House D'avice (1970)
- 14 House Wilson (1973)
- 18 House Zietkiewicz (1975)

- 4 House van Schalkwyk (1969)
- 8 House Dr. Chetty (1969)
- 11 House Gerson (1970)
- 15 House Burgess (1973)
- 19 House T. Lazarus (1975)

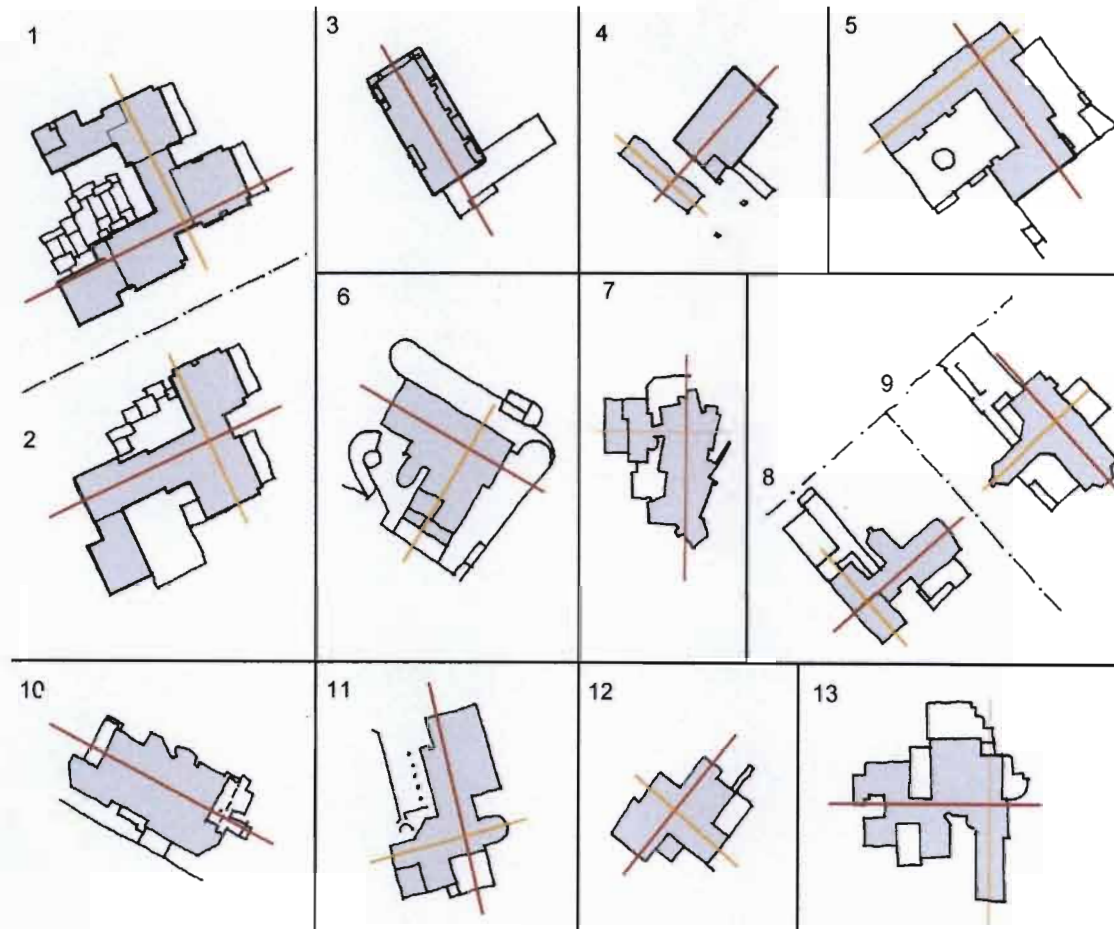


B.Lee
P.Mikula
Building Design Group
9 House Sutie (1969)
13 House Schmidt (1972)
17 House Jordaan (1973)
21 Teambuild Mikula(1976)

1 House I.M.Paruk (1966)
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6 House A.E. Paruk (1968)
10 House Dr. Timol (1970)
14 House Bestall (1972)
18 Farmhouse Cooper (1977)

2 House Dr. Goga (1967)
5 House Marian (1965)
7 House Herrington (1968)
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15 House Wilson (1973)
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3 House Azizollahof (1967)
8 House Kearney (1969)
12 House Edgar (1971)
16 House Burgess (1973)
20 Teambuild MacGarry (1976)



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B.H.Lee

- 1 House Y.M. Paruk (1966)
5 House Naidoo (1967)

- 2 House I.M. Paruk (1966)
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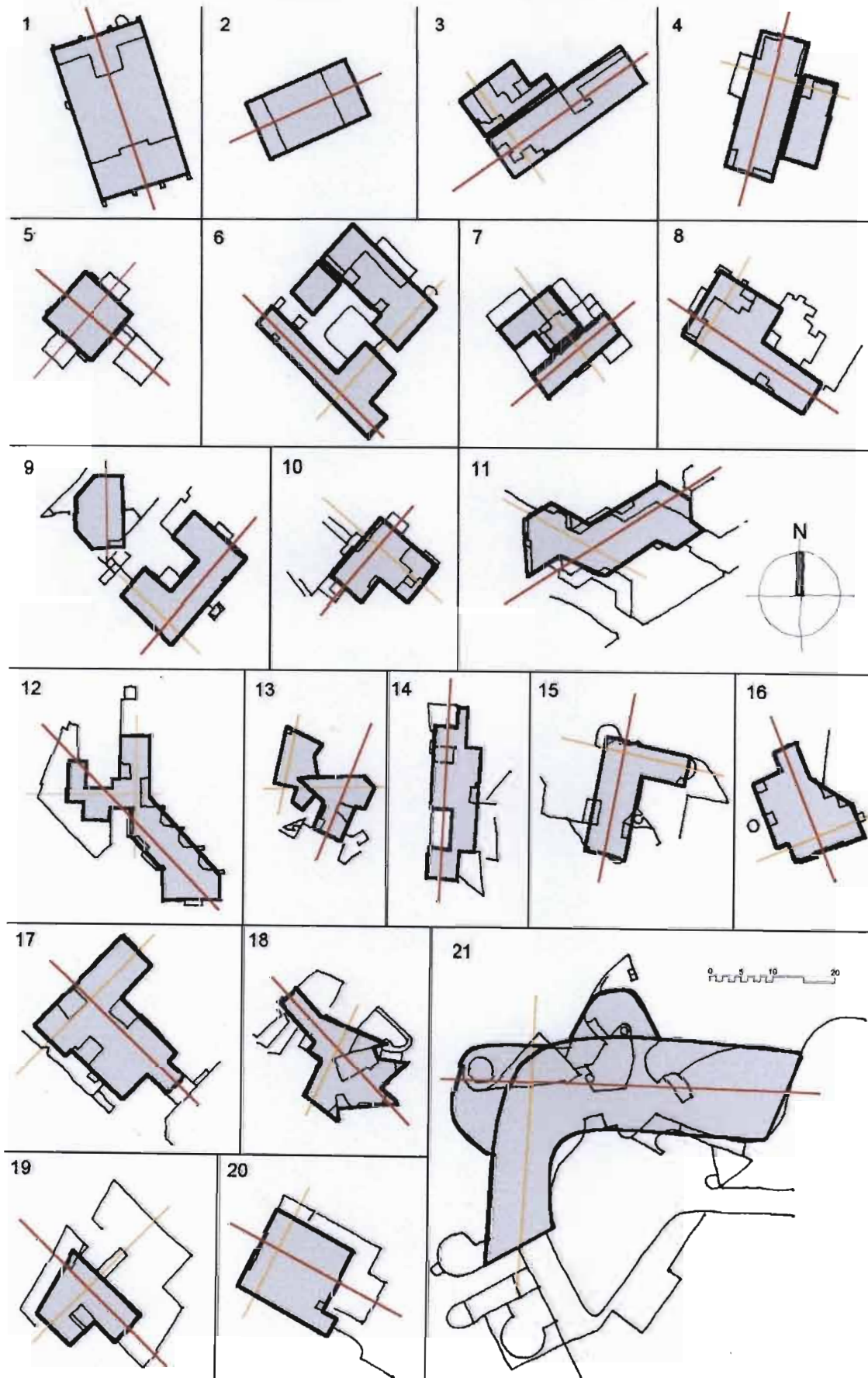
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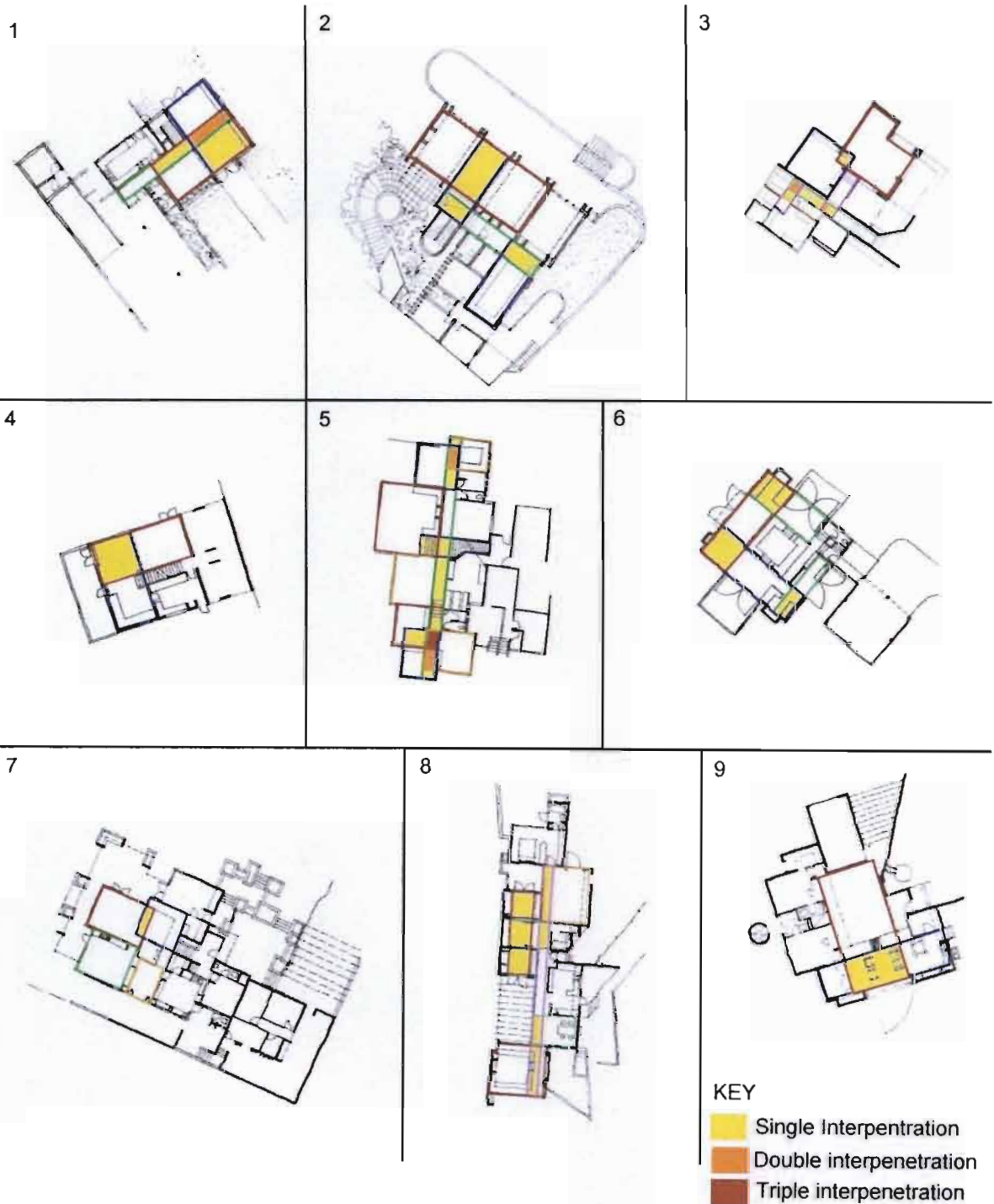
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- 10 House Sukkuma (1967)





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| 6 House Suttie (1969) | 7 House Griffiths (1969) | 8 House Dr. Chetty (1969) | 9 House Dr. Timol (1970) | 10 House Dawood Timol (1971) |
| 10 House D'Avico (1970) | 11 House Gerson (1970) | 12 House van Eck (1971) | 13 House Edgar (1971) | 14 House Wilson (1973) |
| 15 House Burgess (1973) | 16 House Jordaan (1973) | 17 House Cooper (1974) | 18 House Zietkiewicz (1975) | 19 House T. Lazarus (1975) |
| 20 House Charles (1976) | 21 Farmhouse Connor (1977) | | | |

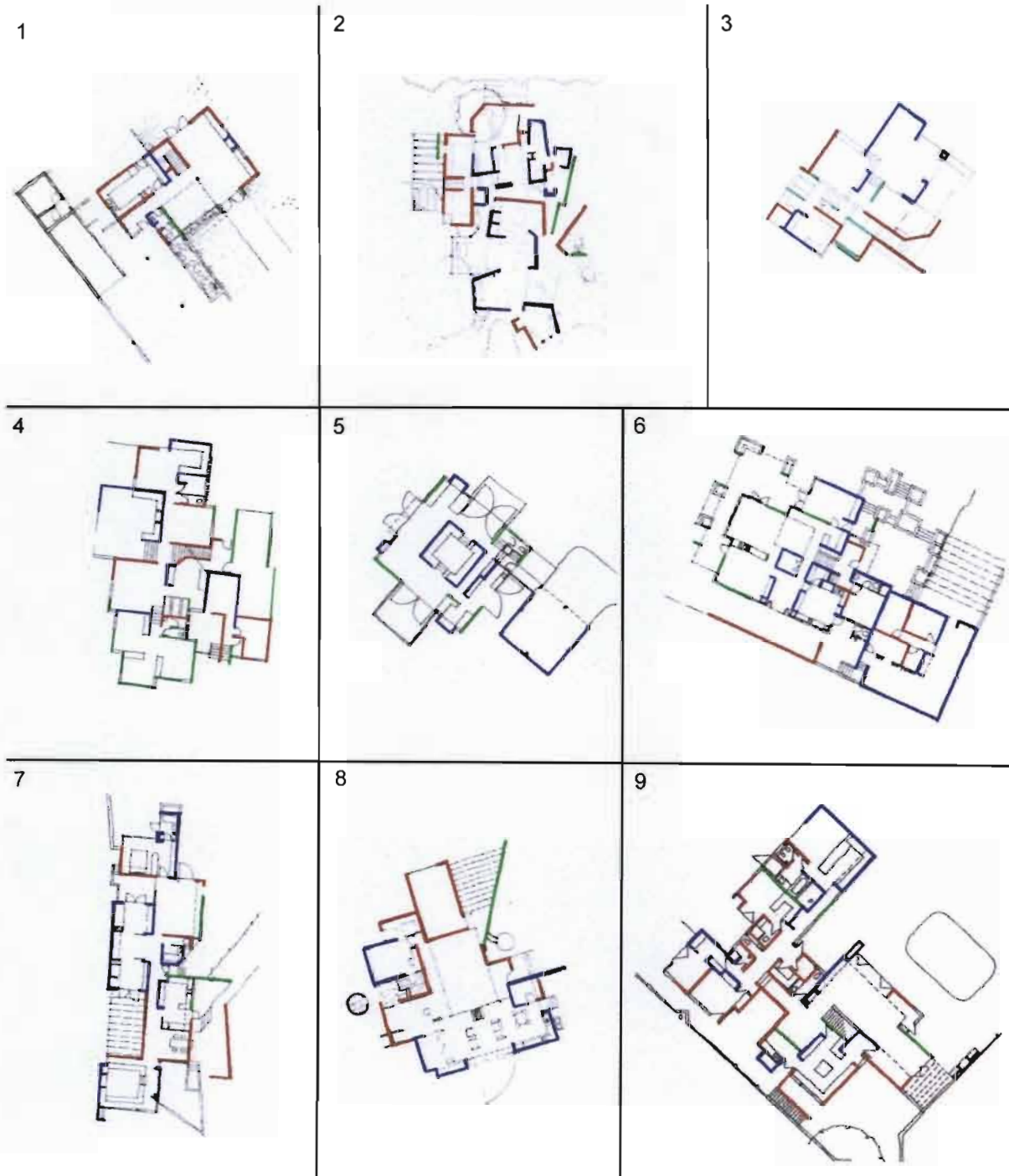


B.Lee 1 House Dr. Goga (1967)
 Building Design Group
 6 House Kearney (1969)

2 House Azizollahof (1967)
 4 House Herrington (1968)
 7 House Dr. Chetty (1969)

P.Mikula 3 House J.N. Reddy (1968)
 6 House van Schalkwyk (1969)
 8 House Wilson (1973)

9 House Jordaan (1973)

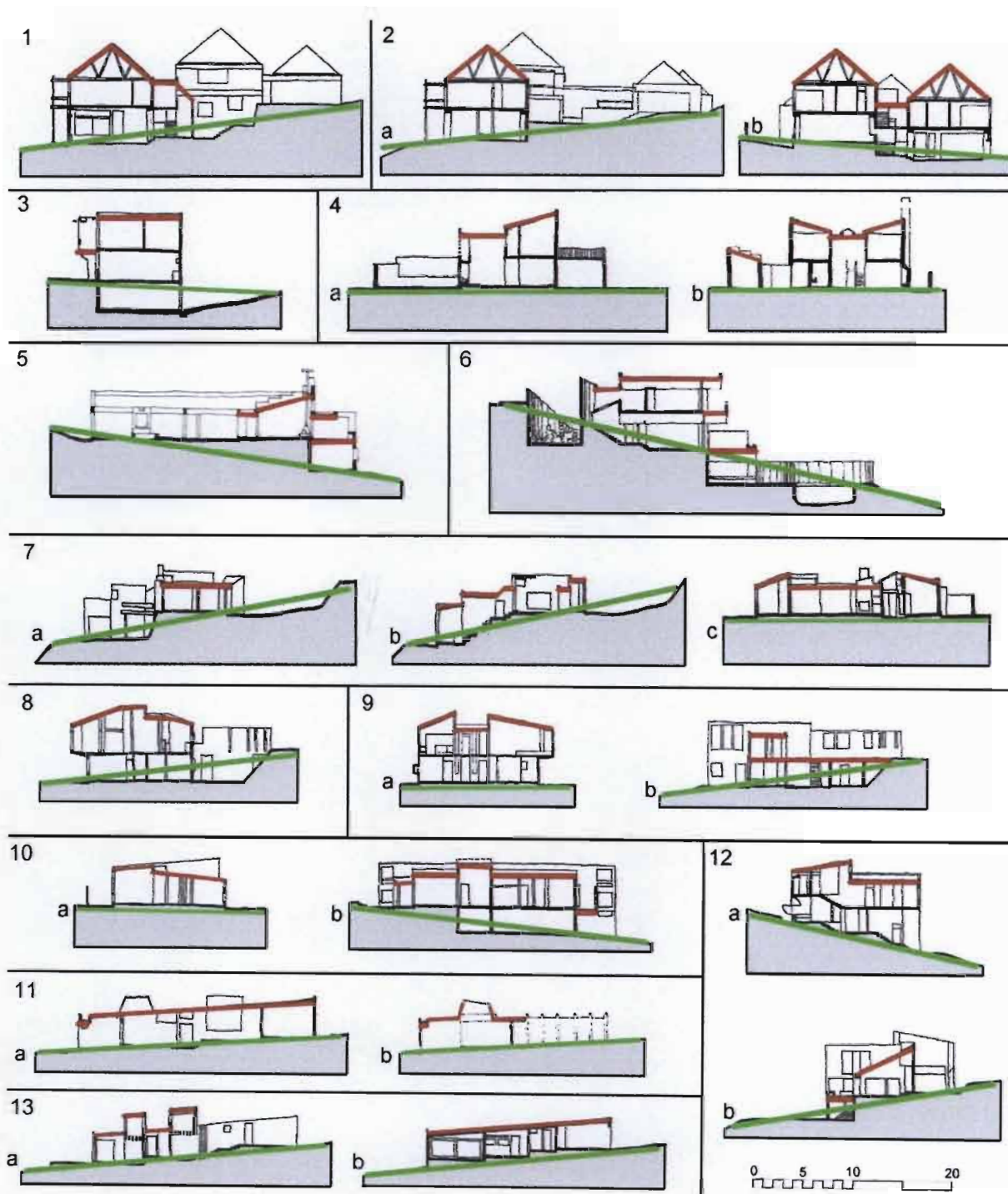


B.Lee
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 1 House Dr. Goga (1967)
 7 House Wilson (1973)

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 4 House van Schalkwyk (1969)
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 5 House Kearney (1969)
 9 House Cooper (1974)

3 House J.N. Reddy (1968)
 6 House Dr. Chetty (1969)



B.H.Lee

1 House Y.M. Paruk (1966)
5 House Naidoo (1967)

2 House I.M. Paruk (1966)
6 House Azizollahof (1967)

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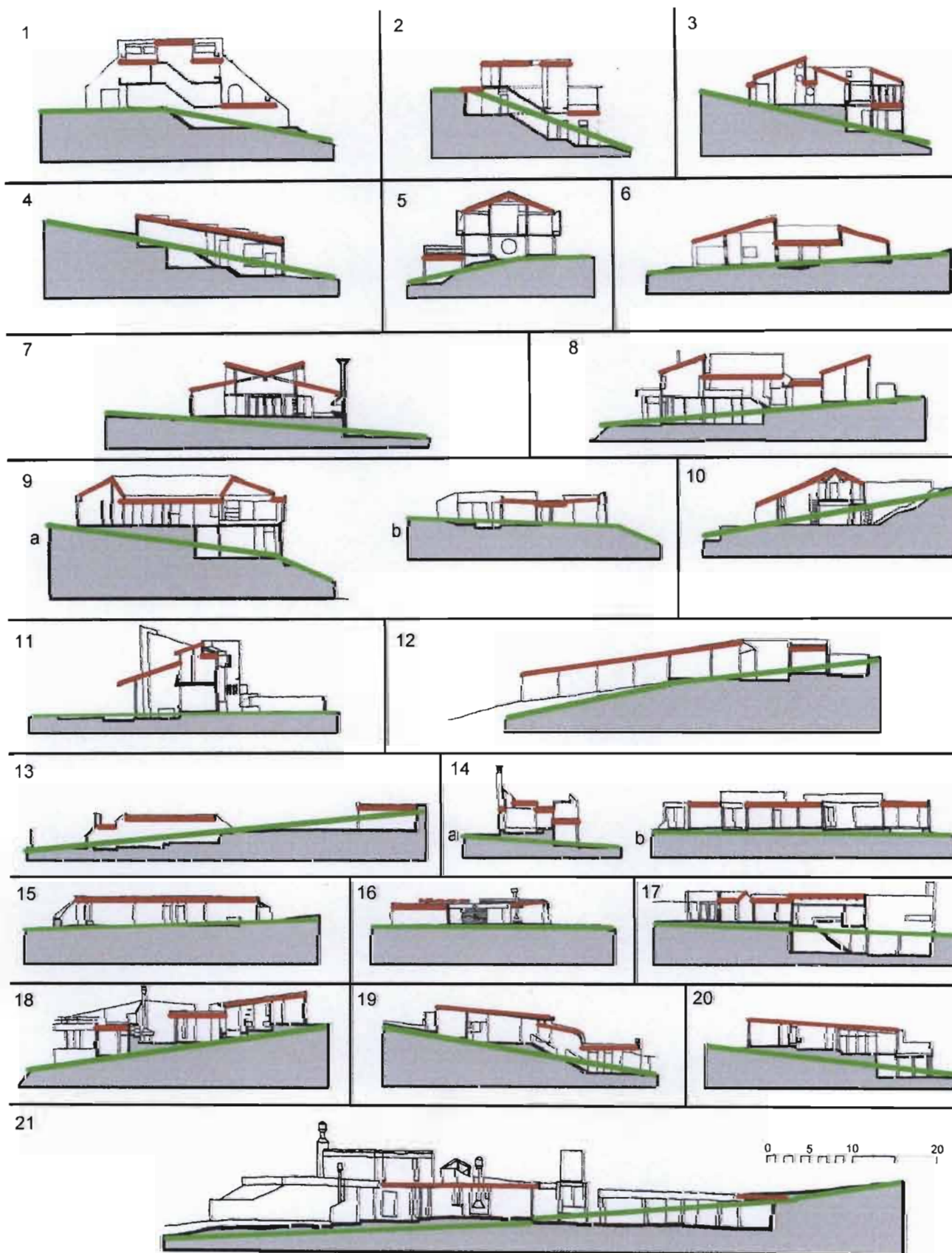
P. Mikula

7 House Mikula (1965)
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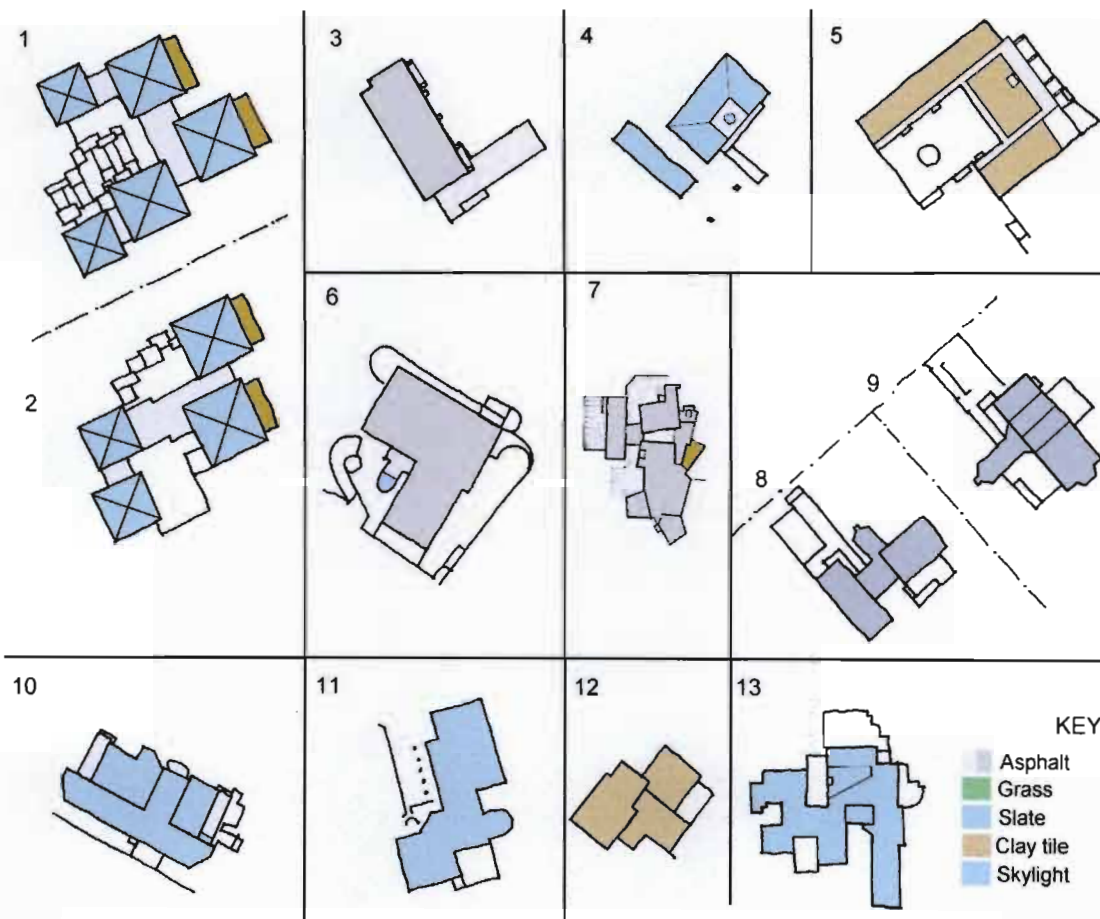
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13 House M.N. Reddy (1968)

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| 1 House A.E. Paruk (1968) | 2 House Harrington (1968) | 3 House Ramkisson (1969) | 4 House van Schalkwyk (1969) | 5 House Kearney (1969) |
| 6 House Suttie (1969) | 7 House Griffiths (1969) | 8 House Dr. Chetty (1969) | 9 House Dr. Timol (1970) | 10 House Dawood Timol (1971) |
| 11 House Gerson (1970) | 12 House van Eck (1971) | 13 House Edgar (1971) | 14 House Wilson (1973) | 15 House Burgess (1973) |
| 16 House Jordaan (1973) | 17 House Cooper (1974) | 18 House Zietkiewicz (1975) | 19 House T. Lazarus (1975) | 20 House Charles (1976) |
| 21 Farmhouse Cooper (1977) | | | | |



B.H.Lee

- 1 House Y.M. Paruk (1966)
5 House Naidoo (1967)

- 2 House I.M. Paruk (1966)
6 House Azizollahof (1967)

- 3 House Randeria (1968)

- 4 House 0 5 10 20

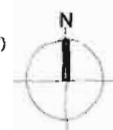
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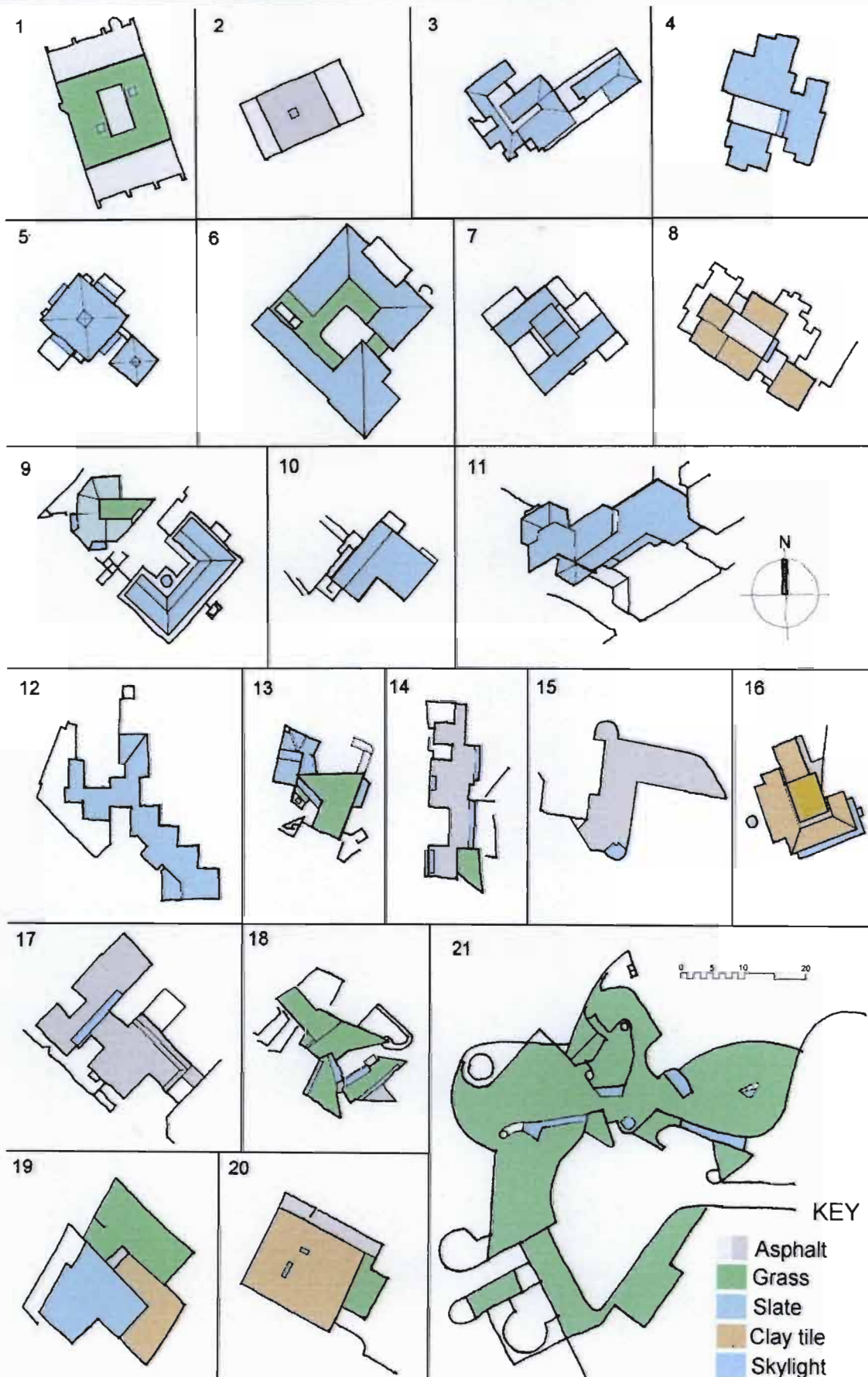
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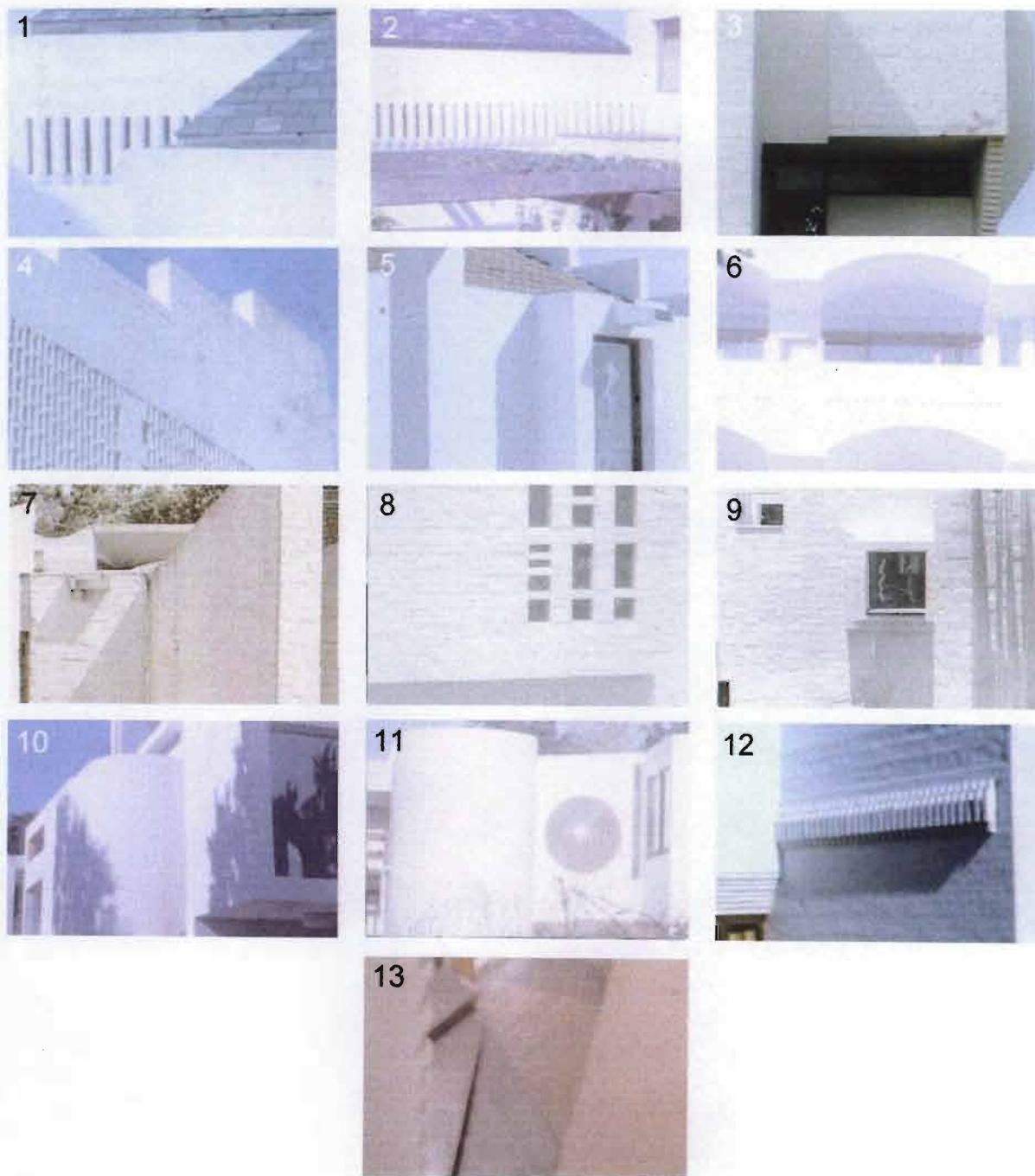
- 9 House Marian (1965)
13 House M.N. Reddy (1968)

- 10 House Sukkuma (1967)





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| 1 House A.E. Paruk (1968) | 2 House Herrington (1968) | 3 House Ramkisson (1969) | 4 House van Schalkwyk (1969) | 5 House Kearney (1969) |
| 6 House Suttie (1969) | 7 House Griffiths (1969) | 8 House Dr. Chetty (1969) | 9 House Dr. Timol (1970) | 10 House Dawood Timol (1971) |
| 10 House D'avice (1970) | 11 House Gerson (1970) | 12 House van Eck (1971) | 13 House Edgar (1971) | 14 House Wilson (1973) |
| 15 House Burgess (1973) | 16 House Jordaan (1973) | 17 House Cooper (1974) | 18 House Zielkiewicz (1975) | 19 House T. Lazarus (1975) |
| 20 House Charles (1978) | 21 Farmhouse Cooper (1977) | | | |



B.H.Lee

- 1 House Y.M. Paruk (1966)
5 House Naidoo (1967)

- 2 House I.M. Paruk (1966)
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- 3 House Randeria (1966)

- 4 House Dr. Goga (1967)

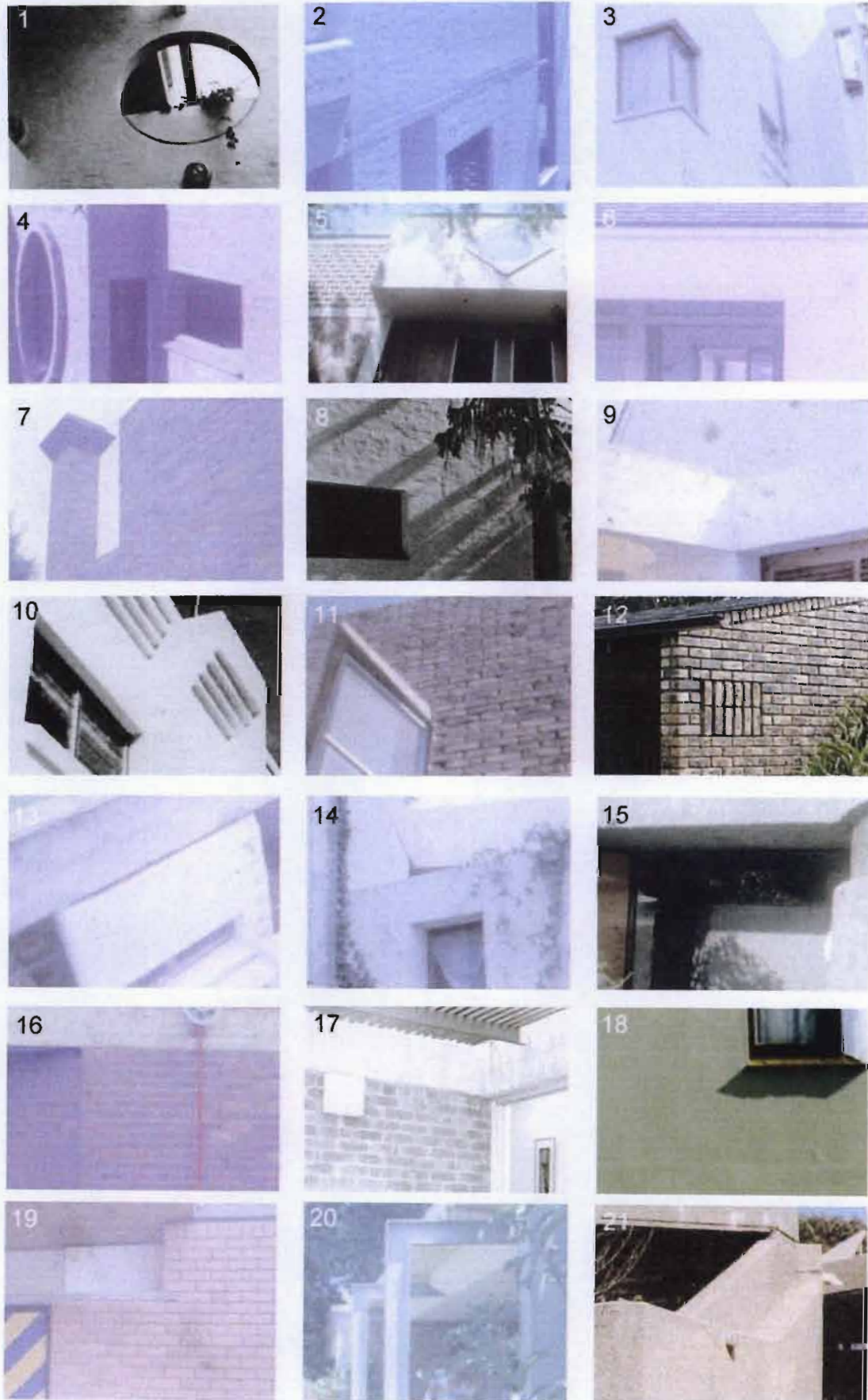
P. Mikula

- 7 House Mikula (1965)
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- 8 House Marian (1965)
12 House J.N. Reddy (1968)

- 9 House Lazarus (1965)
13 House M.N. Reddy (1968)

- 10 House Sukkuma (1967)



- | | | | | |
|---------------------------|----------------------------|---------------------------|------------------------------|----------------------------|
| 1 House A.E. Paruk (1968) | 2 House Herrington (1968) | 3 House Ramkisson (1969) | 4 House van Schalkwyk (1969) | 5 House Kearney (1969) |
| 6 House Suttie (1969) | 7 House Griffiths (1969) | 8 House Dr. Chetty (1969) | 9 House Dr. Timol (1970) | House Dawood Timol (1971) |
| 10 House D'avice (1970) | 11 House Gerson (1970) | 12 House van Eck (1971) | 13 House Edgar (1971) | 14 House Wilson (1973) |
| 15 House Burgess (1973) | 16 House Jordaan (1973) | 17 House Cooper (1974) | 18 House Zietkiewicz (1975) | 19 House T. Lazarus (1975) |
| House Charles (1976) | 21 Farmhouse Cooper (1977) | | | 20 |

5.2 Group residential buildings

5.2.1 Overview

A natural progression of BDG's interest in residential architecture is confirmed by their involvement in several maisonette, townhouse and apartment projects. Issues of densification and group living were being tackled in Northern Europe and BDG were extremely keen to make inroads into a generally un-progressive local residential market which was further hampered by "archaic planning restraints". (Lee 2002 – personal communication)

"If we're going to have to live closer together lets discover that magic, that made villages where people can enjoy a more human relationship". (Mikula from lecture script, undated)

Kloof Park (1969) (Fig 5.112-5.118) – see Plate 5.2.P1

BDG's first major commission came from Alan Gerson's acquisition of York Estates, who were looking to develop a 3.2-hectare suburban property in Kloof, 25km west of Durban. Kloof Park was conceived as a three phased development, with each phase comprising 12 units.

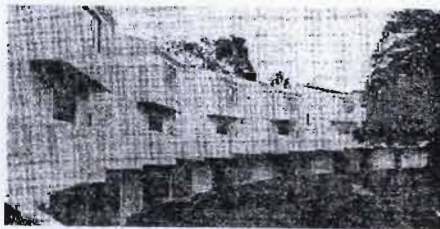


Fig 5.114: BDG – Kloof Park (1969).
Ref : Newspaper cutting-undated. W. Peters.

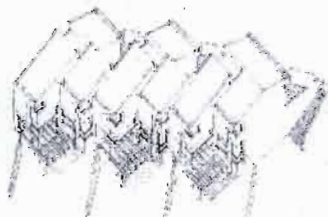


Fig 5.115: BDG – Kloof Park (1969).
Scheme 1 Axonometric. Drawn by D. Jordaan.

Two schemes were developed in the office with the initial design based on stepped terraces, with six units in each linear cluster.. The units in the revised and constructed design were changed into a crescent layout (Fig 5.116). The 3 bedroom houses are each arranged into an interlocking T shaped plan under a conventional double pitched roof, with a development of functions from parking at ground floor with living at first to sleeping above. The development did not proceed beyond the completion of phase 1.



Fig 5.112: BDG – Kloof Park (1969). Scheme 1 model.
Photo: D. Jordaan

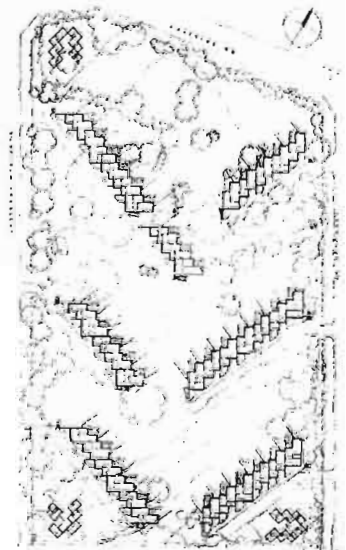
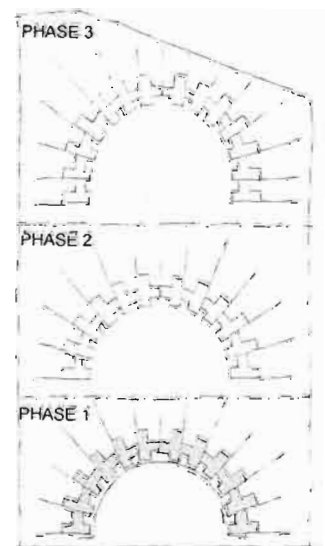
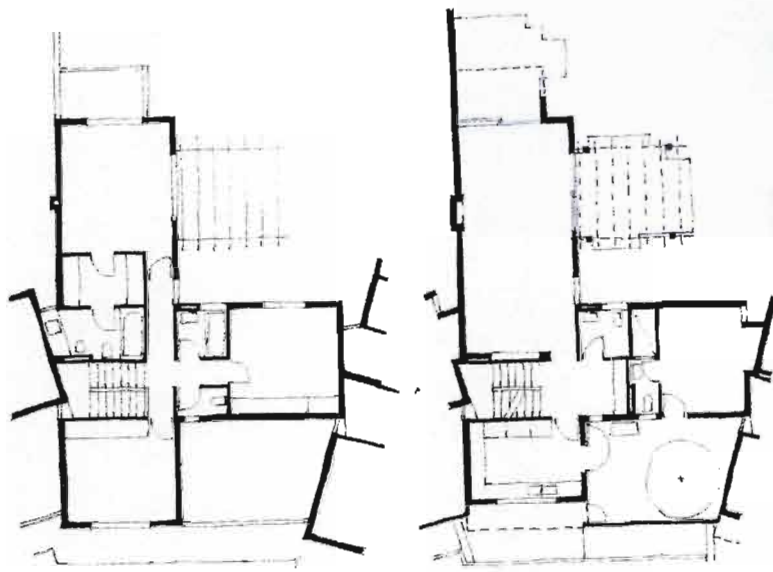


Fig 5.113: BDG – Kloof Park (1969). Scheme 1 site plan.
Drawn by D. Jordaan

Fig 5.116: BDG – Kloof Park (1969). Scheme 2 Site Plan.
Phase 1 (shaded) was the only phase to be constructed.



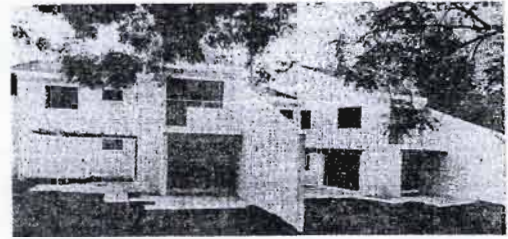


UPPER LEVEL

LIVING LEVEL

LOWER ENTRANCE LEVEL

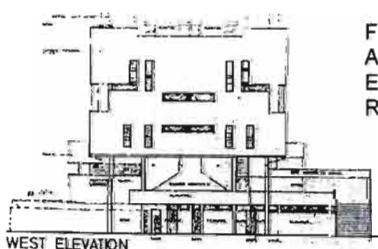
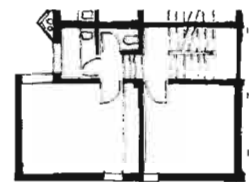
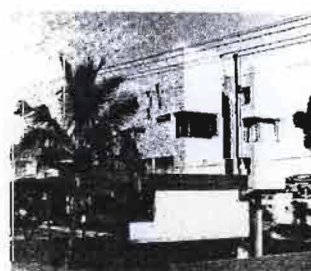
Fig 5.118: BDG – Kloof Park (1969). Typical Unit Plans.

Fig 5.117: BDG – Kloof Park (1969).
Ref : Newspaper cutting-undated. W. Peters.

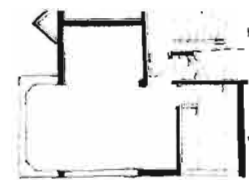
Antelope Place (1971) (Fig 5.119-5.121) - see Plate 5.2.P1

The shops and flats designed for Mr. J Govind in Antelope Place, Sydenham, is a four storey building with walk up access to six apartments. The units have two bedrooms, with a pair of simplexes at first floor and four duplexes on the second and third floors. A split-level is introduced on the fourth floor at the bedroom level of the duplex apartments, creating an increased volume in the living rooms below. These units also benefit from the provision of internal access to roof space drying yards.

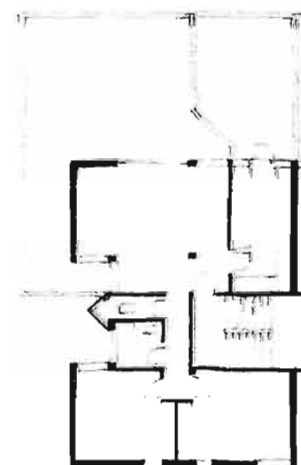
The west and east elevations are lyrical compositions of horizontal and vertically disposed strip windows set into a glazed ceramic tile wall, with bay windows to second floor living rooms being the only predominant fenestration.

Fig 5.119: BDG –
Antelope Place (1971).
Elevation.
Ref: Municipal records

LEVEL 3 & 4 DUPLEX UNIT



LEVEL 2 SIMPLEX UNIT

Fig 5.120: BDG – Antelope Place
(1971). Typical Unit Plans.Fig 5.121: BDG – Antelope Place
(1971). Ref: Plan 74.3: p10.

Barbeito (1972) (Fig 5.123-5.127) see Plate 5.2.P1

The challenges set by the economic constraints of high-density development were significantly addressed at Barbeito in New Germany, developed by Inland Construction. 60 units were designed on a 0.56 hectare site (107 units / hectare). 6 five-storey terraced blocks with walk-up access comprise the bulk of the building with each block containing two 40m² simplex units, six 68m² two bedroom duplexes and two 86m² three bedroom duplex units.

The units are designed to dovetail in section, using the central stairwell as the circulation zone, the upper and lower spaces of the duplex units are diagonally offset from floor to floor.

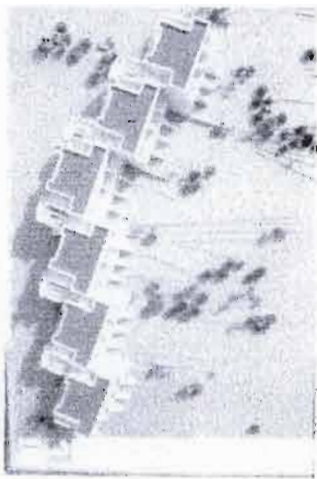


Fig 5.122: BDG – Barbeito (1972). Model. Photo: P. Mikula

Fig 5.123: BDG – Barbeito (1972). Model. Photo: P. Mikula

"Technically, Barbeito pushes load-bearing brickwork structure to new limits and makes extensive use of pre-cast concrete for repetitive elements." (Lee 2002 – personal communication).

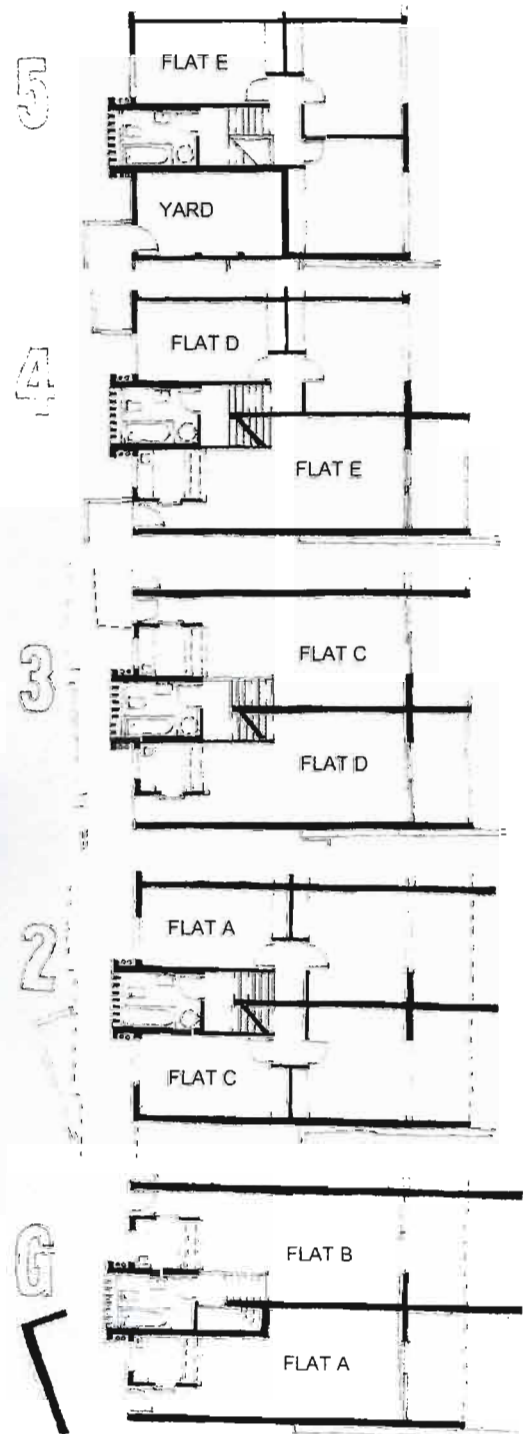


Fig 5.124: BDG – Barbeito (1972). Typical Unit Plans.

The powerful facebrick language of the building is reminiscent of concurrent housing developments in London, particularly those of Darbourne and Darke. Barbeito remains one of the few buildings in Durban to respond to the issue of densification, and is a prototype model of a 5 storey 'walk up' that should be re-evaluated in the context of the current housing demands in South Africa.

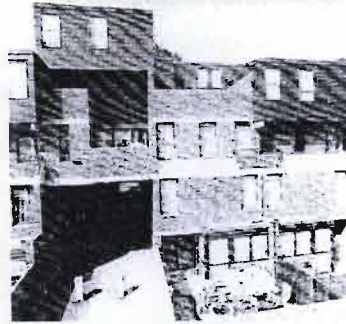


Fig 5.125: Darbourne & Darke – Marques Road Housing (1966-76). Ref: *The Architectural Review* September 1974: p145.



5.126



5.127

Fig 5.126 & 5.127: BDG – Barbeito (1972). Ref: Plan 74.3: p9. >

Pendennis Gardens (1972) (Fig 5.128-5.133) see Plate 5.2.P2

Pendennis Gardens is one of three town house projects commissioned by builder/ developer Eric Pearson on the Berea, one of Durban's premier residential areas. The concept of group housing was then unfamiliar on Durban's Berea, although a number of apartment buildings had contributed to the densification of the area.

"Pendennis pioneered medium density town house development with grouped garaging and parking on the Berea". (Lee 2002 – personal communication).

"On the Berea we did quite a few developments that were 'path breakers'. In those days it was the idea that only the poor people who actually lived next to each other, shared entrance spaces and courtyards. The developers were a dynamic bunch of builders who were from a part of Durban where those prejudices didn't exist, so they couldn't see why one shouldn't build this type of thing on the Berea. Low and behold they sold very well and subsequently lots of others were done, similar townhouse schemes." (Mikula 2000 – personal communication)

Fig 5.123: BDG – Pendennis Gardens (1972). Photo: P. Mikula



Fig 5.129: BDG – Pendennis Gardens (1972). Photo: B.Lee



The sloping site is situated between two parallel roads having a narrow frontage to Essenwood Road and a pan-handle access from Musgrave Road. A driveway from Musgrave Road leads to grouped garages from which a stepped pedestrian walkway rises through the centre of the site. Entrances into four duplex units and two courtyard houses are located either side of this public circulation spine, that has the ambience of a Mediterranean village pathway.

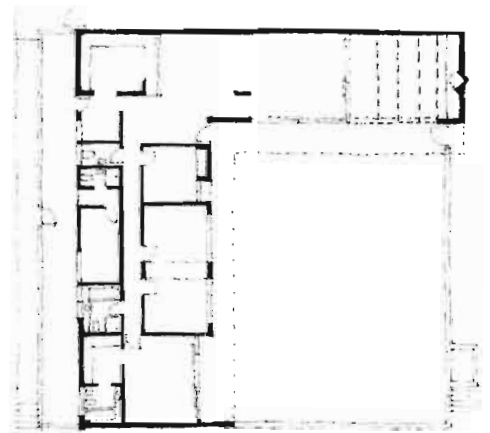
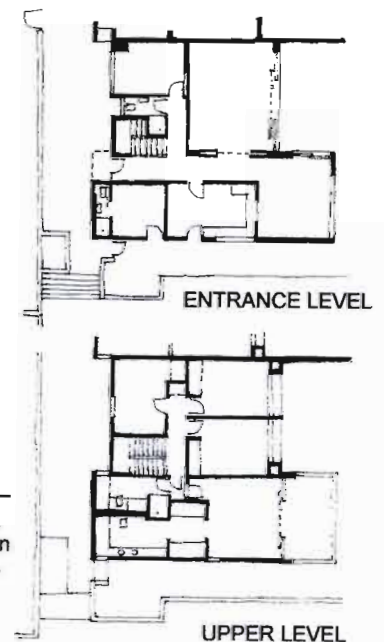


Fig 5.130: BDG – Pendennis Gardens (1972).
Courtyard House plan.



Fig 5.131: BDG – Pendennis Gardens (1972).
Duplex Unit from Essenwood Road. Plans.

Fig 5.132: BDG –
Pendennis Gardens (1972).
Duplex unit from pedestrian
accessway. Plans.



Two additional duplex units relate to the direct frontage off Essenwood Road, with further access to a common pool area that is accessible to all eight units within the development.

Fig 5.133: BDG –
Pendennis Gardens (1972).
Photo: P. Mikula



Pearson also commissioned BDG to design two further developments. At **Farmon Road (1974)** in Glenmore, a pair of four bedroom maisonettes were built that related to large terraces with westerly views. Four townhouses were built at **Silverton Gardens (1975)** in Musgrave, each three bedroom unit planned around a private courtyard overlooking the central driveway and garages below.

Cobblestone Mews (1973) (Fig 5.134-5.137) see Plate 5.2.P2

Sunningdale, developed by Hulett Properties on sugar cane fields 15km north of central Durban, was a new township established to provide a medium density alternative to the prevailing residential sprawl. Acting as town planners and project managers, ZAI (Inc) were instrumental in facilitating BDG's commission to design a prominent 14 unit cluster housing scheme within the new development. Lee recalls that the generic specification for the houses as suggested by Michal Zakrzewski was for "Volkswagen' houses and not 'Mercedes'". (Lee – personal communication 2002).

Two terraced rows of houses occupy the upper and lower contours of the site. The accommodation for each unit being split over two storeys whilst enveloping a private courtyard garden. Ten of the houses are designed with 3 bedrooms, with the balance divided between four and two bedroom units.

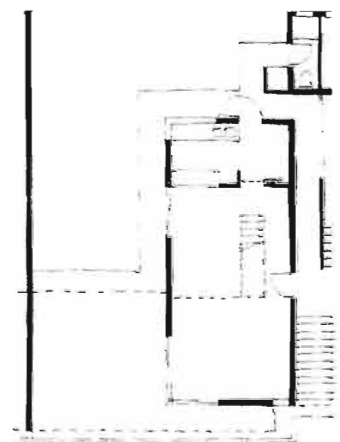
The upper terrace is elevated above the driveway level with some of the units positioned over parking bays, the lower terrace being set into the natural bank. Access to the units is gained via the main stairs that traverse the site. Living spaces relate to both the private courtyards and covered patio's that puncture through the façade.

The main north elevations of the terraces are articulated by the horizontality of the upper bedroom level to each unit that bridges the open patio below. A projecting bay groups together the windows to the bedrooms, and a striking accent is achieved by the inclusion of painted asbestos cement panels to the sliding window frames.

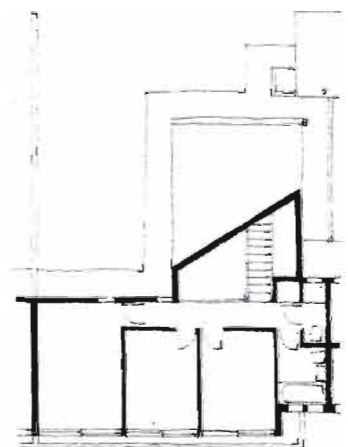
The north elevation acts as a parapet wall to the tiled mono-pitched roof beyond, the descending roofline creating an intimate scale to the private courtyards (Plate 5.2.P3).



Fig 5.134: BDG – Cobblestone Mews (1973).
Photo: P. Mikula



ENTRANCE LEVEL



UPPER LEVEL

Fig 5.135: BDG – Cobblestone Mews (1973). Typical unit plans.

Fig 5.136 & 5.137: BDG – Cobblestone Mews (1973).
Photos: P. Mikula

Fig 5.136



Fig 5.137



Teambuild (1976) (Fig 5.138-5.145) see Plate 5.2.P2

BDG's experimentation with group living culminated in the 'Owner Participation Maisonnets' (Architecture SA, 1978: pp15-17) called Teambuild (1977) in Somme Road, Durban. Six dwellings were designed on three narrow adjoining plots, on the steep westerly facing slope of Durban's Ridge. The intention was to build in collaboration with similarly ordered house layouts over three levels cut into the slope. A sense of community was reinforced with a common garden space at the bottom of the properties.

The project is described thus;

"The sites are on the wrong side of the ridge, off a tiny side road, the clients are us, a group of friends: three architects, one interior architect, a builder and a shopkeeper." (Architecture SA, December 1978: p15)

"With the help of the land slope, building lines and finance restrictions, we developed 'tube houses', always 5 metres wide, nearly always 23 metres long. We all settled for the same external material, cheapest brick and gift windows. The land slope suggested three levels and hey presto! We had flats or servants and guests at the top, at road level. Us, spouses, hi-fi, drawings board and geraniums at intermediate level, completely self contained; and kids at the lowest level. 'Tubes' were allocated to each participant who produced his own layouts." (Architecture SA, December 1978: p15)

Fig 5.138: BDG – Teambuild (1976) – House Mikula. Ref: NPJA 1978: p29.

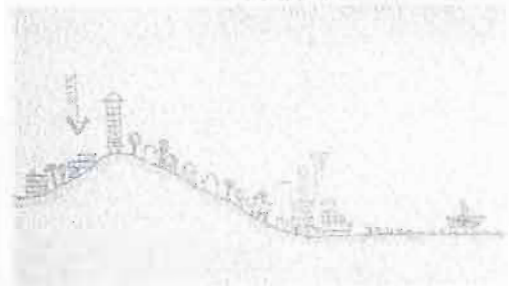
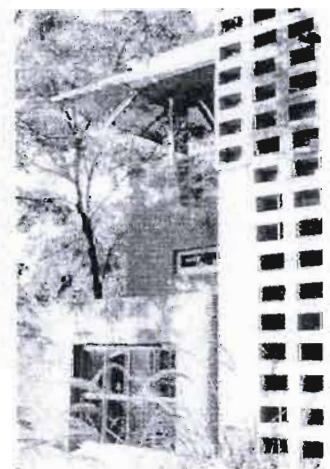


Fig 5.139 :BDG – Teambuild (1976) Diagrammatic sketch of site location on Durban's ridge.
Photo: P. Mikula

Fig 5.140: BDG – Teambuild (1976). Photo: P. Mikula. V



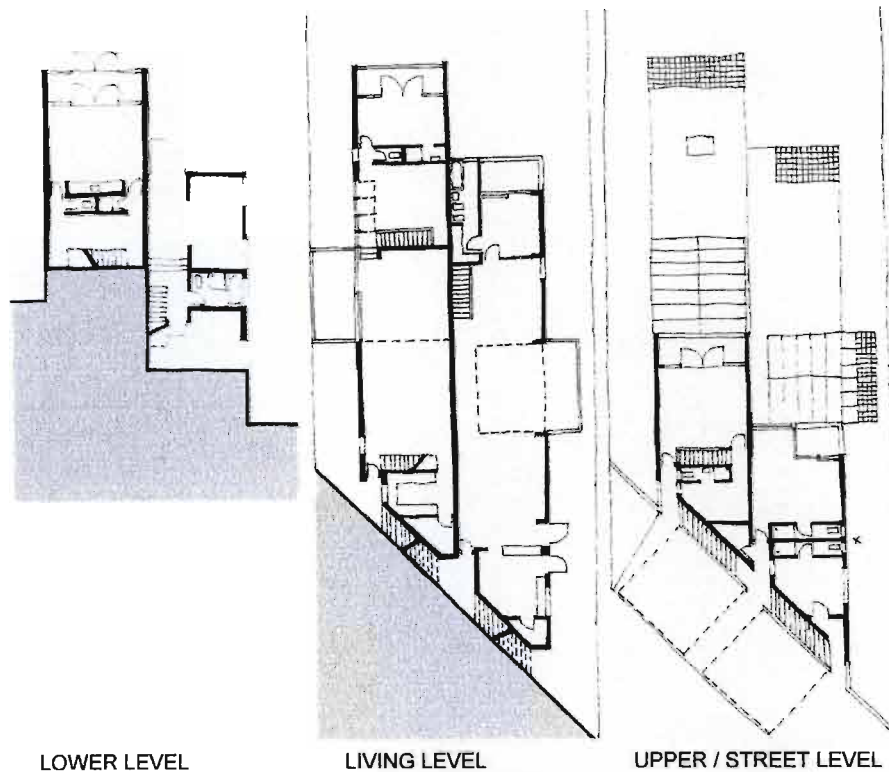


Fig 5.141: BDG – Teambuild (1976) – Typical pair of maisonettes. Plans

The bond allocation provided for the basic house shell, which allowed for a sealed enclosure and plumbing of wet services; internal finishes were for each participants account. Due to the depth of each unit, central courtyard gardens were introduced over which sliding roofs, as at House Jordaan (1973), were installed to moderate changing weather conditions.

"We effectively turned our living areas into verandahs during sunny days, but with the facility to close up during cold and rainy days. This together with large sliding doors which open up the vertical wall of this indoor garden introduces a tremendous sensation of space and air."
(*Architecture SA*, December 1978: p15)



^ Fig 5.142: BDG – Teambuild (1976). Photo: P. Mikula.

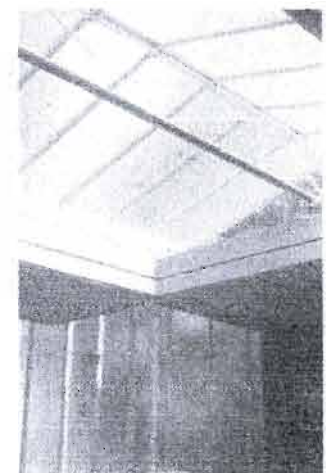
Fig 5.143: BDG – Teambuild (1976). Photo: P. Mikula. v



Fig 5.144: BDG – Teambuild (1976). Photo: P. Mikula. v



Fig 5.145: BDG – Teambuild (1976). Photo: P. Mikula. v



Unbuilt Projects

Cowey Centre (1973) (Fig 5.146-5.149), a large five storey development for York Estates was designed to accommodate retail and office space on lower floors with 30 residential units on the upper levels of the block. Unfortunately due to the insolvency of the developer the project was abandoned with only the lower levels of construction completed. When the project was eventually 'refloated', BDG were not retained as architects, the balance of accommodation altered to provide for office tenancy in lieu of the originally envisaged apartments.



Fig 5.146: BDG – Cowey Centre (1973). Model.
Photo: P. Mikula.

Fig 5.147: BDG – Cowey Centre (1973). Model.
Photo: P. Mikula. v

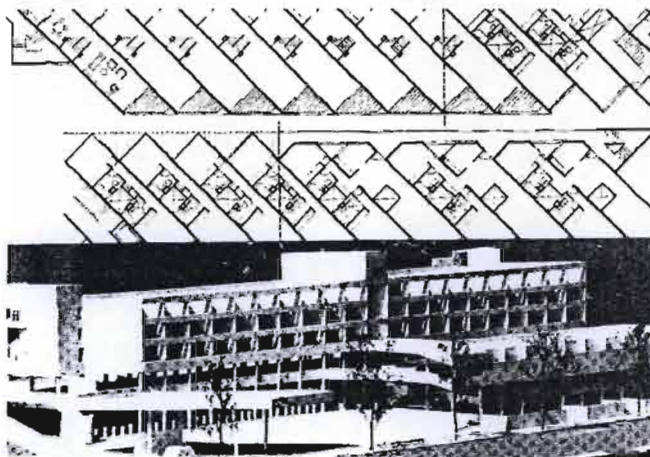


Fig 5.148: BDG – Cowey Centre (1973). Model & Plans.
Ref: *Plan 74.3*: p10.

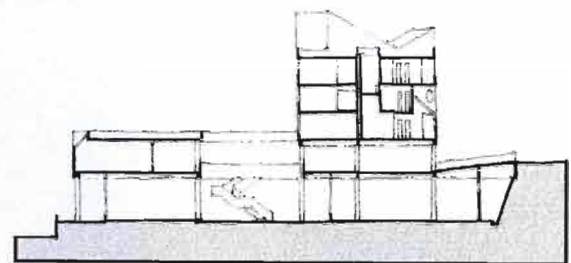


Fig 5.149: BDG – Cowey Centre (1973). Section.

Another residential project not to be constructed was a proposal for a nine storey **Flats Project on Goble Road (1974)** in Morningside. The design is notable for its sculptural qualities and takes its cues from the eminent apartment buildings of Scharoun internationally, and Benjamin locally.

Fig 5.151: BDG – Flats Project (1974).
Typical floor plan.
Ref: *Plan 74.3*: p11.

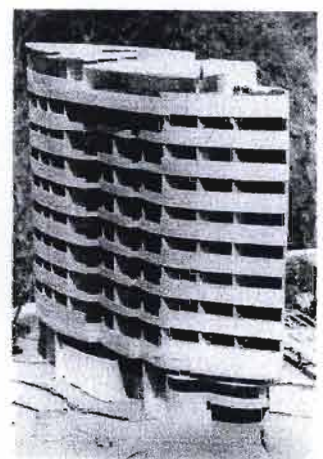
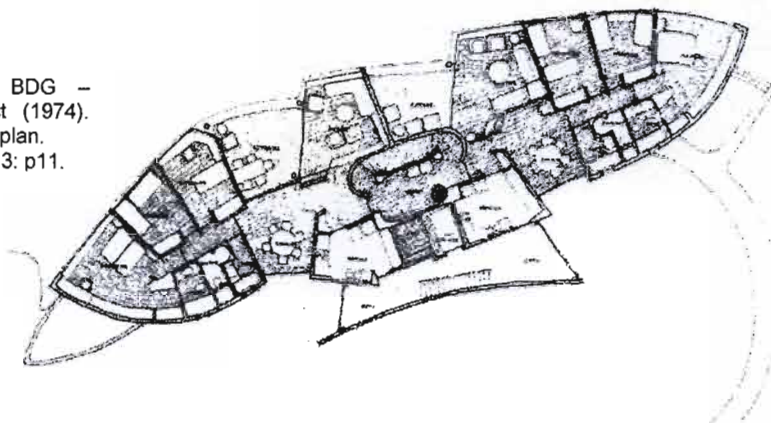


Fig 5.150: BDG – Flats Project (1974). Model.
Photo: B. Lee.

5.2.2 Analysis

Orientation & natural light penetration. Plates 5.2.P1/P2/P3/P4/P5

The challenge of multiple dwelling design, with respect to orientation of living spaces, is to provide a good aspect for the maximum number of units.

At Kloof Park (1969) the design decision to terrace the houses in the form of a crescent enhanced the spatial quality of the cluster at the expense of optimum orientation of each unit. The protruding living spaces, although generally to the north west of the building mass, each receives varying orientation.

The apartment building at Antelope Place (1971) arranges six flats over three floors. Two living spaces are located to the east of the block, one to the north, one to the west and two to the south, the later two only receiving the extremes of early morning and late afternoon daylight.

Similar problems are also experienced at Pendennis Gardens (1972) and Teambuild (1976) where optimal orientation of some of the living spaces has been compromised in consideration of the overall scheme layout. In both cases the problems are relieved to some extent by the inclusion of courtyard gardens at Pendennis and internal courts with sliding roofs at Teambuild.

The apartments at Barbeito (1972) all enjoy a northerly aspect while at Cobblestone Mews (1973) the same favourable orientation is enjoyed for all but one of the town house units.

As with BDG's house designs, all the living spaces in the group residential units relate to an outdoor balcony, terrace or roof garden confirming an appreciation of the climatic advantages of an indoor / outdoor spatial relationship.

Also synonymous with BDG's domestic architecture was the interest in spatial articulation in the living areas; however due to the economic constraints of group residential developments this was not always possible.

Ground slope to roof profile relationship – Plate 5.2.P6

Re-occurring roof profiles from BDG's domestic architecture are the inclined mono-pitched roofs at Pendennis Gardens and Cobblestone Mews and the flat roofs of Antelope Place, Barbeito and Teambuild. Double pitched roofs, rarely used in the house designs, are used at Kloof Park and the upper townhouses at Pendennis Gardens.

The parallel roof pitch to ground slope, a relationship in many of the house profiles, is not found in the townhouse and apartment buildings.

Materials : Roof – Plates 5.2.7 & 5.2.P8

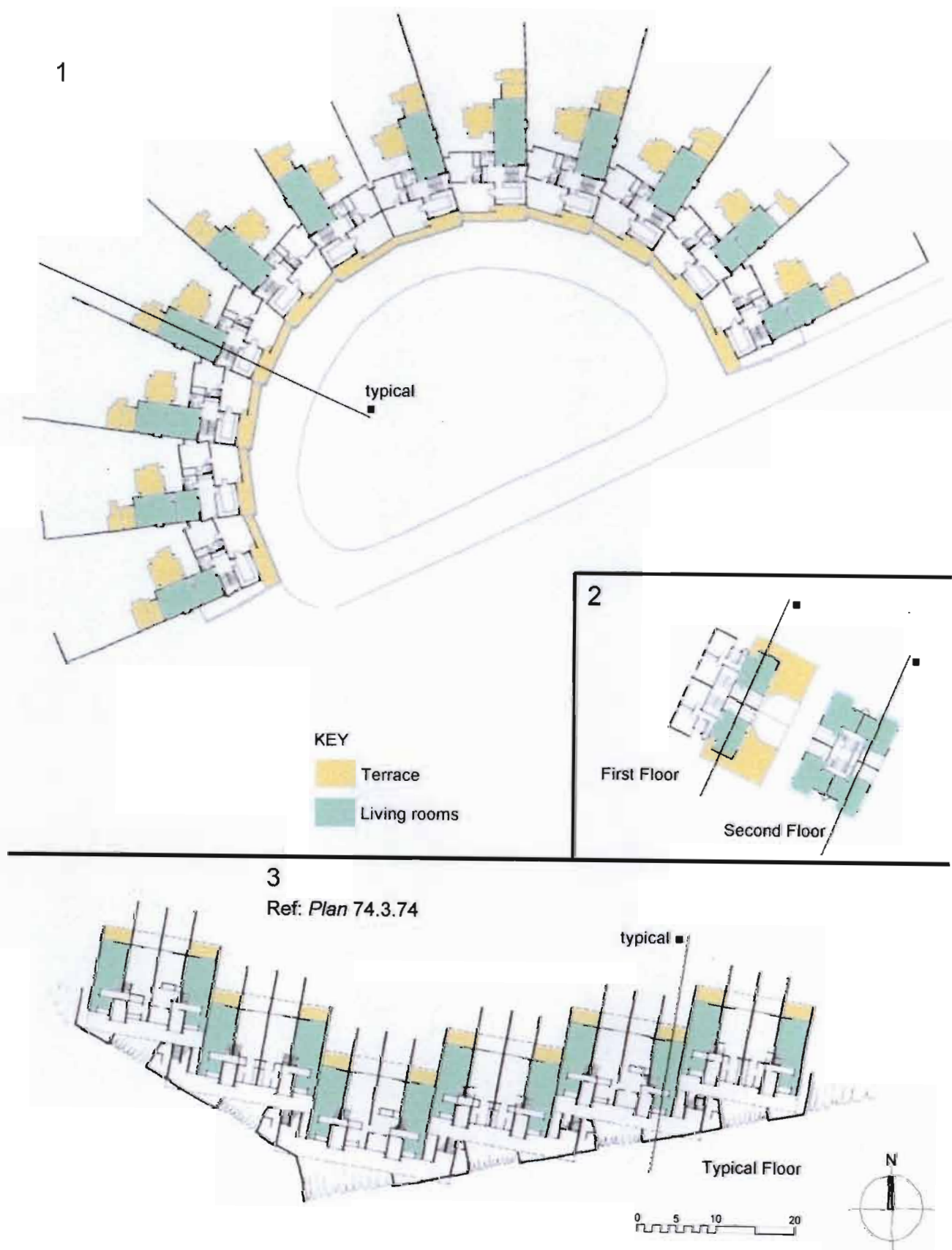
Materials : Walls – Plates 5.2.9

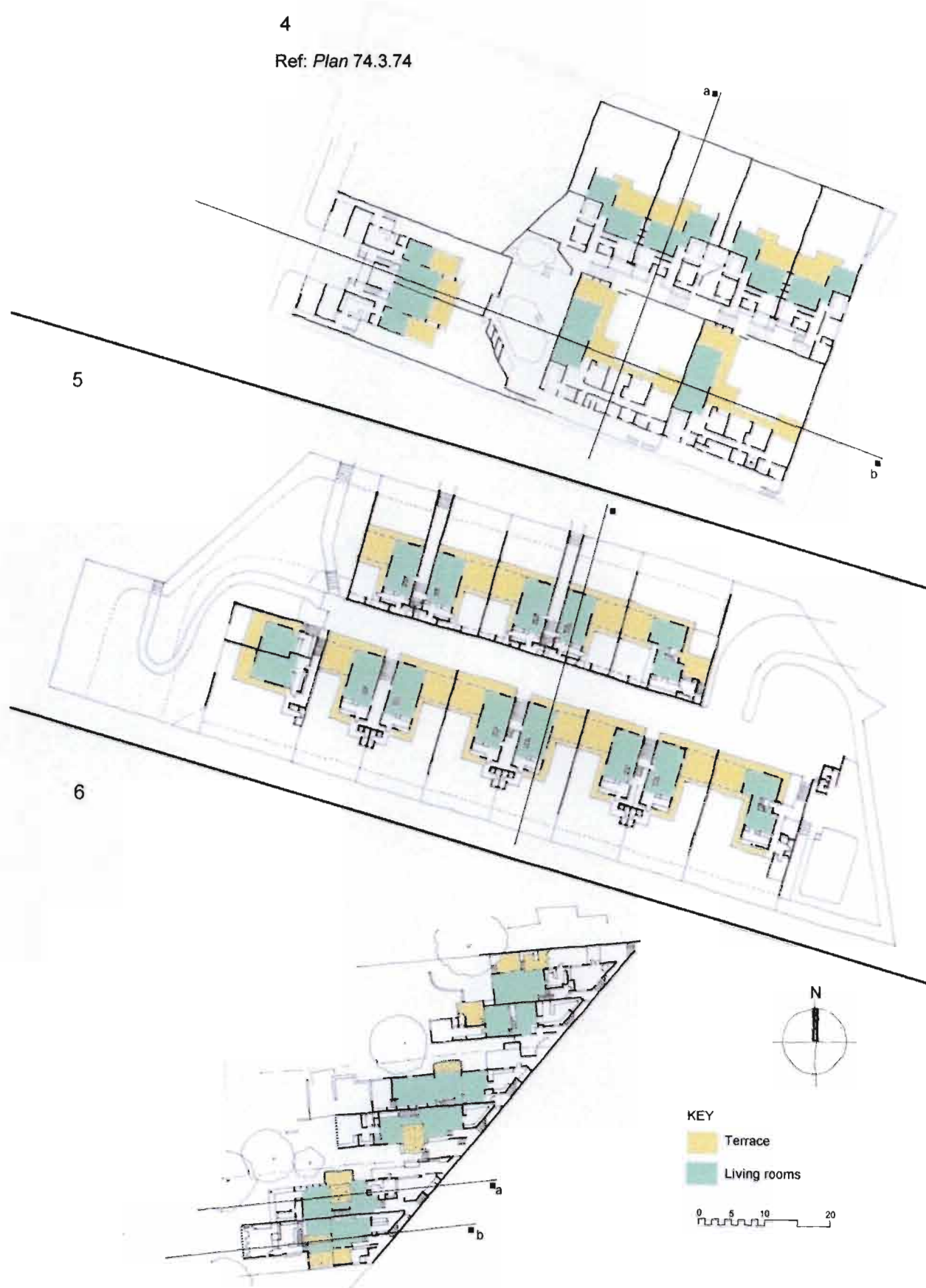
Materials and finishes to roof and walls was considered in similar terms to the domestic residential buildings.

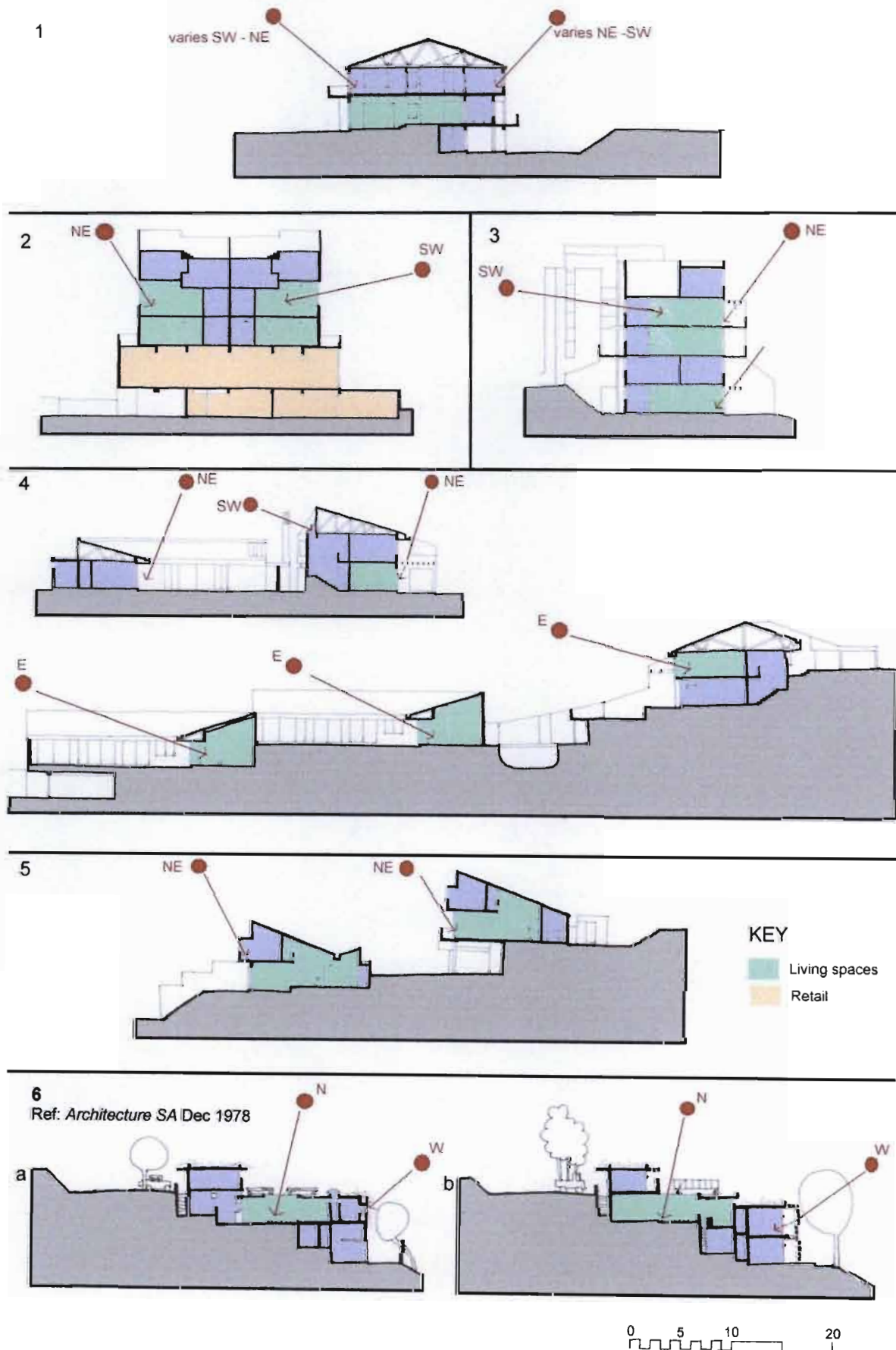
Natural slates were utilised on timber battens and trusses at Kloof Park and Pendennis Gardens while Clay roofing tiles were incorporated at Cobblestone Mews. Flat roofs at Antelope Place, Barbeito and Teambuild were simply screeded and waterproofed.

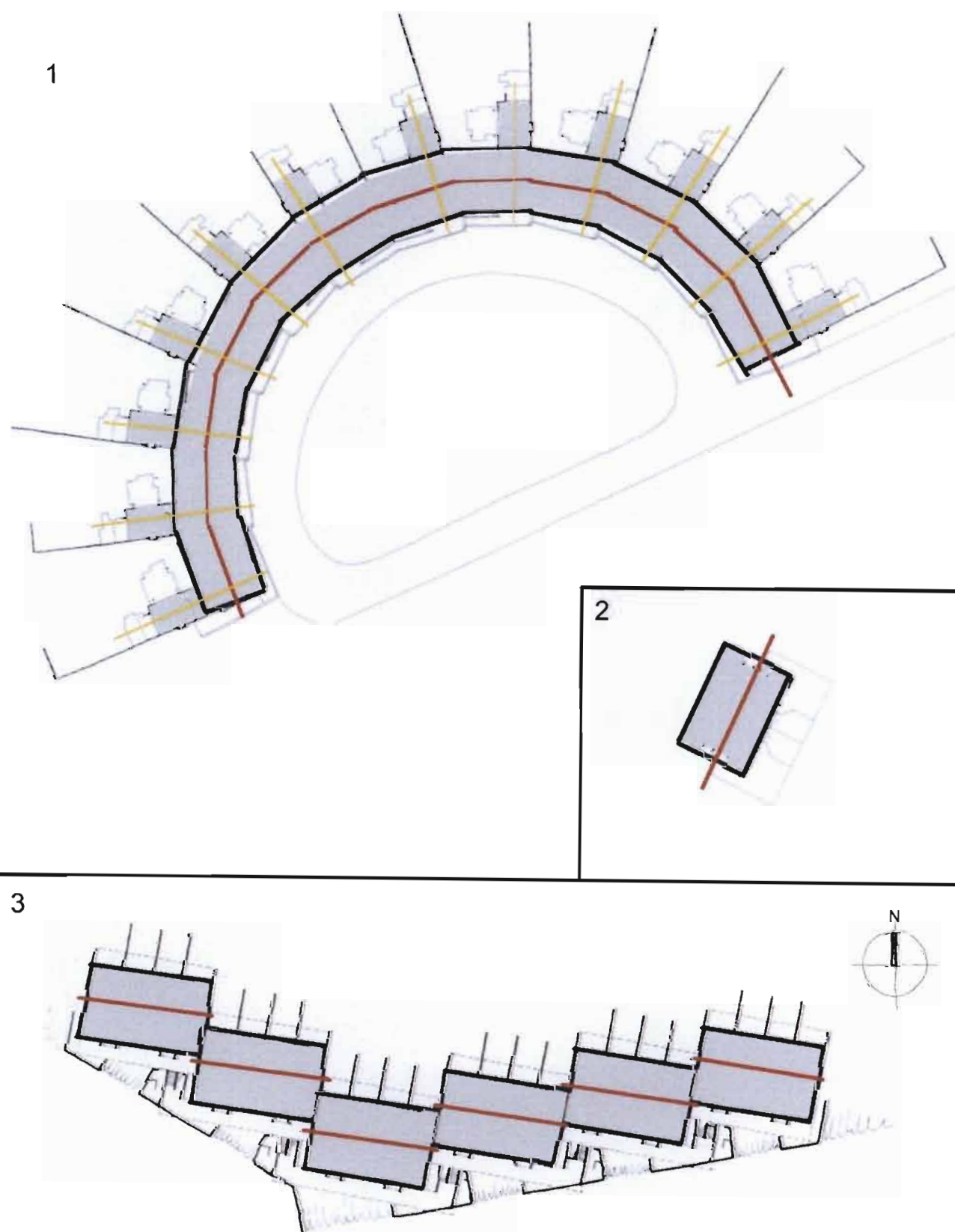
The sliding roof constructions over internal courtyard at Teambuild was an adaptation from the similar retractable mechanics devised for House Jordaan.

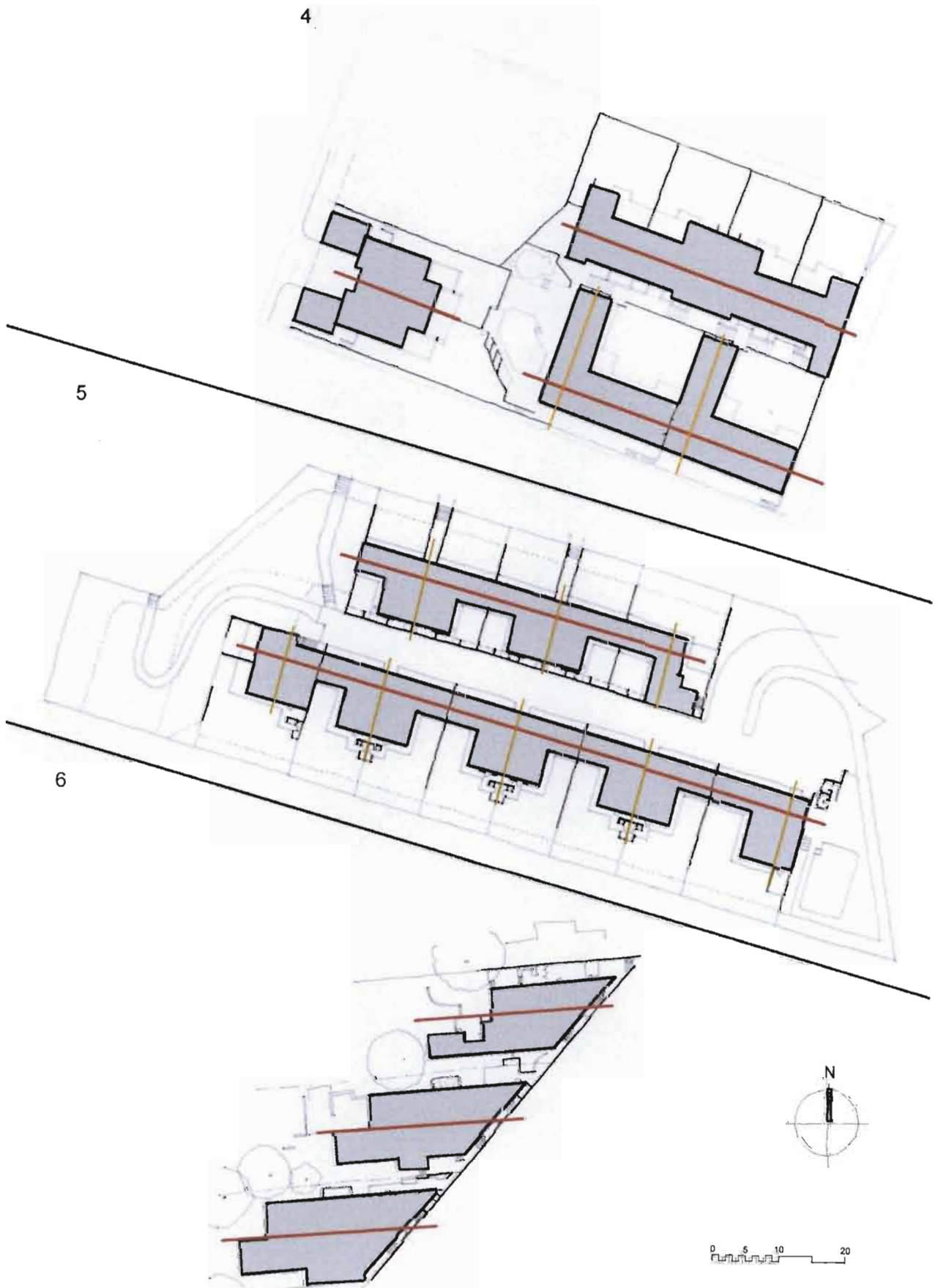
A departure from the material palette of bagged, plastered or face brickwork was the use of glazed ceramic tiles to the external walls at Antelope Place, a detail which had been first specified by BDG for the retail and office development at Pinetown Mews (1969), and Gitsav Offices (1972).







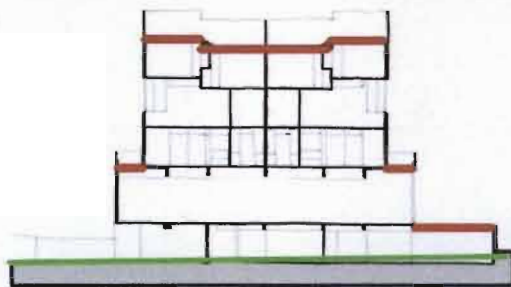




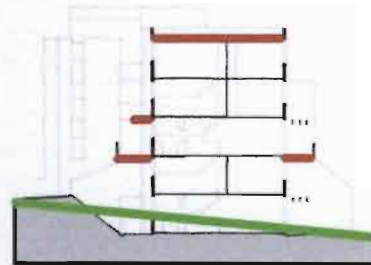
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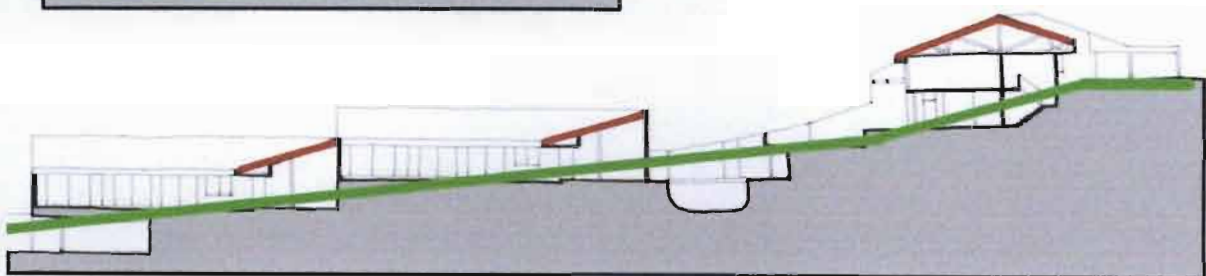
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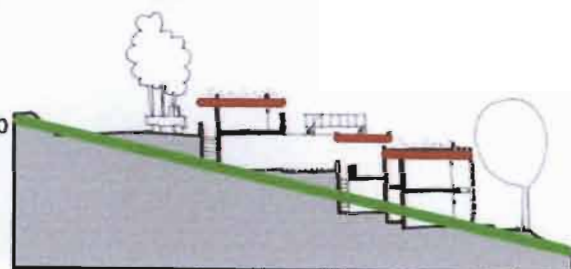
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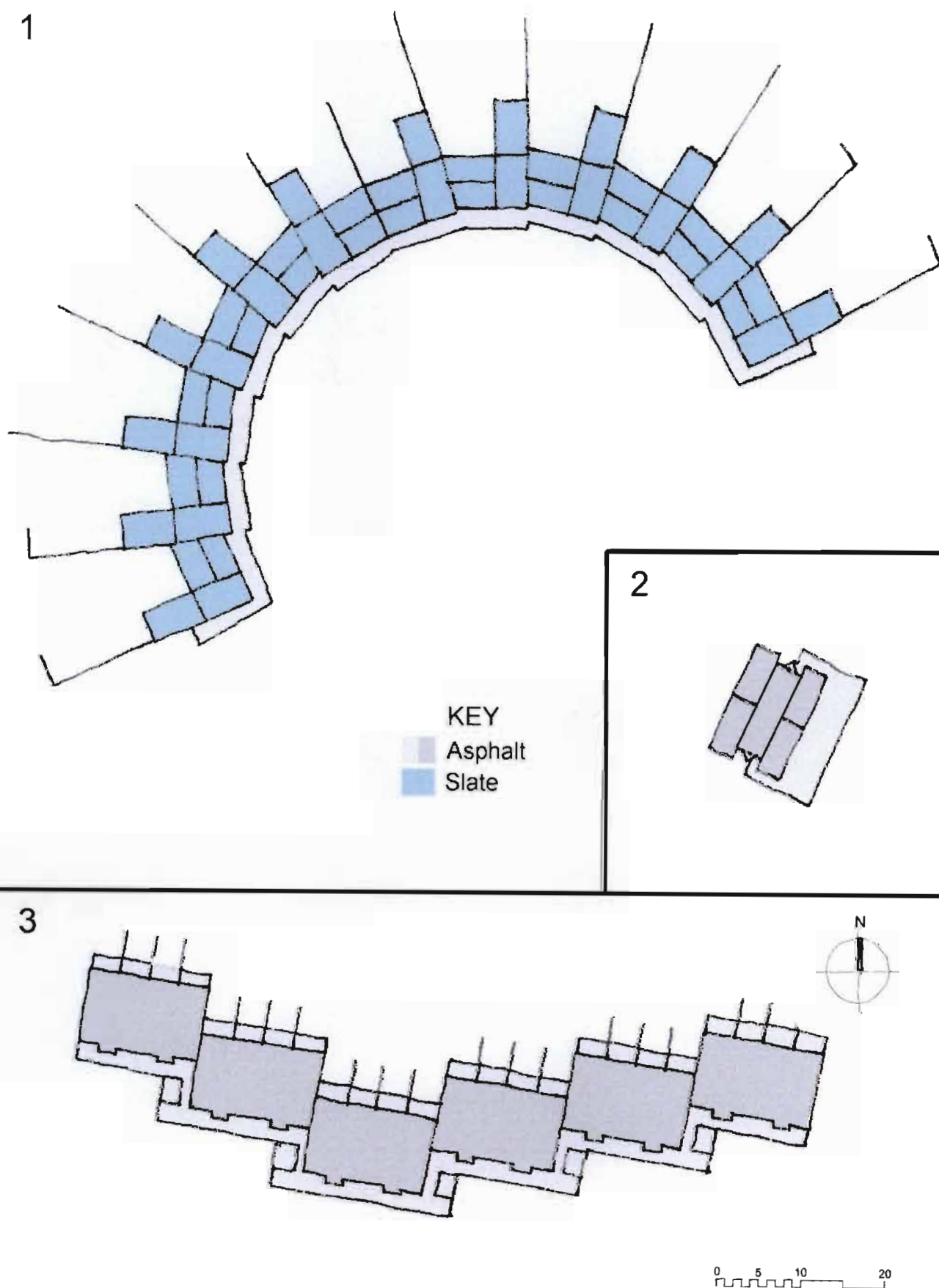
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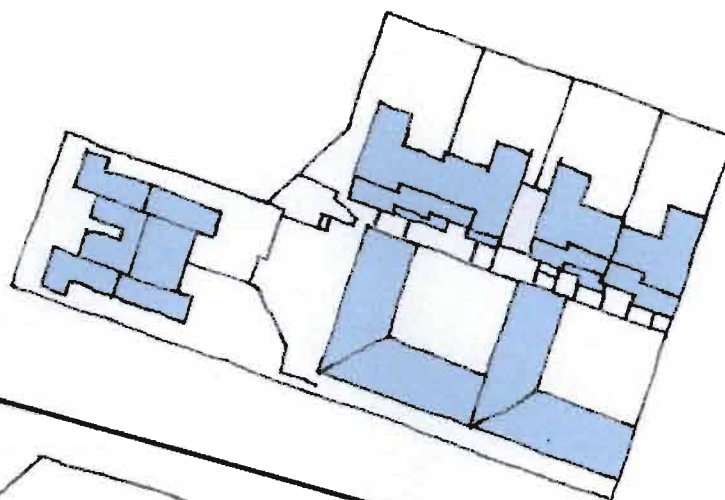


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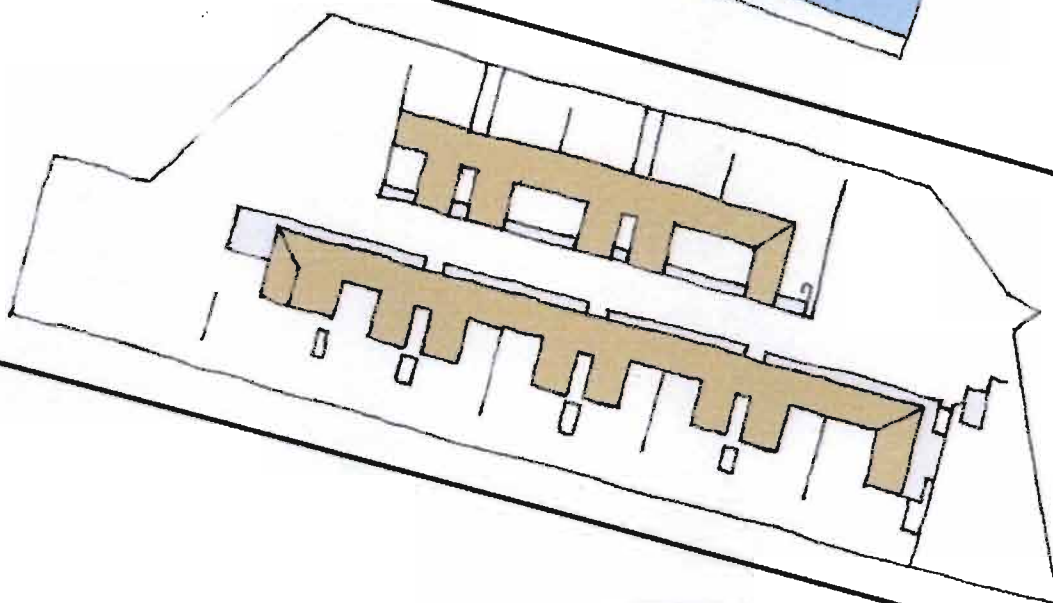


1 Kloof Park (1969) 2 Flats & Shops, Antelope Place (1971) 3 Barbeito (1972)

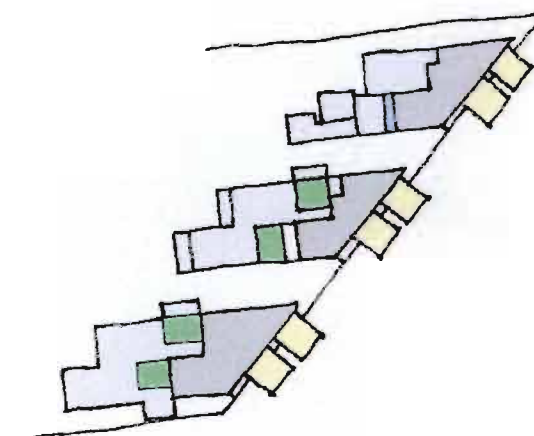
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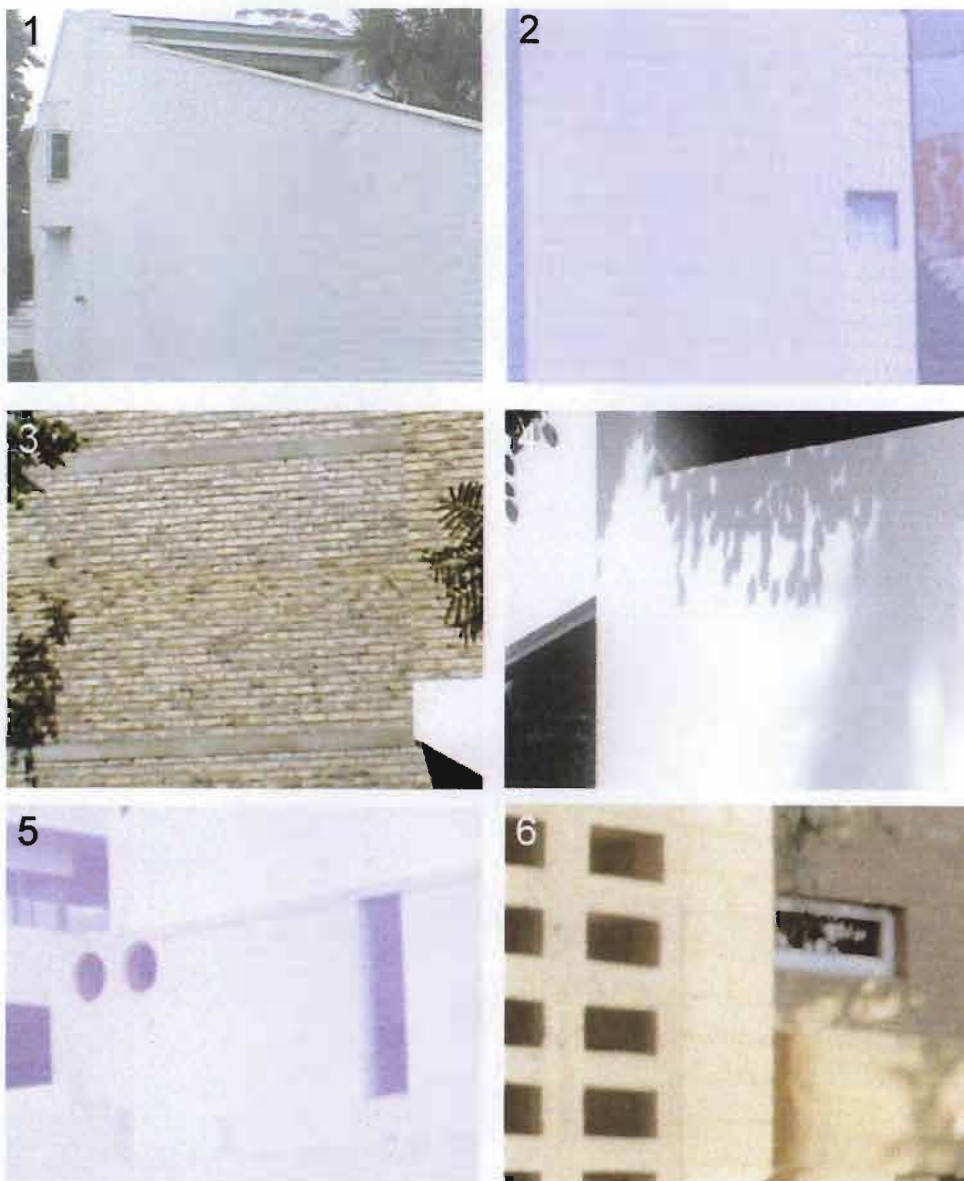


6



KEY

- Asphalt
- Grass
- Slate
- Clay tile
- Skylight
- Carport



1 Kloof Park (1969) 2 Flats & Shops, Antelope Place (1971) 3 Barbelto (1972) 4 Pendennis Gardens (1972) 5 Cobblestone Mews (1973) 6 Teambuild (1976)

5.3 Commercial and Industrial Buildings

5.3.1 Overview

BDG's repertoire of Commercial and Industrial projects, although limited in number, represents a diversity of architectural challenge, away from residential scale and language towards issues of large span construction and urban context.

Retail and office developments

Group Practice Surgery & offices (1969) (Fig 5.152) – see Plate 5.3.P1.

BDG's first commercial project was the commission for a Group Practice Surgery and offices for Dr. Goga and partners in Pietermaritzburg. The circulation to the ground floor doctor's rooms is skilfully resolved by using the central passage as a linear waiting room, distributing the patients through the deep floor plan to the respective consultation rooms. The Chemist is positioned on the street frontage to take advantage of passing trade, with the dispensary located centrally. A narrow driveway allows cars to access parking bays at the rear of the site.

The deep site with narrow street frontage presented natural daylight and ventilation problems which was resolved by the introduction of light wells into the three storey building. The two levels of office accommodation are located on first and second floors, all working spaces relate to a light well thereby achieve a practical and efficient layout.

Two commercial projects were commissioned by Alan Gerson in 1969. Lancewill, a shop & showroom development in Durban and Pinetown Mews, a shop and offices development in Pinetown.



5.152 : BDG -Group Practice Surgery and offices (1969). Photo by author, March 2003.

Lancewill (1969) (Fig 5.153) – see Plate 5.3.P1

Lancewill, a two storey building of simple exposed concrete frame and facebrick infill, is situated on the corner of Lancers and Wills Roads. The shopfront dominates the main street frontage, with the entrance and stairs to the upper level discreetly located on the side elevation. The completed building demonstrated an efficient and direct architectural attitude to the constraints of speculative development.

Pinetown Mews (1969) (Fig 5.155- 5.157)– see Plate 5.3.P1

Pinetown Mews was a challenge to make a development work on a narrow corner site on Crompton Street and Dales Avenue. Gerson recalls, "I was a client of the bank who owned the site and I had heard that they were keen to sell it. The deal was attractively priced, the terms were good and the bank couldn't sell it because of the difficult site, which most of the other developers thought was too small. So we came up with a good solution that worked at the time, and to everyone's surprise we built it." (Gerson – personal communication 2002)

The four storey, concrete framed building incorporated a basement car park, ground floor retail showroom, with two floors of office space above. First floor windows are paired either side of the supporting columns, as at Lancewill. The clear span roof structure was supported on pre-cast concrete mullions that were set out on an AB module ie. alternating wide and narrow spacing which functionally generates a variety of partitioning modules, was a system which had previously been considered in the design for the office component for the Paarl Civic Centre competition in 1966. (Lee – personal communication 2002).

Glazed ceramic tiles were used on external walls, providing a durable a low maintenance finish.



Fig 5.153: BDG – Lancewill (1969).
Photo by author, March 2003.

Fig 5.154: BDG – Pinetown Mews (1969).
Photo: D. Jordaan. v



Fig 5.155: BDG – Pinetown Mews (1969).
Photo: D. Jordaan. v



Fig 5.156: BDG – Pinetown Mews (1969). Roof construction.
Photo: P. Mikula v



Fig 5.157: BDG – Offices for Gitsav Properties (1972).
Photo by author, March 2003. v



Office development for Gitsav Properties (1972) (Fig 5.157-5.158) – see Plate 5.3.P2

The two storey office development for Gitsav Properties in St. George's Street, is the only BDG building in the central area of Durban. Prospectively designed to be developed to several stories in height, the initial phase was never extended. Occupying a deep narrow site, 700m² of office accommodation was provided for a firm of accountants, accessed from a reception and stair at ground floor, along with a retail showroom and provision for car parking.

Shops & Offices, Julia Road (1973) (Fig 5.159-5.164) - see Plate 5.3.P2

Possibly the epitome of BDG's architecture is the design of their own office building in Julia Road, Overport. A celebration of the formal language developed in earlier residential buildings is enhanced by the introduction of concrete, steel frame and patent glazing technologies. A flat roof over the main studio 'box' at first floor gives way to a sharply inclined mono-pitch that functionally allows for a mezzanine level within the office space below. With formal references to Hugo Haring's 'shed' buildings at the farm in Garkau (1922-26), one of the recognised icons of Brutalist architecture.

"A powerful generator influencing organisation was the separation of public and private functions, while allowing each its own freedom and particular environment." (*NPIA Newsletter* 3 –1977: p9) This is achieved by placing the entrance, reception and meeting room at ground floor (along with the retail spaces), and locating the open studio space to the first floor where the informal activities of the office could occur privately.

"The studio, with its attendant services enjoys a full relationship with the trees and planting of the Berea ridge while celebrating the



^ Fig 5.158: BDG – Offices for Gitsav Properties (1972). Photo by author.

Fig 5.159: BDG – Julia Road Office (1973).

Photo: D. Jordaan.

v

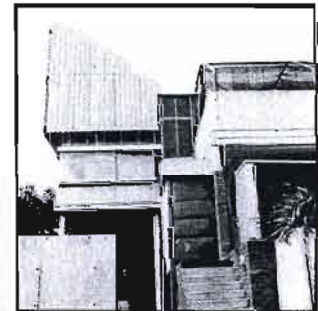


Fig 5.160: H. Haring- Garkau Farm Buildings (1922-26).

Ref: P. Blundell Jones, 1999 v

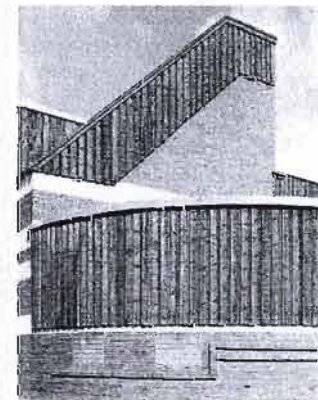


Fig 5.161: BDG – Julia Road Office (1973). Reception foyer.

Photo: P. Mikula.

v



spaciousness of inland views via a pergola of creepers and vines.”
(*NPIA Newsletter* 3 –1977: p9)

The wrap around verandah, planted and shaded, is consistent with BDG's design ethos of inside / outside spatial relationships and assists with solar protection on the east elevation. On the western side a vertical louvred screen shields the glazing from the afternoon sun. Notwithstanding these measures the unfavourable orientation of the building did result in a degree of thermal discomfort at times as the building was naturally ventilated and not air conditioned.

Bruce Stafford comments; “The technology and thought behind the BDG office, makes it a really relevant building today. In my view it is one of the high points in the history of Durban architecture. It was a living entity, a totally democratic and egalitarian building” (Stafford 2002 – personal communication).

Fig 5.163: BDG – Julia Road Office (1973). Detail.
Photo: P. Mikula.

Industrial Buildings

The two major industrial buildings that were designed by BDG both resulted from having earlier designed houses for the factories' owners.

Factory and Offices for Richards and Barlow (1973) (Fig 5.164-5.166) - see Plate 5.3.P3

The brief for the factory and offices in Prospecton, for Richards & Barlow, the architectural aluminium window manufacturers, called for 950m² of workshop space at ground floor and 150m² of offices at first floor. A steel portal frame supports the galvanised roofsheeting over the main factory floor and abuts the office element to the north, creating clerestory windows on the vertical face.

As at House Sutherland (1970), the use of patent glazing systems is fully exploited with raking glass cladding to the east



Fig 5.162: BDG – Julia Road Office (1973). Terrace. Photo: D. Jordaan.

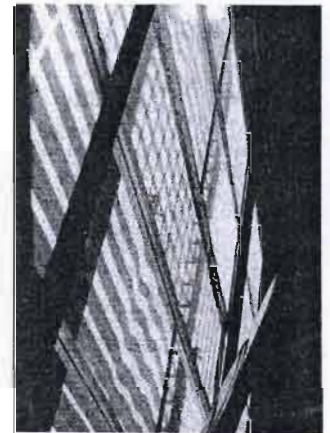


Fig 5.164: BDG – Richards & Barlow (1973). Entrance. Photo: P. Mikula.



Fig 5.165: BDG – Richards & Barlow (1973). Entrance. Photo: D. Jordaan.



and western workshop enclosure. Glazing elements to the general office space allow for a generous influx of natural light onto worktops and the internal planter that extends along the northern edge.

Surveillance of the factory from within the mezzanine general office is achieved through elongated 'porthole' windows that are set into a thin concrete upstand wall. A 'high tech' language is further developed with the bright yellow painting of steel structure, entrance stair and company signage. Further development of detail experimentation is evident in the design for the canvas sling for the air conditioning ducting in the general office space (Fig 5.166).

Scrap metal plant and offices for Chicks (1974) (Fig 5.167-5.169)
- see Plate 5.3.P3

A more utilitarian design approach was adopted for the scrap metal plant and offices for Chicks Scrap Metal, also in Prospecton, which was prompted by the harsher industrial operations. A 77m long portal framed shed, accommodating ablutions, offices and non-ferrous metal shelter is sited along the Jeffels Road building line allowing for the remainder of the site to be used for scrap metal stock piling. The scrap material is manipulated around the site by a large steel crane gantry, painted brilliant red, it becomes the focal architectural feature, with the ancillary building acting as a backdrop.

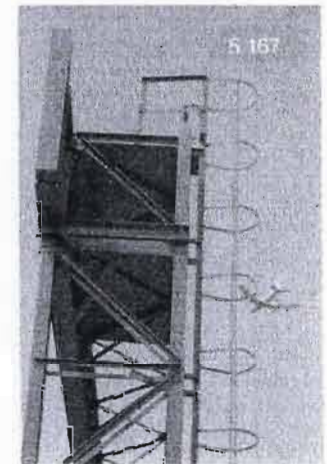
Hulett's Research & Development Laboratory (1973)
(Fig 5.170-5.178) - see Plate 5.3.P4

One of BDG's major commissions and finest architectural achievement was the design for Hulett's Research & Development Laboratory at Mount Edgecombe, where the interest in prefabrication and special assemblies through precise detailing reached a crescendo.



[^] Fig 5.166: BDG – Richards & Barlow (1973). Office interior. Photo: P. Mikula.

Fig 5.167 & 5.168: BDG – Chicks (1974). Gantry details. Photos: P. Mikula. ^v



[^] Fig 5.169: BDG – Chicks (1974). Metal store & offices. Photo: P. Mikula.

Fig 5.170: BDG – Hulett's R & D Labs. (1973). Photo: P. Mikula. ^v



The commission itself was instigated by Peter Stewart who explains, "I had sold my Cowies Hill house to George O'Reilly, a mechanical engineer and senior member of the Hulets organisation who later asked me to design their Mount Edgecombe Sugar Research Laboratories. Hulets were attempting to work with new architects at the time with Hallen & Theron being asked to design their office accommodation at Umhlanga Rocks. I brought the Hulets project into the office and was involved in the sketch design; I left to go on sabbatical leave at which time Kevin Macgarry et al took over". (Stewart 2002 – personal communication)

The facility was sited adjacent to the Mount Edgecombe Sugar Mill and principal group administration buildings. "Planning was influenced by the future possible replacement of these older buildings. Early studies generated a linear route to provide access to present known and future un-known demands. The pedestrian access evolved as an independent structure and was referred to as the Spine. It provided access for 'comers and goers' with samples, test trolleys or tea trays and is 2400mm wide." (*NPIA 3 Newsletter* 3-1977: p10)

The spine connects both pedestrians and service elements through the new laboratory, offices and service facilities that are dispersed between courtyard spaces. Most dramatic is the air-conditioning tube that is centred at the curvature of the steel vaults supplying chilled air to the compartmented accommodation, the passageway itself acts as a return air plenum for the entire project.

Prefabrication was applied throughout the building, from the steel structure, and glazed walling to the purpose-made laboratory fittings. The laboratory space is organised either side of a sunken service duct that runs horizontally and perpendicular to the spine. Work areas within the laboratory are defined by a series of parallel 'service



Fig 5.171: BDG – Hulets R & D Labs.(1973).
Photo: D. Jordaan.



Fig 5.173: BDG – Hulets R & D Labs.(1973).
Photo: P. Mikula.



Fig 5.172: BDG – Hulets R & D Labs.(1973).
Cutaway perspective.
Photo: P. Mikula.

umbilicals' that carry water and electricity to the worktops. The painted steel 'suitcases' can be adjusted in height and are also removable (Chapter 6.5 - Fig 6.30). Generally a horizontal datum line defines the extent of the patent glazing above which, cranked metal sheeting clads the vertical and sloped sections of the roof; the base is defined by a battered off-shutter concrete plinth. The pavilions housing services and ablutions are articulated with bright blue glazed tiling, and the strong use of colour is further perpetuated throughout with the painting of the building's metallic elements.

The building exudes a 'High tech' language, reminiscent of the early work of Richard Rogers in the UK. An impression confirmed by Douw van Zyl, a Senior Lecturer at the University of Natal, who visited the building shortly after its completion and recalls its 'futuristic architecture' that was unparalleled in South Africa at the time. (van Zyl 2002 – personal communication).



Fig 5.176: BDG –
Hulett's R & D Labs. (1973).
Photo: P. Mikula.



Fig 5.177: BDG –
Hulett's R & D Labs. (1973).
Photo: P. Mikula.



Fig 5.174: BDG – Hulett's
R & D Labs. (1973).
Photo: P. Mikula.

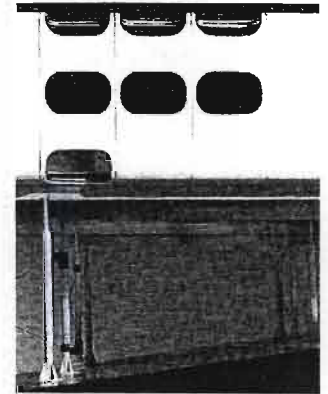


Fig 5.175: Richard + Sue
Rogers – Zip up Enclosure
(1968) Ref: *Architectural
Monographs* 1985: p70.



Fig 5.178: BDG –
Hulett's R & D Labs. (1973).
Photo: P. Mikula.

The Hulett's Laboratories, along with the Julia Road Office Building were nominated for the NPIA Awards of Merit in 1977. It is unfortunate that the opportunity for the local profession to recognize BDG's contribution to architecture in the region was overlooked, awarding a 'Beer Hall' for African men (*NPIA Newsletter* 3-1977), in preference to the BDG's nominations. The indifference between the two parties had prevailed.

5.3.2 Analysis

Orientation & natural light penetration. Plates 5.3.P1/P2/P3/P4/P5/P6

Plates 5.3.P1 & 5.3.P2 depict the arrangements of retail and office spaces in BDG's commercial developments. Planning constraints in the cases of the Group Practice Surgery (1969), Lancewill (1969), Pinetown Mews (1969) and Offices for Gitsav (1972) are determined by the urban infill site locations.

Retail spaces in these instances present a direct relationship at ground floor to street frontages, with the shopfronts at Pinetown Mews set back on a verandah which accommodates steps from the pavement due to the sloping ground.

At Antelope Place (1971) and Julia Road (1973), the suburban sites allow for the buildings to be set back from the street to provide customer parking in front of the retail units.

Due of the pre-eminence of the retail accommodation at ground floor, access to office spaces on upper floors was restricted in most cases to discreet entrances with small lobbies and ascending stairs. The exception being at the Julia Road offices, where a reception area and meeting room was located at ground floor to improve client convenience and impression upon arrival.

Generally the orientation of office spaces resulted from the site constraints as previously mentioned, with control of lighting and ventilation mainly reliant on mechanical means. At the Group Practice Surgery the incorporation of six light wells dispersed through the deep floor plan afforded the opportunity for natural light ingress and cross ventilation, this consideration was not adopted at the similarly dispositioned offices for Gitsav. " Gitsav was a very deep office space and had to be air-conditioned, the Julia Road Office however, allowed for a 'green' approach". (Lee 2003- personal communication).

Plate 5.3.P3 illustrates the planning arrangements of the two industrial buildings for Richards & Barlow (1973) and Chicks Scrap Metal (1974). In both examples factory space is located at the ground floor with offices at first floor, at Richards & Barlow the administrators overlook the factory operations.

The orientation of the open plan office at Richards & Barlow is located along the northern edge of the building, the favourable aspect is enhanced by a planted zone adjacent to the windows which assists as a natural light filter. Indirect light also penetrates the office space through south-facing clerestorey glazing (Ref Plate 5.3.P6).

Less concern is shown for the office accommodation at Chicks Scrap Metal. The offices face either directly west or east as a consequence of site constraints, requiring a continuous louvre screen to deflect the harshness of the morning and late afternoon sun.

The Hulett's Research & Development Laboratories (1973), illustrated on Plate 5.3.P4 was planned around the special requirements of the laboratory spaces in respect to services and administration. A central circulation spine connects the six building elements displaced either side of the passageway whilst also being the route for the central airconditioning ducting.

The three laboratory wings are serviced by a horizontal service duct which runs perpendicular to and is accessible from the circulation spine. The researchers' offices are located at the glazed edges of the laboratory blocks with either north/east or south/west orientation with the same aspect also applying to the smaller administration wings. The extension of the steel roof trusses to create overhangs, illustrated on Plate 5.3.P7, provides reasonable solar protection for these office areas.

Plate 5.3.P5 illustrates the predominantly east / west orientation of the building mass of BDG's commercial and industrial buildings, resulting in problems of thermal loading on the structures. The narrow plan form of the buildings suggests that proximity of working spaces to external openings is within accepted norms, usually six metres, which would contribute to a reasonable working environment.

Plate 5.3.P6 reveals the general compliance with commercial norms of office areas with ceilings under flat slabs. Spatial volumetric qualities are however apparent at BDG's own offices at Julia Road, where the roof to the studio inclines to accommodate the mezzanine space, and at Richards & Barlow where the office space is articulated by clerestorey glazing. The abundance of patent glazing walling on these two buildings does however provide significant problems as these elements are exposed to the morning and afternoon solar penetration.

Materials and structure – Plate 5.3.P8

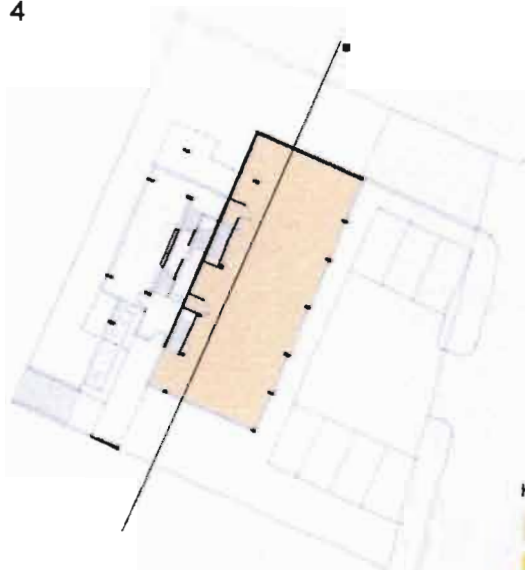
BDG's portfolio of commercial and industrial projects represents a development into framed structures in contrast to the load-bearing structures in earlier residential work. Initially the construction technology was concrete framing with brick infill as at the Group Surgery (1969), Lancewill (1969), Pinetown Mews (1969) and Offices for Gitsav (1972), however a move to a predominantly steel frame structure with applied cladding systems characterised the later projects. Julia Road Offices (1973) and Richards & Barlow (1973) were composite structures with first floor structures supported by a concrete frame with the main building envelope clad over a steel structure.

Wall finishes varied from the facebrick panels at the Group Surgery and Lancewill, ceramic tiles at Pinetown Mews and Gitsav offices, to the applied cladding systems of roof sheeting, patent glazing and solar louvre screens at Julia Road Offices, Richards & Barlow and Chicks Scrap Metals.



1 Group Practice Surgery for Dr. Goga (1969) 2 Lancewill – Shops & Showroom (1969) 3 Pinetown Mews – Shops & offices (1972)

4



Ground Floor

KEY

- Retail areas
- Office areas
- Service areas

5



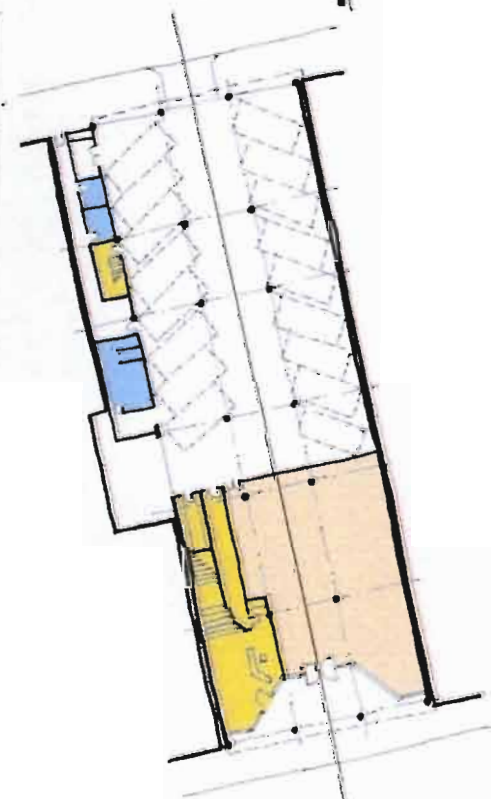
First Floor

6



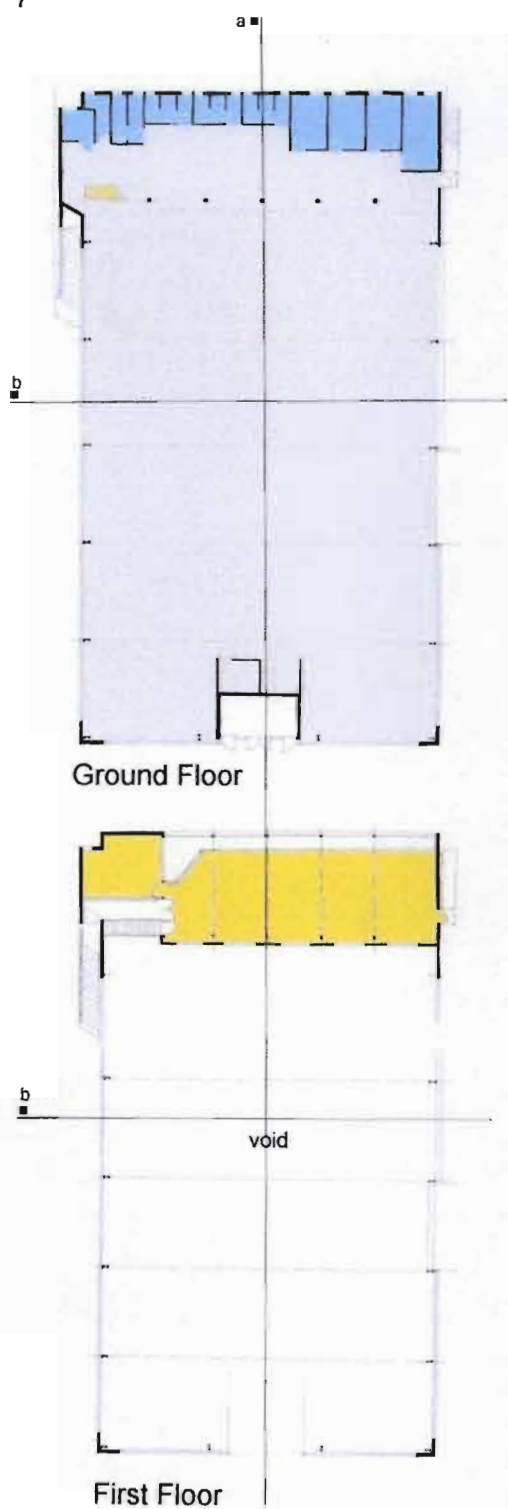
First Floor

Ground Floor



Ground Floor

7



8

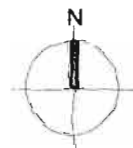


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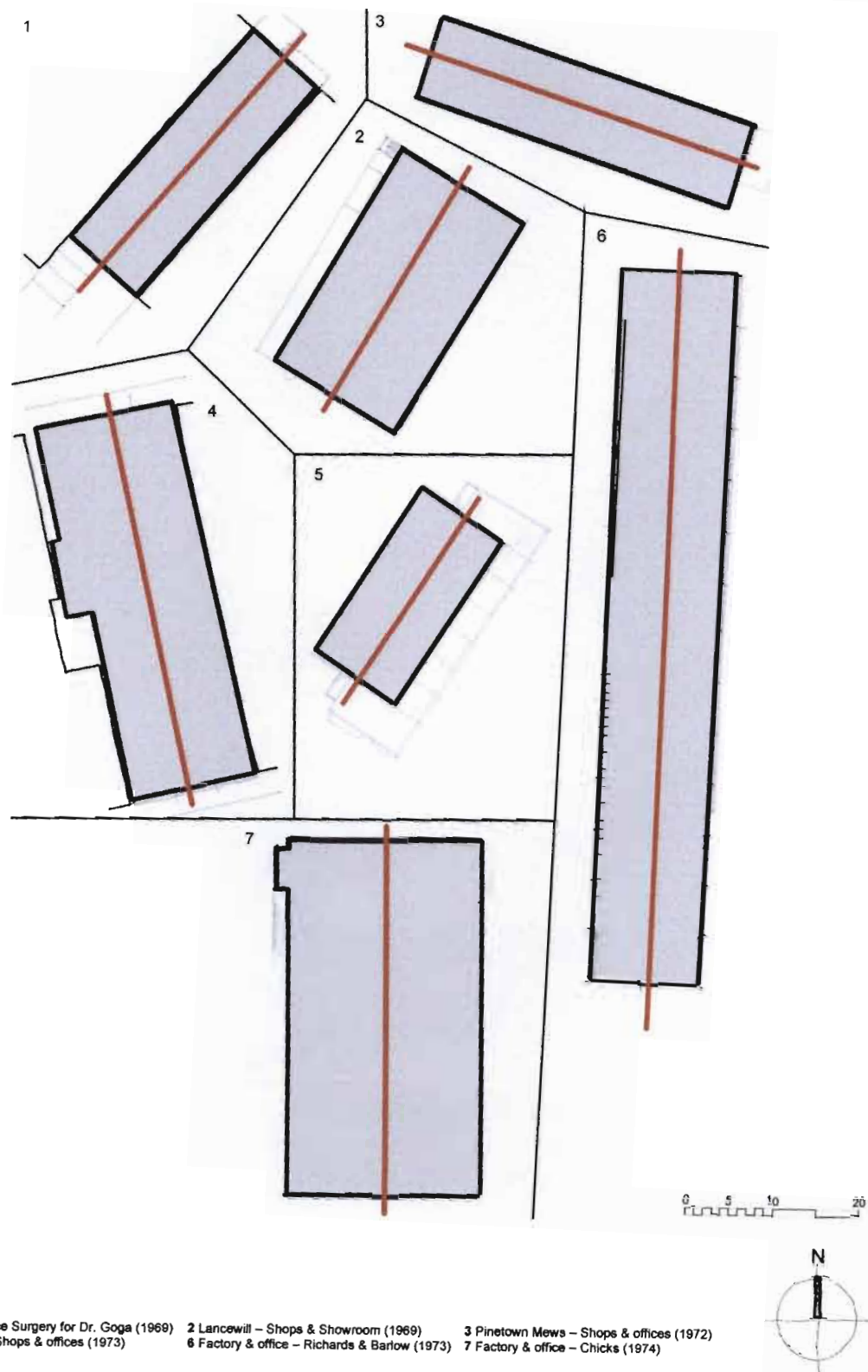


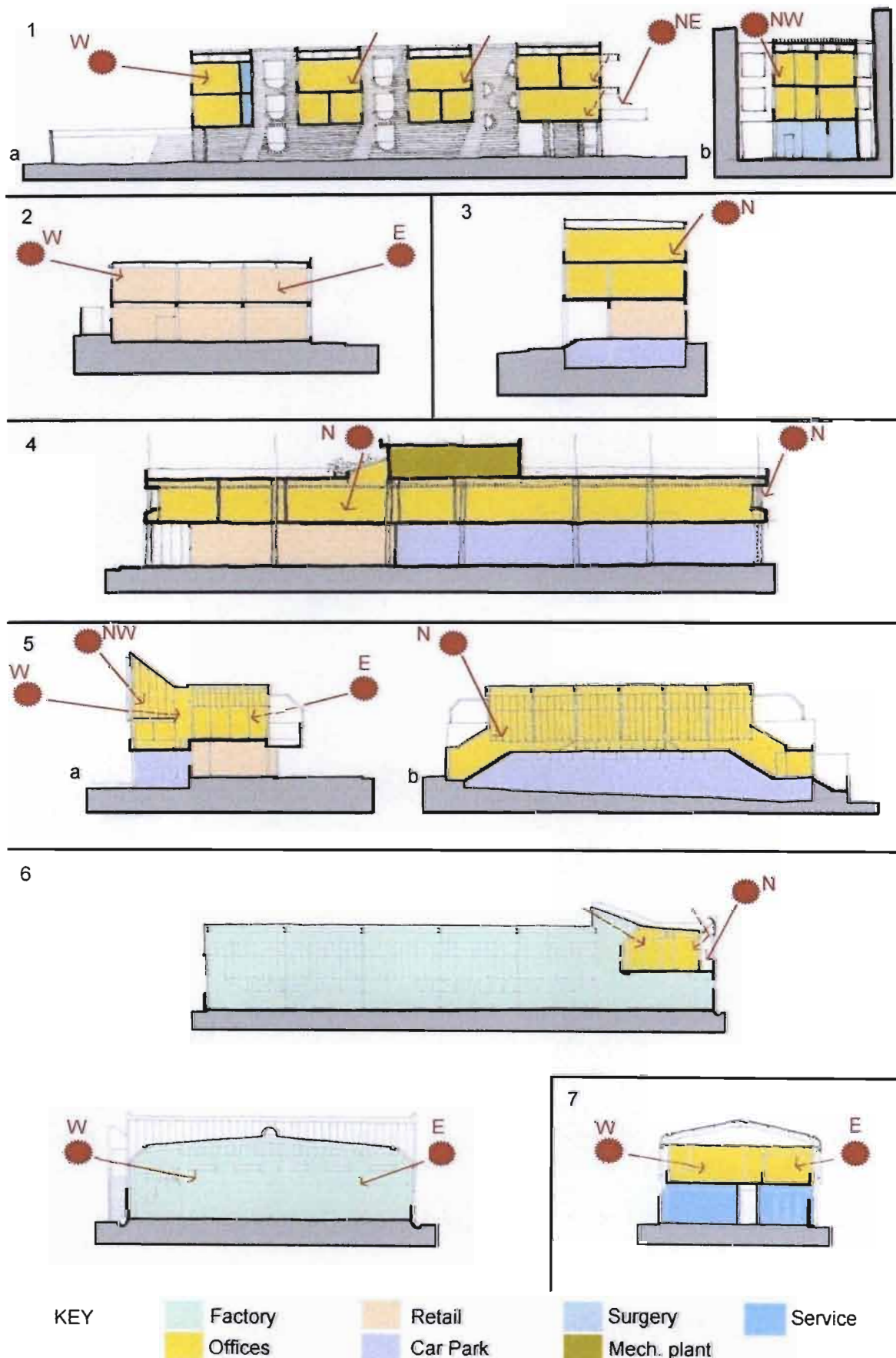
KEY
 LABORATORY
 OFFICE AREA
 SERVICE AREA
 DUCT

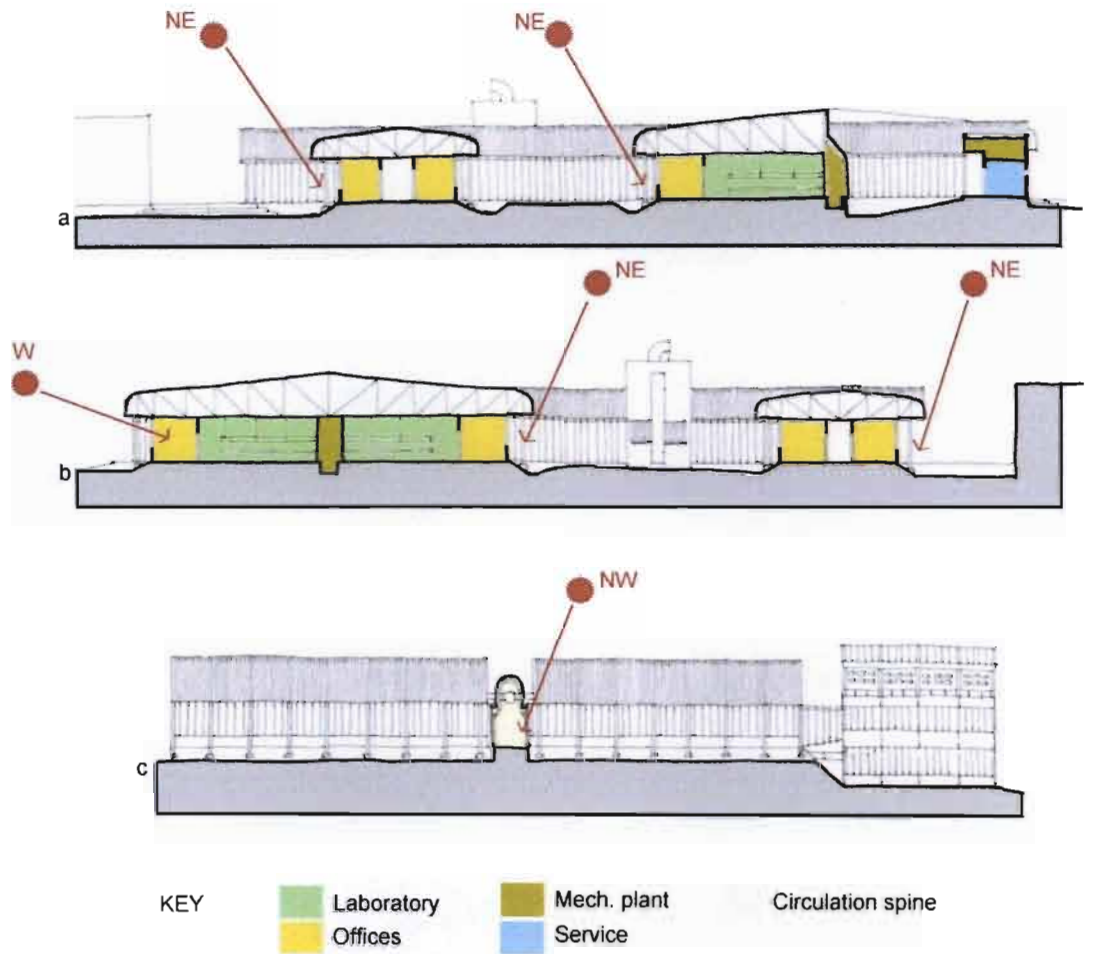
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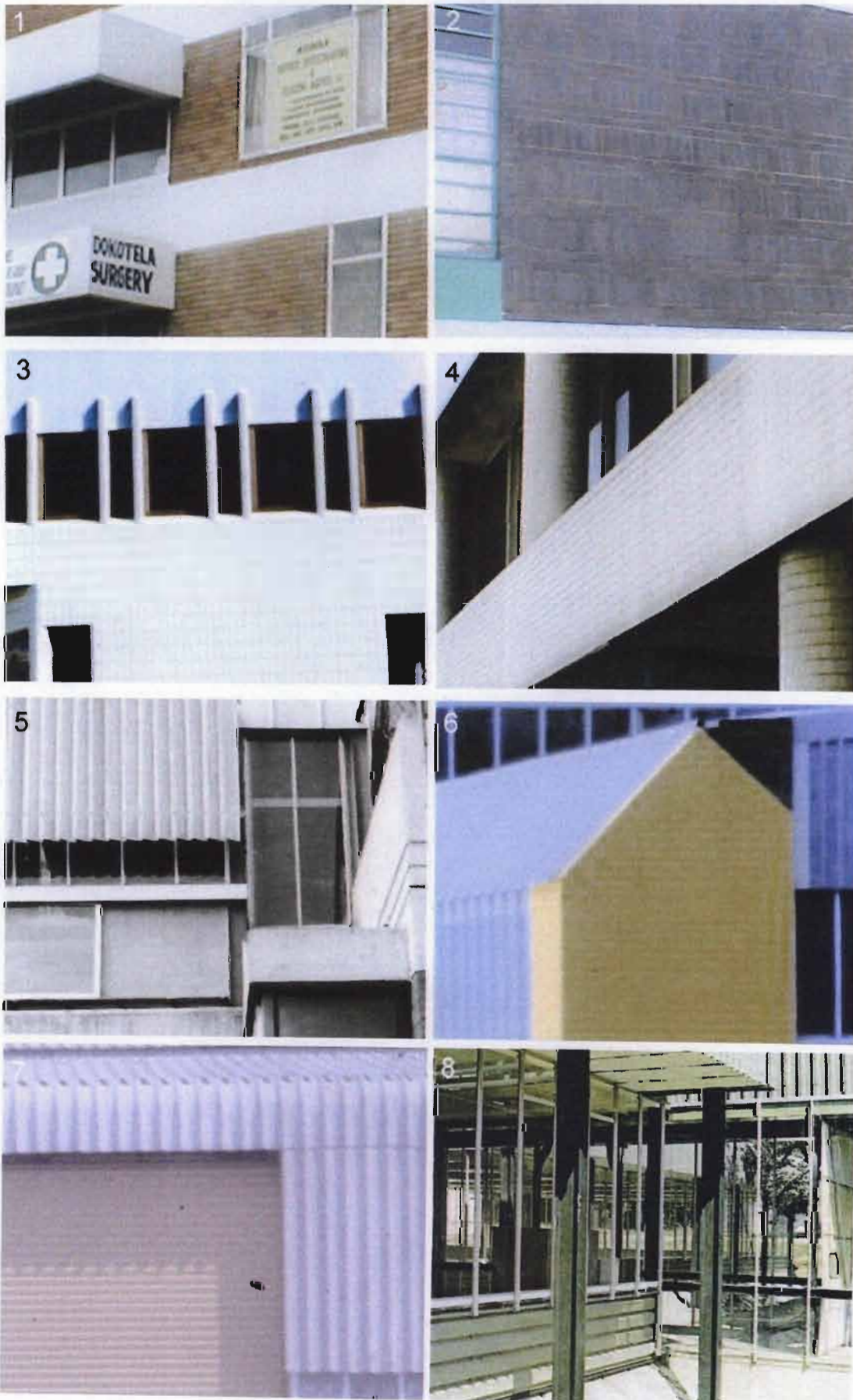


9 Hulett's Research & Development Laboratories (1973)









1 Group Practice Surgery for Dr. Goga (1969) 2 Lancewill – Shops & Showroom (1969) 3 Pinetown Mews – Shops & offices (1972) 4 Offices for Gitsav (1972)
5 Julia Road – Shops & offices (1973) 6 Factory & offices - Richards & Barlow (1973) 7 Factory & offices - Chicks (1974)
8 Hulett's Research & Development Laboratories (1973)

5.4 Community Buildings

5.4.1 Overview

The desire to diversify the predominantly residential work profile of BDG towards projects of social relevance resulted in the practice being involved in the design of school buildings and community centres as well as churches. Mikula explains;

"I wanted to move away from the residential projects, because it can become a bit self indulgent. One has the feeling that maybe there must be a bit more to your role as an architect than doing these little cultural exercises for some other nice people." (Mikula 2001 – personal communication)

The Urban Foundation, a development agency financed by the private sector was established in 1976 in reaction to the 'Soweto Uprising'³⁵ the same year, "to promote and co-ordinate improvements in the quality of life of urban communities on a non political, non-racial basis." (Urban Foundation brochure, undated) The Urban Foundation was soon to become significantly active in the areas of housing, education and economic development, promoting appropriate models of building design through community consultation.

Due to the economic recession that followed the political turbulence in 1976, incoming work rapidly dwindled and by mid 1977 a decision by BDG to join the large multi-disciplinary practice of ZAI (Inc) was concluded.

"On the practice front we have associated with a fairly dynamic multi-disciplinary (mainly engineering) practice. While they bankroll us, they have the muscle to get government contracts etc. which we hope will enable us to build, as well as dream the drawings. We otherwise continue operating as we are, in our building, and with our present team: we are therefore hoping for opportunities to get involved in the type of work which is going to have a real effect on this country. The



Fig 5.179: Urban Foundation logo.

³⁵ Soweto uprising of June 1976. (See Chapter 1.4)

architectural fraternity has looked on our move as a complete capitulation, while they sit behind empty drawing boards of prestige towers. “

(Extract of letter from BDG to Ralph Erskine, BDG 25/05/1977; see Chapter 5.5 for explanation of association.)

The commitment of the professional community to the Urban Foundation was often through free consultation. Resulting from the incorporation into ZAI (Inc), Mikula was seconded to the Urban Foundation where in turn he was asked to work on various projects through BDG.

Schools

The 1845m² new **John Dube High School** (Fig 5.180-5.182- see Plate 5.4.P1) in KwaMashu was designed in 1977 and completed in March 1979, and incorporated 16 classrooms, hall, library and principal's house on a sloping site. The design solution is along similar lines to that suggested by Wilson in his Design Thesis of 1971, 'A School Building System for KwaMashu Township' (see Chapter 3.4). The hall and administration spaces are sited at the top of the site with a circulation spine and perpendicular classroom fins located under a metal sheeted roof that slopes parallel to the ground, as in some of the early BDG houses. The solution is economical and efficient, maintaining a good building scale with a quality of space established between classrooms and connecting courtyards. Generally walls are plastered with a fairface brick plinth to reduce maintenance to the painted surfaces, steel windows and doors are elegantly arranged. A lightness of detailing is also achieved by the slender steel posts and rafters which support the roof to the central passageway and classroom verandahs, providing much needed shaded space.

Additional building were also designed for the Mzuvele High School (1977 –Fig 5.183) and Inhlakanipo School (1977), both in Kwamashu.

Fig 5.180: BDG – John Dube High School (1977).
Photo: P. Mikula



Fig 5.181: BDG – John Dube High School (1977).
Photo: P. Mikula



Fig 5.182: BDG – John Dube High School (1977).
Photo: P. Mikula

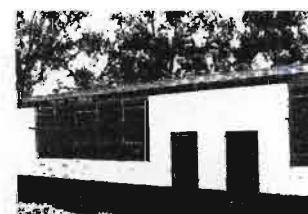


Fig 5.183: BDG – Mzuvele High School (1977).
Photo: P. Mikula



Community Facilities

The **YMCA Building (1977)** (Fig 5.184-5.187), close to the KwaMashu central railway station, was also commissioned by the Urban Foundation as part of their programme to improve community facilities. The building accommodates "24 bedrooms, matrons flat, dining room, lounge, utility rooms, kitchen and foyer". (*NPIA Journal* 2-1984: p8)

A simple architectural language of industrial proportions was adopted, the building enclosure utilising long span sheeting over mono-pitched roofs. Clerestorey windows and translucent sheeting allows natural light to penetrate into the central circulation passage (Fig 5.186), offering pleasant spatial quality in an otherwise harshly detailed building, a reflection of a limited budget and economic constraints.

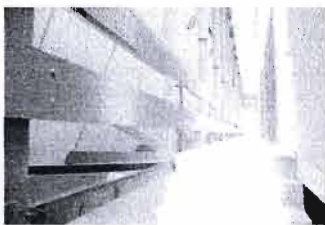


Fig 5.186: BDG – YMCA (1977).
Photo: P. Mikula

By contrast the **Visitors Centre (1975)** (Fig 5.188-5.193-see plate 5.4.P1) designed as the display and marketing rooms for the residential suburb at Sunningdale, north of Durban, was an opportunity to further develop BDG's architectural themes in a sculptural show piece building for the new development.

Stafford comments:

"The Visitors Centre was a definitive mood in BDG's work. It was a beautiful shape, a harp shape with a concrete roof which came down and kicked up at the end, with glass panels at 45 degrees. It was very much like a James Stirling building." (Stafford - personal communication 2002)

Fig 5.184: BDG – YMCA (1977).

Photo: P. Mikula

v



Fig 5.185: BDG – YMCA (1977).

Photo: P. Mikula

v



Fig 5.187: BDG – YMCA (1977).

Photo: P. Mikula

v



Fig 5.188: BDG – Sunningdale Visitors Centre (1975).

Photo: D. Jordaan.

v



Stafford continues;

"The fact that BDG were commissioned to design the centre after the first building at Sunningdale (Cobblestone Mews, see Chapter 5.2) is a good reflection on their reputation because other big firms were also involved and a visitors centre is a very important building for a developer." (Stafford – personal communication 2002)

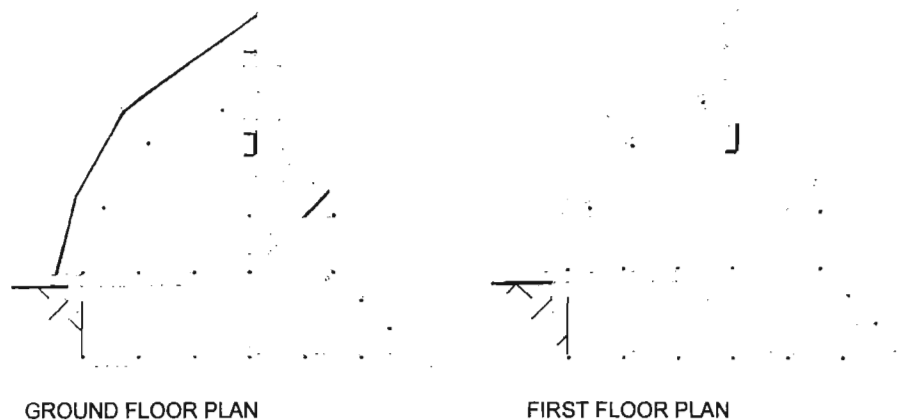


Fig 5.191: BDG – Sunningdale Visitors Centre (1975). Plans.

Two office levels on the north side of the building are linked to a display hall at an intermediary level. The hall flanked by large pivoting doors and an off-shutter concrete wall was the focal space of the centre where the development model and drawings were displayed. Patent glazing screens were used exclusively for windows and skylights resulting in a well lit interior.



Fig 5.193: BDG – Sunningdale Visitors Centre (1975). Sections.

In many respects the Visitors Centre at Sunningdale was a signature building of BDG, demonstrating a rationality of functional organisation through an expressive use of concrete and glass. It is regrettable that it was demolished in 1996 to make way for a mediocre commercial office building.

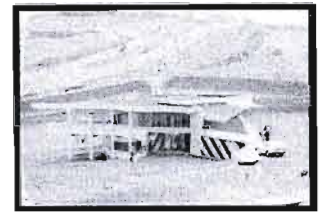


Fig 5.189: BDG – Sunningdale Visitors Centre (1975). Photo: D. Jordaan



Fig 5.190: BDG – Sunningdale Visitors Centre (1975). Photo: D. Jordaan



Fig 5.192: BDG – Sunningdale Visitors Centre (1975). Photo: P. Mikula.

Religious Buildings – see Plate 5.4.P1

Designs for two religious buildings were undertaken by BDG, a Catholic Chapel at St. Lucia Estuary (1968) and a Presbyterian Church (1972) in Ladysmith. Although they differ substantially in scale and complexity, they both utilise the geometry of a hyperbolic paraboloid roof over the main congregational space.

Brian Kearney continued his engagement with religious communities into the formative years of BDG with the commission to design the **Catholic Chapel at St. Lucia Estuary (1968)** (Fig 5.192-5.193). The singular space of the building, designed to seat 148 people, is articulated by two enclosing walls whose curvature is controlled to define the entrance at one end and the Sacristy at the other.

Kearney had earlier suggested a hyperbolic paraboloid roof in his BArch Design thesis (1965 – see Chapter 2.2). Here the roof is constructed using 6 inch diameter timber poles, that pivot over the horizontal central supporting pole and are fixed at their ends onto the sloping wallplate capping the edge walls. Window openings are dispersed in random sizes, and are located at either eaves or ground slab level to articulate the roof and floor planes. The simple geometry contributes to an understated solution to the chapel, and through this refined approach an architectural elegance is derived.

The **Ladysmith Presbyterian Church (1972)** (Fig 5.196-5.202), in contrast, is an imposing building that develops the language of brick masonry construction to achieve its sense of presence, whilst fulfilling an expansive accommodation brief. The building pays little reference to the conventions of historical church form opting however to express a raw architectural directness and functional resolution of the liturgical problem, as Le Corbusier had demonstrated at La Tourette (1954).

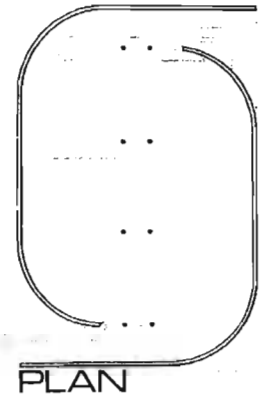
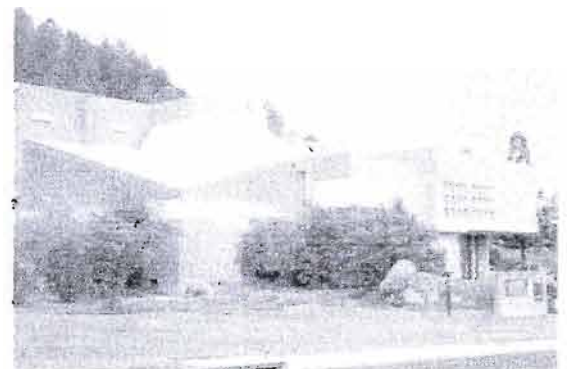


Fig 5.194: BDG – Catholic Chapel at St. Lucia Estuary (1968). Plan.
Drawn by B. Kearney.



Fig 5.195: BDG – Catholic Chapel at St. Lucia Estuary (1968). Section.
Drawn by B. Kearney.

Fig 5.196: BDG – Ladysmith Presbyterian Church (1972).
Photo: W. Peters.



"Aside from a free-standing concrete cross the building is in harmony with its formal and historical context and its function – a church is disguised." (Grové 1973: p8)

The entrance space is more concerned with the equal distribution of movement to the first floor hall and administration than a singular focus of processional entry into the adjacent church volume. This is deferred to a passageway that leads past the main stairs to a reception space located at the corner of the church itself, from which the main aisle penetrates diagonally to the altar, as was the case in Kearney's thesis design in 1965 (see Chapter 2.2).

Fig 5.199: BDG – Ladysmith Presbyterian Church (1972). Plans. Ref: *Plan 74.3*: p9

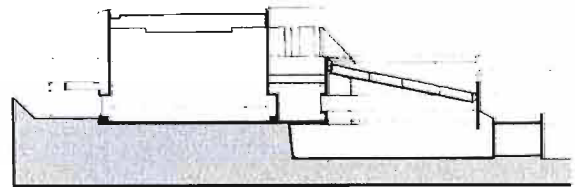
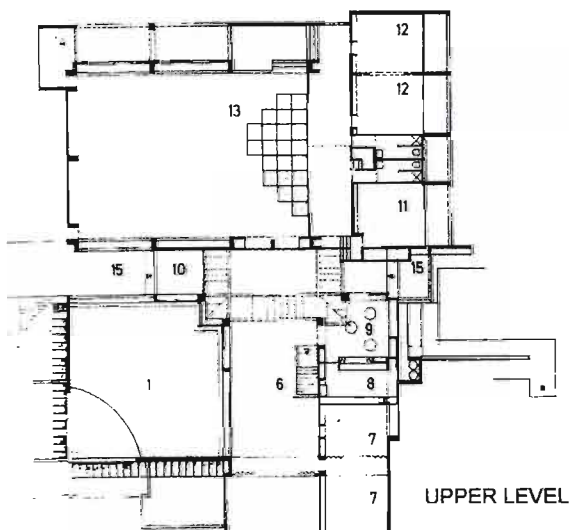


Fig 5.200: BDG – Ladysmith Presbyterian Church (1972). Section. Ref: *Plan 74.3*: p9

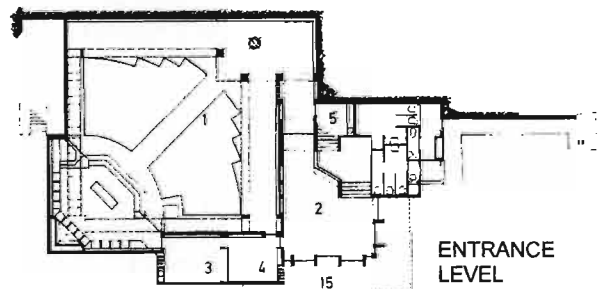


Fig 5.201: BDG – Ladysmith Presbyterian Church (1972). Photo: W. Peters.

"From the point of entry a dynamic arrangement of volumes unfolds. These are accentuated by the use of natural light which also serves to orientate users and to create a legible frame of reference. The building, grounds, hall, classrooms, cafeteria and entry attest to a critical, analytical insight and approach to detailing and planning which the user is constantly made aware of. The gallery, divorced from the church by means of a series of sliding windows also serves as a space for entry, Sunday school teaching and general recreation, all with constant visual access to the church volume itself." (Grové 1973: p8)

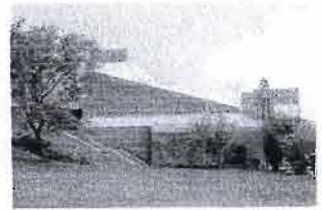
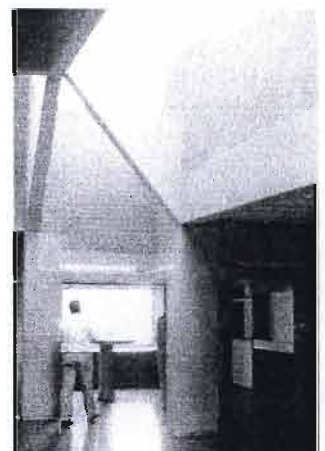


Fig 5.197: BDG – Ladysmith Presbyterian Church (1972). Photo: W. Peters.



Fig 5.198: BDG – Ladysmith Presbyterian Church (1972). Photo: W. Peters.



The Ladysmith Presbyterian Church demonstrates BDG's architectural independence, with a building of unrestrained modernity, in the context of an otherwise strictly conservative client and community.



Fig 5.202: BDG – Ladysmith Presbyterian Church (1972). Photo: W. Peters.

Competitions

Participation in competition was an important component in the practice of BDG. Designing an entry for the Paarl Civic Centre competition in 1967 had been the catalyst in the formation of the group, and opportunities to test the architectural thinking of the practice through competitions were rarely missed. Although not destined to win with any of their submissions, BDG's entries were usually highly placed or received commendations.

"We always seemed to be second, which is best after all, as you get a bit of the prize and don't have to build anything!" (Lee 2002 – personal communication)

On one occasion the whole office was taken to a restaurant whereby the prize money was placed on the table and the waiter was informed that nobody was to leave until all the money had been spent. (Lee-personal communication 2001)

Competition designs were usually radical and uncompromising; being well conceived and presented they posed a difficult proposition for the often conservative juries. BDG received a commendation for their entry for the La Lucia Civic Centre (1972) together with Italo Lupini, and 2nd place with their scheme for the Tongaat Community Centre (1976). For the **Pinetown Library Competition (1978)** (Fig 5.203-5.204 -see Plate 5.4.P1), BDG were awarded 3rd prize from 70 entries overall, and there is evidence that the competition assessors were challenged by the submission.

Referring to entry no 48: Building Design Group –Durban, the competition report of March 1978 reads, “The assessors had some difficulty in placing this submission. The poetic philosophy contained both in the admirably presented analysis and in the detail design of the internal spaces was thoroughly beguiling; more questionable, in terms of the assessor’s criteria were the siting of the building towards the North East corner and the treatment of the “stern” face fronting onto Main road “. (Pinetown Public library Competition – Assessor’s Report – *Architect & Builder* May 1978: p18).

Colin Savage refers to a subsequent conversation with one of the assessors, “ he said to us, you know your scheme didn’t meet the criteria although it was a brilliant scheme; it was controversial, so we had to shift it from first position to a consolation prize. Our controversial approach to it was not to make it a building in a park but rather a building on the edge of the city, that interacted and bussled. It would have worked incredibly as a street edge to the park, one that protected the park as well as a foil to it. The idea was that it was a large verandah that had books in it, the building cascaded down into the park and you could have spaces to sit quietly that were like living rooms.” (Savage 2001- personal communication)

Fig 5.203: BDG – Pinetown Library competition (1972). Elevation.
Ref: C. Savage records.



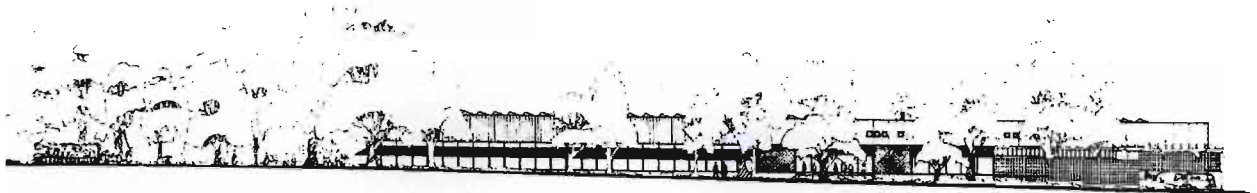
The poetic philosophy referred to in the assessors report was described by BDG in a three part conceptual analysis of the proposal;

“External Generators: On assessing the mood of the people of Pinetown, seeing the life in the park, noting the short cutters, the day dreamers, bird watchers and the little corner stores of Pinetown history,

we feel that this park with its old giant trees, and precious bushes could be made into the oasis of Pinetown, a park to be proud of.

Internal Environment: A library is not a supermarket for books. To read is to dream, and a library is where you choose your dreams. The quality of the space, the stories that each junction tells and the variety of experiences are all part of the same romantic tale. Our library tells stories of books in attics, elevated researchers and children at play. It tells of Pinetown's past and it anticipates its future and it loves the park.

Fig 5.204: BDG – Pinetown Library competition (1972). Elevation.
Ref: C. Savage records.



External Environment : We see the building as a two-faced animal. A hard civic motorcar and bus face, turned to the noisy road frontages, a face that hold the machines that keep the building cool, a long hard stern face for people at speed with a big proud entrance not to be missed at 60km.p.h.

We also see the building with a soft face, a face full of detail, a face that filters light like tress do. An edge with windows at people height. A zig-zag edge slipping in and out between trees; a "park" building. On this face we see informal entrances, where people stand, sip wine and chat to friends, a friendly face." (Building Design Group 1978 – extract from competition submission document)

The Pinetown Library competition revealed BDG's commitment to original thought and an un-compromised expression of architectural ideas. Such unbridled creativity is rare and it is unfortunate that the opportunity to advance such schemes to built reality did not transpire.

5.4.2 Analysis

Orientation & space utilisation. Plates 5.4.P1

Although a variance in the project range of community buildings designed by BDG is apparent, some comparisons are possible.

Orientation is well considered in the John Dube High School (1978) where classrooms are accessed from a north-facing verandah, while at the Sunningdale Visitors Centre (1975) the administrative offices also enjoy north orientation. The proposed design for the Pinetown Library (1978) locates the bulk of the building to the north of the site to allow extensive glazing on the south face overlooking the park, thereby preventing direct sunlight into the library spaces. The principal congregational spaces in the church buildings at Qachasnek (1968), St. Lucia (1968) and Ladysmith (1972) do not relate to a specific orientation as they are primarily cubic and introverted in form.

Circulation at the John Dube High School is similar to the Hulett's Research Laboratories, where a spinal passageway connects the series of classroom wings that are accessed from verandahs, perpendicular to the central route.

Diagonal processional routes are developed in the congregational spaces at the Qachasnek Chapel and Ladysmith Church, while at the St. Lucia Chapel the entrance, although located at one corner, reverts to the more conventional central axis.

Spatial volumetric & natural light penetration. Plates 5.4.P2

The primary public spaces in each of the community buildings is volumetrically developed to distinguish a hierarchical presence. The assembly hall at the John Dube High school is modestly enhanced with a barrel vaulted profile, while in contrast, the flat roof over the display hall at the Visitor Centre in Sunningdale, is dramatised at its edges where the concrete slab inclines over a tilted glazed screen.

Hyperbolic paraboloid roofs are used over the congregational spaces at the St. Lucia Chapel and Ladysmith Church, whereas a pyramidal form rises over the Sanctuary of the Qachasnek Chapel.

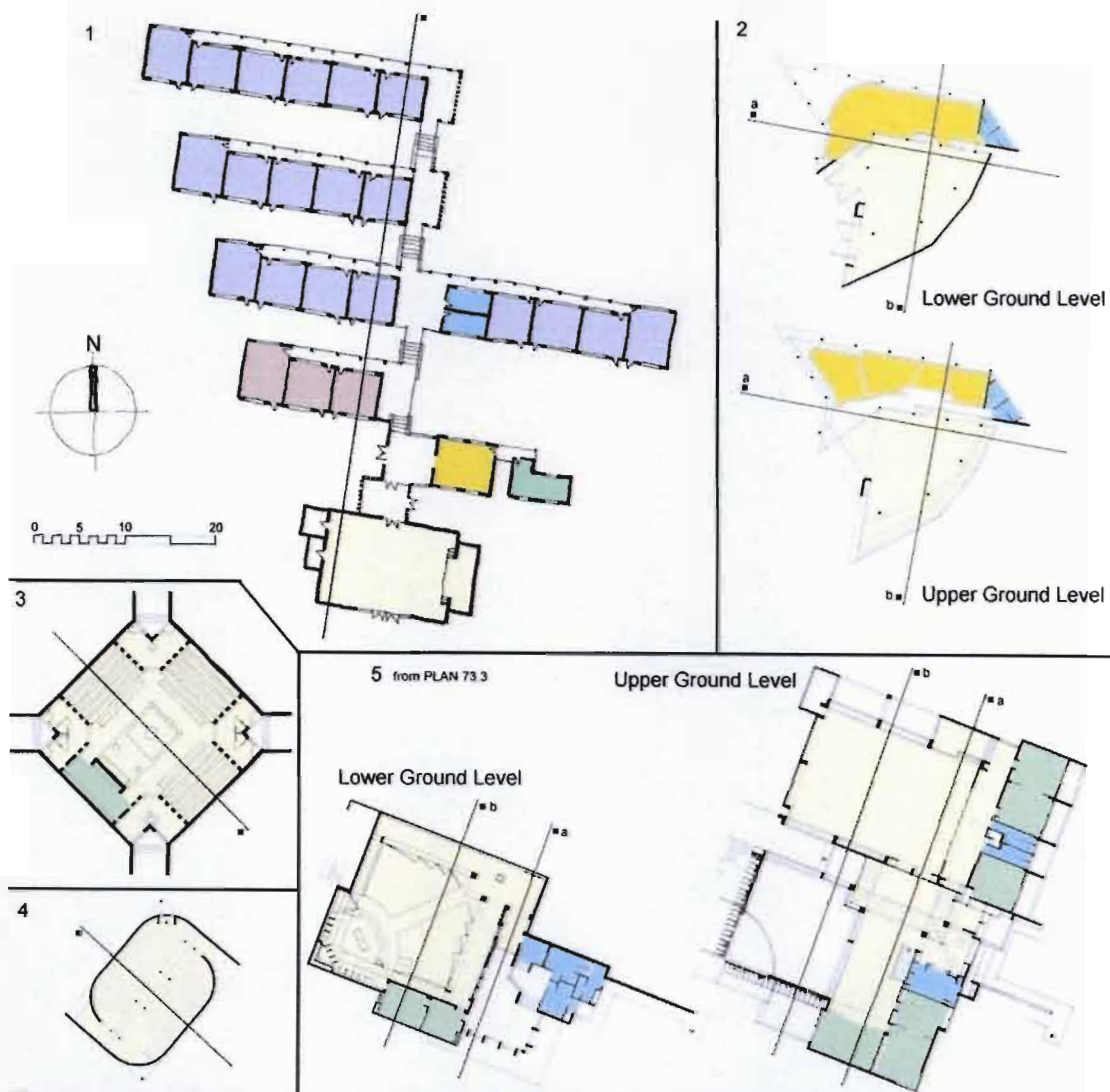
The control of natural light and ventilation is particularly important at the John Dube High School where mechanical cooling of especially the classrooms and hall would be economically prohibitive. The narrow classroom wings afford good natural cross ventilation while the northerly verandah protects the rooms from solar penetration.

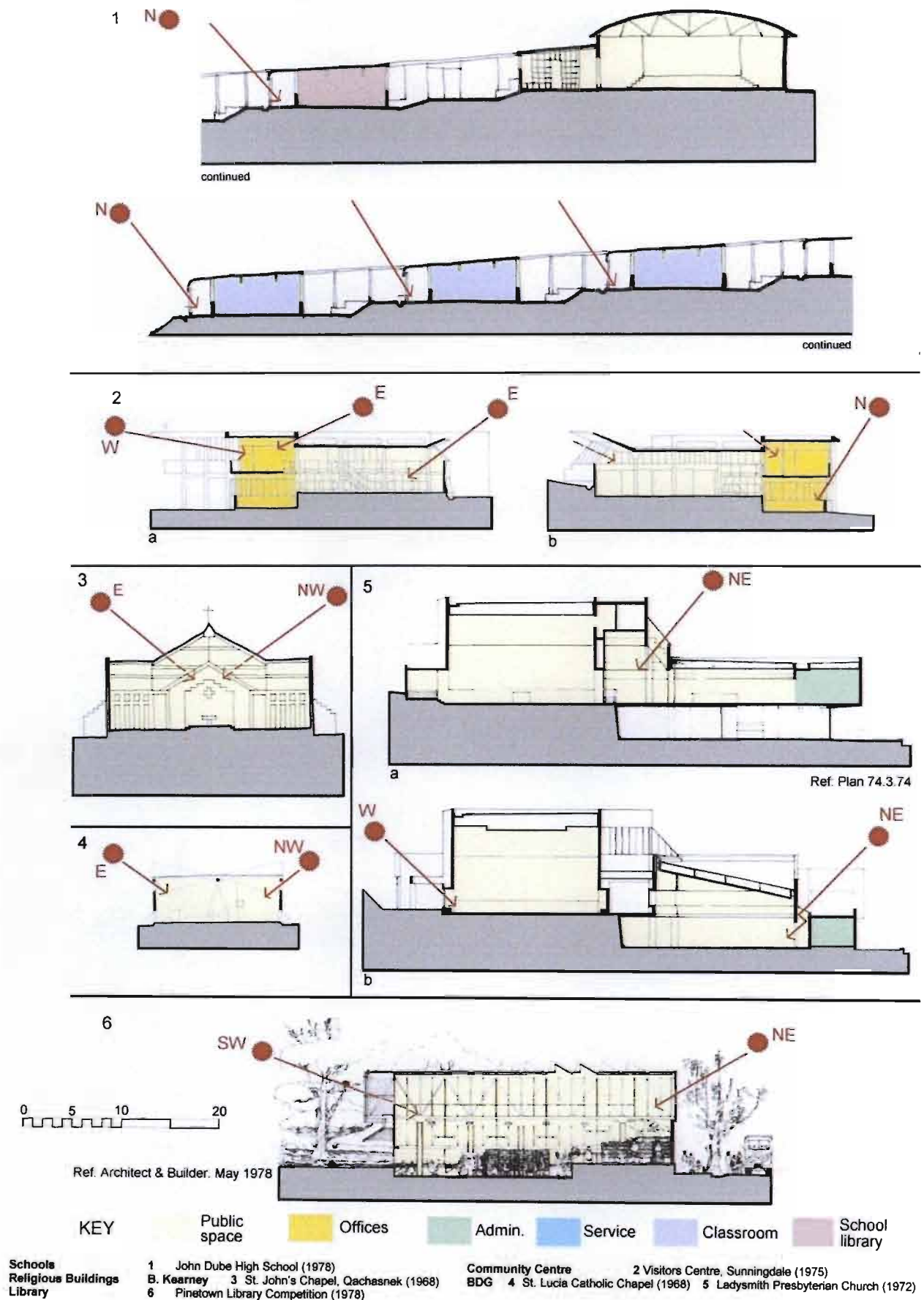
In the Sunningdale Visitors Centre and the Ladysmith Church, natural light was manipulated through clerestorey windows and patent glazed screens. At the Qachasnek Chapel light is allowed to penetrate through translucent sheeting in the roof while at the St. Lucia Chapel, daylight enters through randomly-spaced windows set into the side walls, or through the stained glass panel washing colour onto the Sacristy walls and onto the Altar.

Materials and structure – Plate 5.4.P3

The rawness of construction typical of Brutalist architecture is most clearly represented at the Sunningdale Visitors Centre where reinforced off-shutter concrete and glass were the predominant construction materials. Similarly at the Ladysmith Church, facebrick, offshutter concrete and glass were used in a formal composition that is unambiguous in its materiality.

Likewise the modestly scaled projects of the John Dube High School and St. Lucia Chapel also demonstrate an honesty in construction, whereas the concession to use the vernacular of stone blockwork was conceded at the Qachasnek Chapel, so as to integrate the new building with those existing.







Schools		1	John Dube High School (1978)	Community Centre	2	Visitors Centre, Sunningdale (1975)
Religious Buildings	B. Kearney	3	St. John's Chapel, Qachasnek (1968)	BDG	4	Ladysmith Presbyterian Church (1972)

5.5 Community Housing

5.5.1 Overview

The logical tailpiece to the work profile of BDG was their involvement and commitment to community housing in South Africa. The progression of projects from single domestic dwellings to higher density developments had given the practice expertise in residential design. Motivated by a strong social conscience in the face of prevailing political events in the country, BDG became more active in issues of social upliftment, primarily through Mikula's association with the Urban Foundation, but also through competition design and publications.

From the *NPIA Newsletter* 1-1977, 'Housing People', Mikula comments;

"Indian, Coloured and Black townships pockmark our country in an endless perpetuation of an ill-conceived dream, and even this disease will come to an end as we are running out of land and money, no longer can South Africa afford to sell a home and site for R830 if it costs over R2000 to develop, as in the case in our Black Townships. Fuel costs, low densities and long distances made transport un-viable.

The under-privileged are questioning loaded handouts. Yet I believe that as a result of these strong pressures, some new solutions might emerge. Solutions which might however, not live up to the standards we set ourselves while we live in our 'first' world of make belief. We are South Africa, we are a poor Third World Country, living through our own industrial and social revolution and our priorities must start to come into perspective." (Mikula, *NPIA Newsletter* 1-1979: p4)

One of the many issues raised by the Urban Foundation was the need for home ownership in the disadvantaged communities. Through home

Fig 5.205: Sketch – housing in and around Durban. Drawn by C. Savage.
Ref: *NPIA Newsletter* 1-1979: p5.



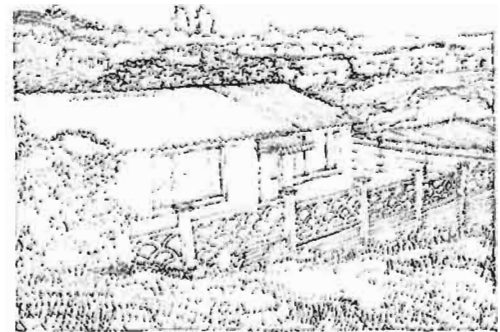
ownership would follow home improvement; an important stumbling block towards this achievement was the problems of accessibility to home finance within these communities.

Mikula continues;

"Only recently has the KwaZulu Development Corporation made it possible for the man in the street to borrow small amounts of money repayable over long periods; remember that no other leading lending institution will lend money in the townships.

The Urban foundation is setting up a home improvement centre in the township, where we will advise on procurement of finance, availability of materials, and provide technical know-how, we will assist in the untangling of red tape and provide a large variety of home improvement ideas." (Mikula, *NPIA Newsletter* 1-1979: p5)

Fig 5.206: Sketch – housing in and around Durban. Drawn by C. Savage.
Ref: *NPIA Newsletter* 1-1979: p5.



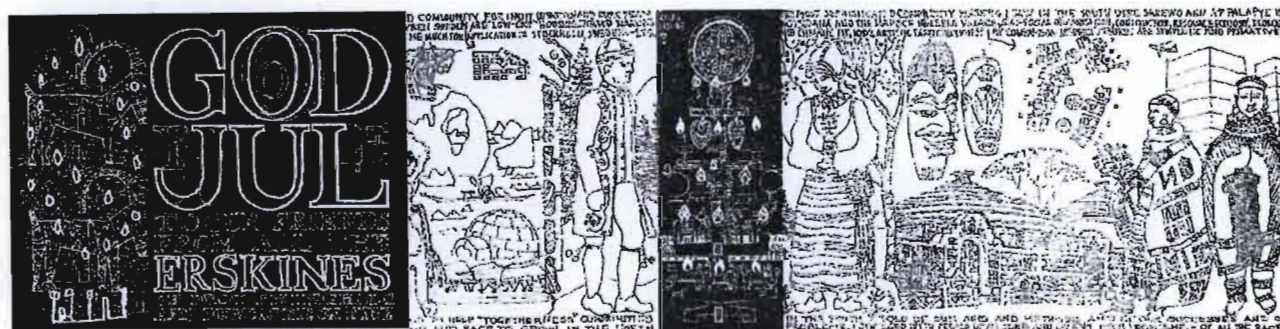
For Mikula, the role of architects in South Africa had irrevocably changed;

"If architects can come to terms with their new role in society they can look ahead to a rewarding future. Any practitioner who has that sort of end-of-the-road feeling, should spend a day driving through the townships and backwoods of Durban to see just how necessary his skills are. Maybe not the sort of skills the profession and the university expects of him, but some new updated and amended version. The architect that will move out of air-conditioned city centre offices and get to grips with the problems of today; the variety that sincerely believes that architects can make a difference. " (Mikula, *NPIA Newsletter* 1-1979: p5)

In October 1975 a Housing Conference was held at the Rand Afrikaans University in Johannesburg. Among the speakers was the architect Ralph Erskine, internationally renowned for his designs for

housing through community participation. While in Durban after the conference, Erskine visited BDG at their offices in Julia Road where a rapport was developed over discussions that focused on the social programme in architecture. The following year Mikula reciprocated the exchange with a visit to Erskine's office at Drottingholm in Sweden.

Fig 5.207: R. Erskine - Christmas card 1975 sent to BDG.
Ref. B. Lee records.



In May 1977, BDG wrote the following letter to Erskine;

"Dear Ralph,

It's Durban, South Africa

It's the steel frame studio on the Ridge,

It's the bantams – remember?

O.K.

It must be nearly two years since we saw you here, although your spirit seems to have seeped into all the corners of the office to pop its head out each time we have a new problem to solve.

Times have changed somewhat in South Africa, both politically and economically, and the whole situation changes from week to week. For us, it's obviously a challenge, with the whole bureaucratic machine now gearing itself to concentrate on mass housing and other social facilities. Your line exactly.

We have been trying to make our contributions to changing government thinking etc. Unfortunately not being politically well-connected, we have had to confine our efforts to competitions (at this stage). We enclose two recent efforts which were adjudged worthy of second places.

"The most sophisticated community planning I saw in the south were Sarewo at Palapye in Botswana and the Mapoch Ndebele villages, S.A:- social organisation, construction, resource economy, ecology and climatic fit. 100% artistic participation!!"
Erskine from Christmas Card 1975.



Fig 5.208: R. Erskine.
Ref: AD Profile 11-12 1977: p750

The Tongaat Community Centre is for an Indian Village about 30kms. to the north of Durban in the sugar belt.

The Mitchells Plain housing is a 'New Town' for 250 000 of the Coloured Community in the Cape Flats.

We still have to convince our overlords on home-ownership, and the concept of participation and encouraging growth and change – the attempt to create a community, in other ways than by imposing monumental public buildings conceived in isolation.

It is sobering to see the efforts produced in these national competitions, which always seems to bring out the worst in Architects: we would welcome your criticism and comments – I think that you will agree that we have been good boys and have listened to your encouragement." (Extract from letter to Ralph Erskine, BDG 25/05/1977)

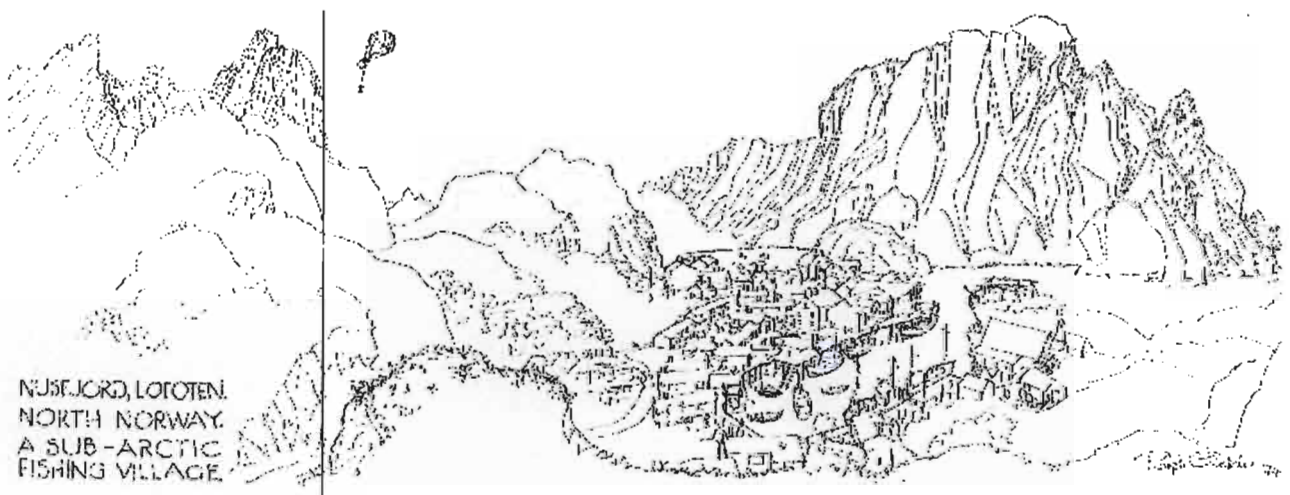


Fig 5.209: R. Erskine. Greeting card sent to BDG on 25/05/1977. Ref: B. Lee records.

"I will watch with interest" (Erskine- greeting card- undated) was Erskine's brief reply.

*All about building.
I will watch with interest.
R. Erskine*

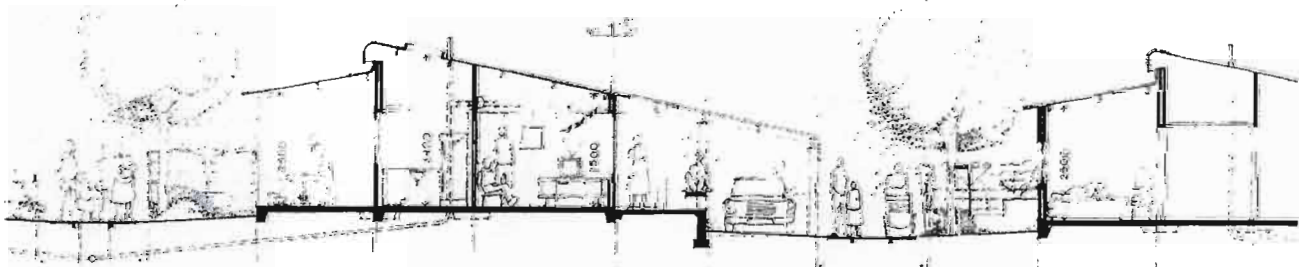
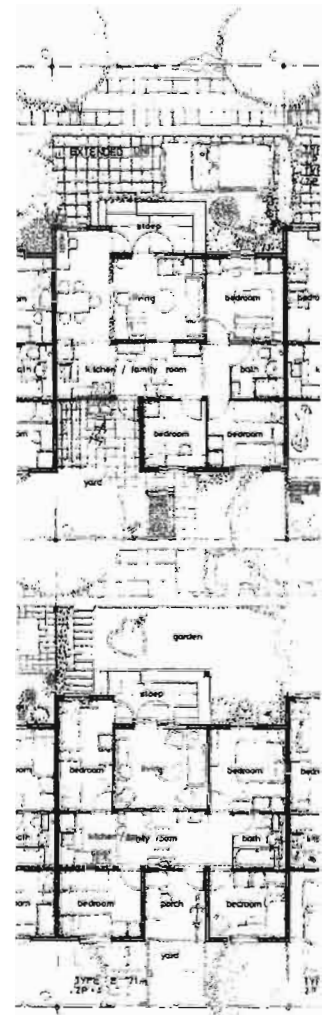
Mitchells Plain Housing Competition (1977) – see Plate 5.5.P1/P3

In January 1977, an architectural competition was announced in the architectural press for the design of a low cost housing settlement at Mitchells Plain (*Architect and Builder*, January 1977: p32). 43 entries were submitted by the closing date in April, from which a winner was selected with BDG receiving one of the three design award commendations. (*Architect and Builder*, June 1977: p30).

The BDG entry was based on a site layout of terraced units that addressed the street at the edges, with inner block mews creating shared open spaces between the building rows with larger public playgrounds and community facilities at the centre.

A variety of six unit types were designed with double storey houses at the south with extendable single storey units over the balance of the site, user flexibility was another principle that determined internal wall construction. (Fig 5.210)

Fair face blockwork and industrial profile roof sheeting was proposed for external materials in a design that made a concerted effort to articulate individual unit identity.



The presentation drawings clearly demonstrated empathy towards the envisaged activities within the proposal through the skilful attention in drawing detail to the space utilisation.

Fig 5.210: BDG – Mitchells Plain Housing Competition (1977). Plans and section.
Ref: P. Mikula records.

BDG's design for the Mitchells Plain Housing competition, although not destined to be implemented would importantly serve as a precursor for the design of a similar neighbourhood in Durban, known as Briardale.

Briardale (1977) – (Fig 5.211-5.218) see Plate 5.5.P1/P2/ P4-P6

The Urban Foundation, acting as agent on behalf of employer organisations, were the co-ordinators for Briardale (1977), a 105 dwelling development in Newlands West, 20km to the north of Durban.

"Briardale is a pilot project that examines a number of concepts in the field of user involvement in the housing process; to the extent that employer-assisted housing in South Africa is in its infancy and the inclusion of the community in the economic housing process is yet to begin. It further aims to make available economic housing to those who do not own houses and cannot afford to enter the market, yet desperately seek an alternative to the environment offered by current housing schemes." (Building Design Group Inc. - *NPIA Newsletter* 1-1979: p6).

Colin Savage elaborates, " Briardale was dealing with a community of people that were renters, reasonably employed, bank tellers, clerks, that profile of people, unable to gain access to buying their own homes through the government or corporation scheme houses. What we were trying to do was bridge the gap between the formal housing market and the scheme houses, sitting somewhere in-between the two, providing a variety and choice in the multi unit approach, either townhouse or individual free-standing. " (Savage 2001– personal communication).

For BDG, Briardale was their opportunity to really engage with community housing and demonstrate how architecture can make a difference.

Fig 5.211: BDG – Briardale (1977). Photo: P. Mikula



BRIARDALE

Fig 5.212: BDG – Briardale (1977). Aerial view.
Ref: Urban Foundation promotional brochure.

Fig 5.213: BDG – Briardale (1977). Photo: P. Mikula



"Our buildings attempted to see Briardale as a place. So each building, while it was trying to be a wonderful little home for somebody, had a greater role to play in the larger social event and place in the whole piece of architecture." (Mikula – personal communication 2000).

An essential component in the delivery process at Briardale was the participation process between the aspirant home owners and the Urban Foundation as developers.

"Preliminary proposals were prepared and tested by means of continuous group discussions with working committees drawn from the more than 200 enthusiastic applicants who participated in the scheme. All applicants were invited to visit the site and view models of the proposed township layout and house designs, and to further group presentation by means of a slide and talk show; detailed questionnaires both helped to explain the proposals and examine the desires and preferences of the applicants. Face to face interviews with all the families enabled applicant and designer to become acquainted and offered maximum exposure to the decision making processes and professional expertise.

The moral dilemma posed by having far more applicants than homes available, was eventually resolved by preparing a computer programme to examine the detailed requirements and aspirations of the participants on the one hand, and the cost restraints and the environmental potential offered by the various sites on the other.

Applicants were impartially scored in terms of the best fit, which indicated the most suitable applicants who were then invited to group discussions where they were able to meet their new neighbours, decide on their particular site, finalise their house choice, and make their bond applications." (Building Design Group Inc. - *NPIA Newsletter* 1-1979: p7).



^ Fig 5.214: BDG – Briardale (1977). Photo: P. Mikula



^ Fig 5.215: BDG – Briardale (1977). P. Mikula (foreground) with colleagues, testing layout of units. Photo: P. Mikula



^ Fig 5.216: BDG – Briardale (1977). P. Mikula (centre) leading the discussion at the Julia Road offices. Photo: P. Mikula.

The steeply sloping triangular site was bounded by a railway reserve, a road and a Municipal open space with provision for a future Infant School. Houses were designated into eleven 'zones' within the layout of the proposal that also incorporated two parks, a playlot, a day care centre and local corner shop. The characteristics of each zone were defined by their proximity to particular services and house type allocation.

Also synonymous with the earlier competition entry was the interest in the extendable home (Plate 5.5.P6). The house designs needed to anticipate the desire to expand accommodation and the scope of these extensions were presented at the outset of the project. Over time, the individual identity of each unit become manifest, as owners tailored and decorated their homes to suit their particular needs.

A specific building contract was prepared for the project allowing for the staged delivery of construction documentation due to the ongoing consultation process. This ultimately resulted in contractual difficulties; the builders were generally only accustomed to the speculative market and were not prepared for such a complicated procedure.

"Developers on other projects, they just see the site plan with building lines, roads and parking. Eventually some buildings come out of that way of looking. The idea that you actually spend money on a building that goes beyond that was quite difficult for us to sell to these guys because they were actually just spec builders. We were too difficult and complicated their lives." (Mikula 2000 – personal communication).



^ Fig 5.217: BDG – Briardale (1977). Model. Photo: P. Mikula



^ Fig 5.218: BDG – Briardale (1977). Day Care Centre. Photo: P. Mikula

Fig 5.219: BDG – Briardale (1977). Pedestrian path. Photo: P. Mikula v



Fig 5.220-5.222 : BDG – Briardale (1977). General views; March 2003 showing owner adaptations. Photo by author.

Fig 5.220



Fig 5.221



Fig 5.222



5.5.2 Analysis

Site layouts. Plates 5.5.P1/P2

The contrast between the layouts of the two housing schemes is determined primarily by topography, with the Mitchells Plain low cost housing settlement designed for a flat site, while the Briardale project is located on a steep hill. Thus the Mitchells Plain layout has a regular grid of terraced housing across the site whereas at Briardale, houses relate to the contours and resulting street patterns, where a balance of terraced and detached units are dispersed.

Both projects regard public open space as a core component with central areas reserved for parks and 'totlots'. Other essential public amenities, day care centres, schools and corner shops, are incorporated into integrated neighbourhoods.

Another common element is the location of double storey units to the southern edges of the respective sites, minimising over-shadowing of neighbouring houses. At Briardale double storey houses are also located the edges of the central park space.

Pedestrian mobility around the sites is encouraged by the incorporation of walkways and paths that provide alternative access routes around the development.

Plate 5.5.P2 defines the eleven 'zones' at Briardale. The information poster published by the Urban Foundation attributes the following characteristics to each area, from which the prospective purchasers could assess their choices of location.

Briardale Zone A :

Two storey townhouses / small sites 180-300m² / medium growth potential / main road / north facing / on bus route / adj. local shop / overlooking park - tot-lot / busy / elevated.

Briardale Zone B :

Two storey townhouses / small sites 180-300m² / medium growth potential / main road / north facing / on bus route / adj. local shop / overlooking park - tot-lot / busy / sheltered.

Briardale Zone C :

Two storey townhouses / small sites 180-300m² / medium growth potential / residential road / north facing / on bus route / adj. local shop / adj. day care centre / overlooking park - tot-lot / busy / sheltered.

Briardale Zone D :

Single storey detached / medium sites 300-600m² / high growth potential / residential road / north facing / on bus route / adj. local shop / adj. day care centre / overlooking park - tot-lot / busy / sheltered.

Briardale Zone E :

Two storey townhouses / small sites 180-300m² / medium growth potential / main road / north facing / on bus route / busy / elevated.

Briardale Zone F :

Single storey detached / Two storey townhouses / small sites 180-300m² / medium sites 300-600m² / medium growth potential / high growth potential / main road / cul de sac / north facing / on bus route / quiet / sheltered / variety.

Briardale Zone G :

Two storey townhouses / medium sites 300-600m² / high growth potential / residential road / adj. day care centre / overlooking park - tot-lot / quiet / sheltered.

Briardale Zone H :

Single storey detached / medium sites 300-600m² / medium growth potential / residential road / north facing / adj. day care centre / quiet / elevated.

Briardale Zone J :

Two storey townhouses / medium sites 300-600m² / high growth potential / residential road / adj. primary school / adj. day care centre / overlooking park - tot-lot / quiet / sheltered.

Briardale Zone K :

Single storey detached / medium sites 300-600m² / high growth potential / cul de sac / adj. primary school / adj. day care centre / quiet / sheltered.

Briardale Zone L :

Single storey detached / medium sites 300-600m² / high growth potential / residential road / adj. primary school / adj. day care centre / overlooking park - tot-lot / quiet / sheltered.

Unit types. Plates 5.5.P3/P4/P5

Plate 5.5.P3 illustrates the precedent set in the competition entry for Mitchells Plain housing where a regular unit module was developed into which several different living arrangements were made possible. In the single storey units, configurations ranged from two, three and four bedroom layouts

representing differing house size options and living arrangements. Similarly the double storey units provided different internal space utilisation, although the basic unit size remained constant.

Plates 5.5.P4 and 5.5.P5 show the variety of internal configurations possible in each unit type at Briardale, demonstrating a similar range to the Mitchell Plain houses. In the double storey units a maximum of 3 bedrooms is possible at first floor, with a fourth bedroom accommodated at the ground floor. Four basic detached single storey unit types were designed, based on the varying demands for overall size and space utilisation.

Extendable houses. Plates 5.5.P6

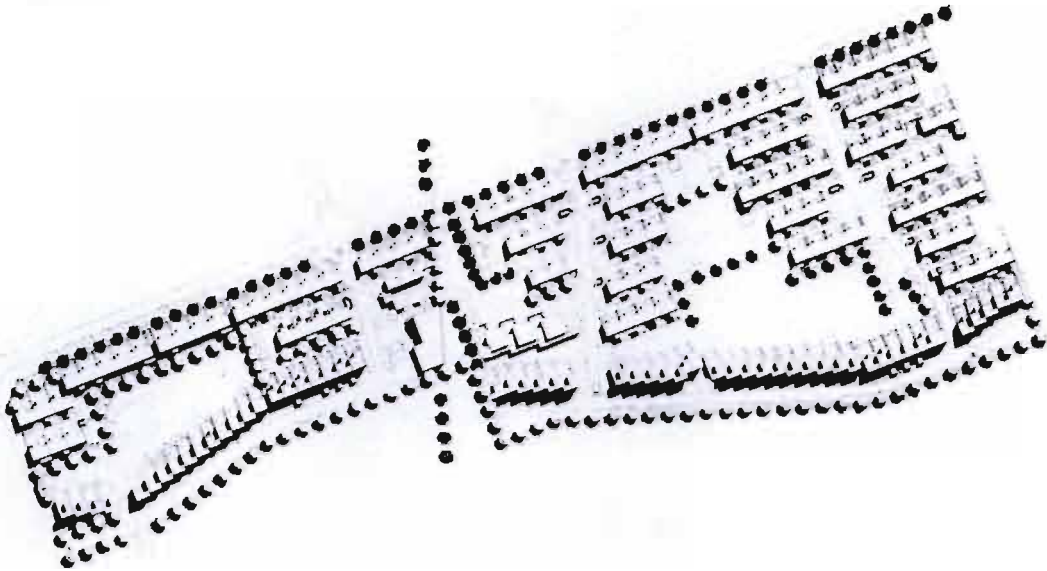
Plate 5.5.P6 illustrates the provision for expansion of the typical unit at Briardale. An important consideration with respect to the changing demands for space in a home, where the extended family is the norm. Incremental development and extension of the basic unit was made possible with the result that the aesthetic quality of the neighbourhood has evolved over time, where individual owners have not only been able to expand the dwelling but also to personalise their home.

Materials. Plates 5.5.P7

Building construction was similar to the Mitchells Plain Competition proposal, with fair face concrete blockwork for the main external walling and painted plaster panels on certain buildings offering colourful relief to the overall aesthetic appearance. Roofing was predominantly asbestos cement corrugated sheeting with concrete tiles to the single storey detached houses.

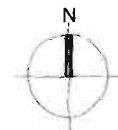
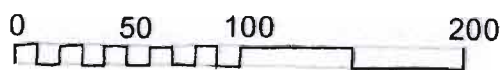
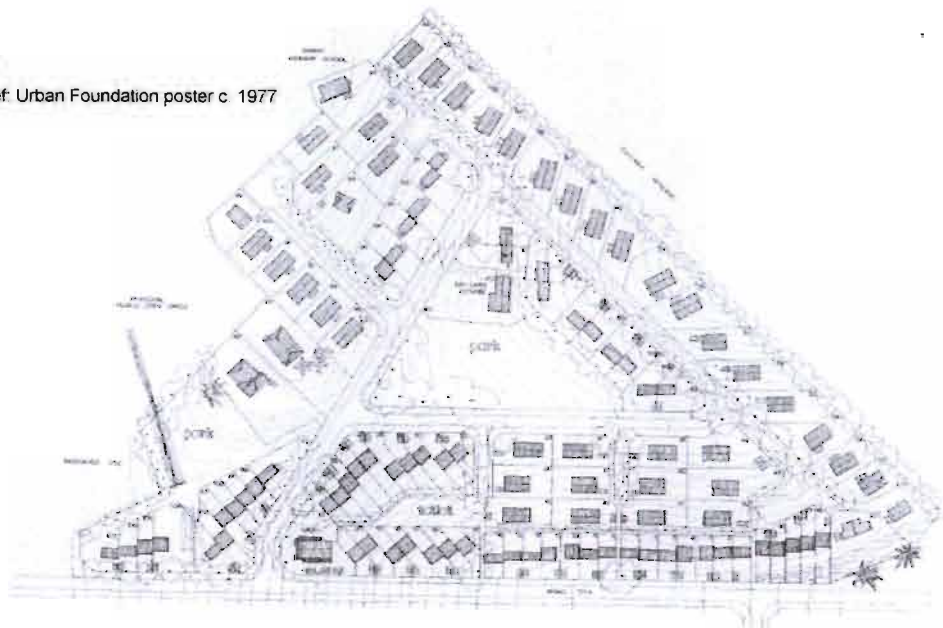
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Ref: BDG project file.

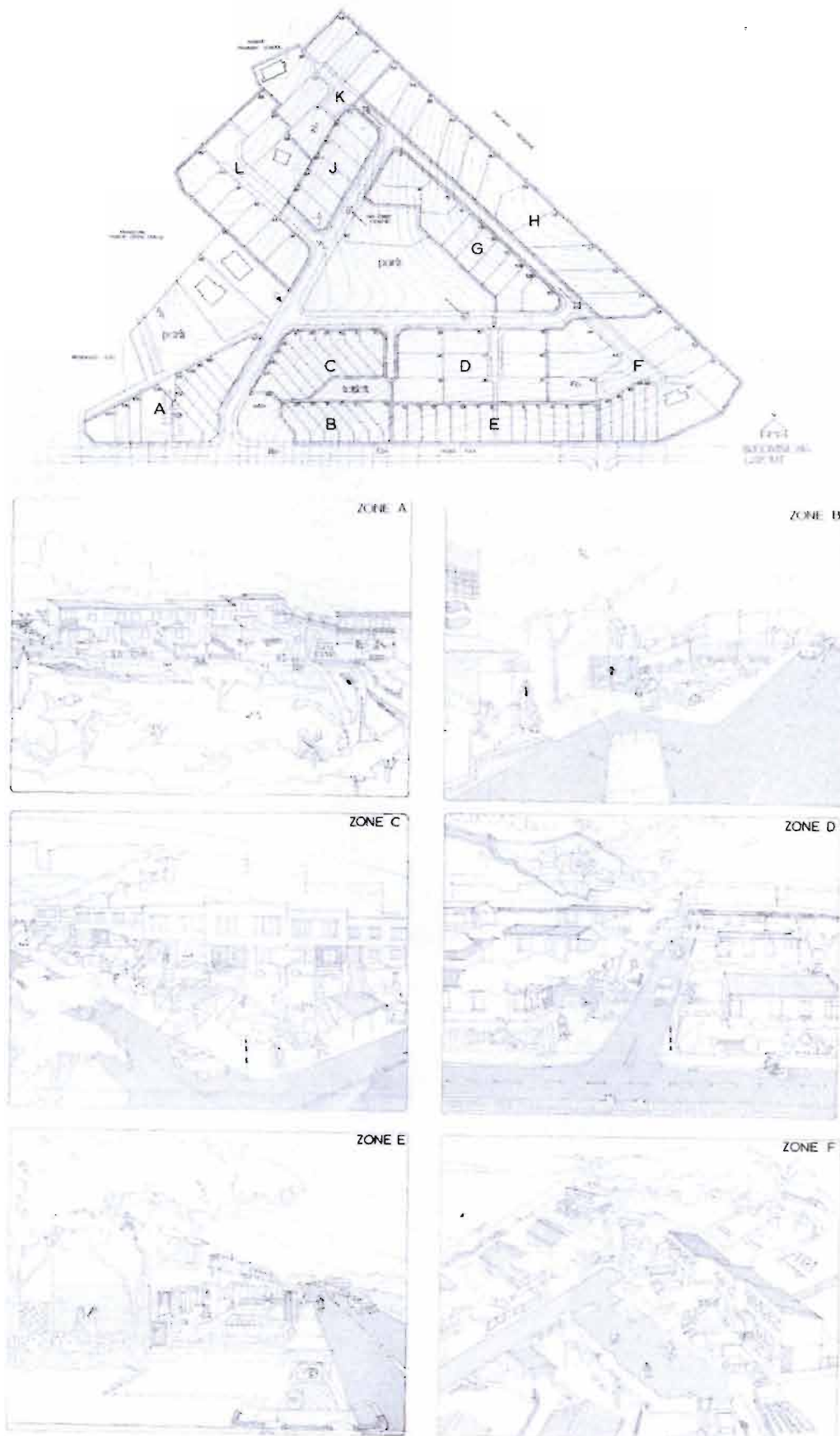


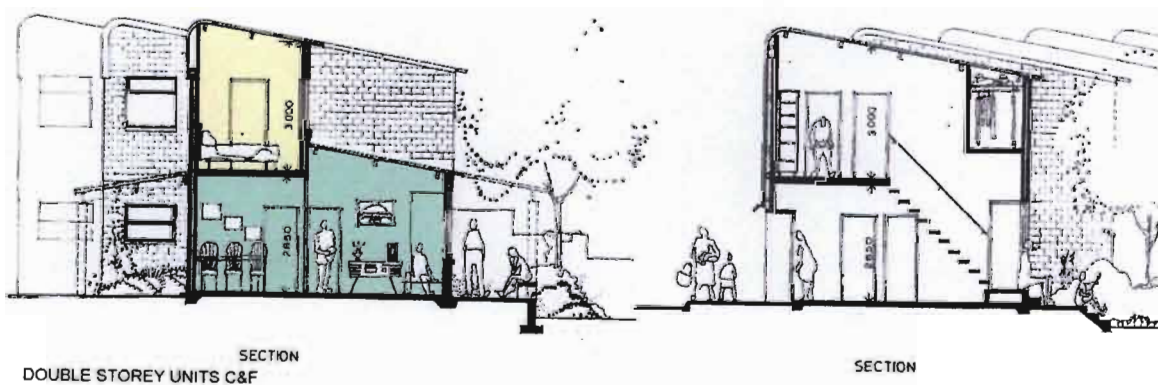
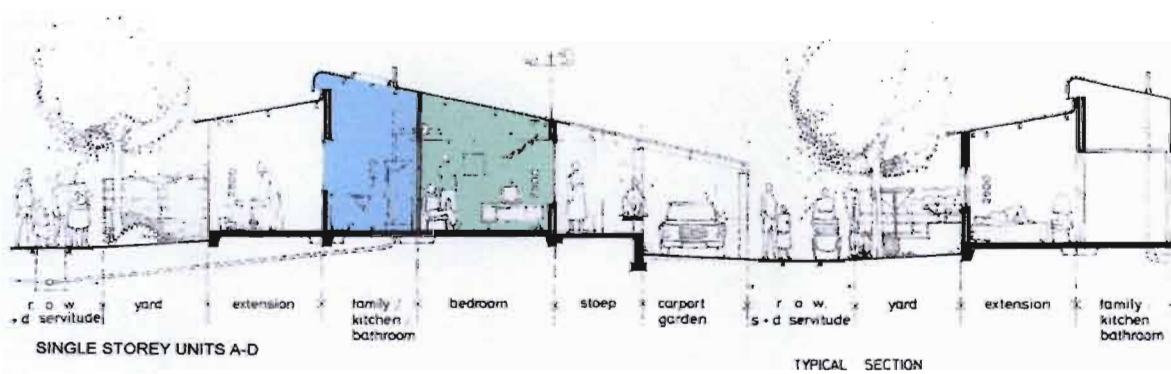
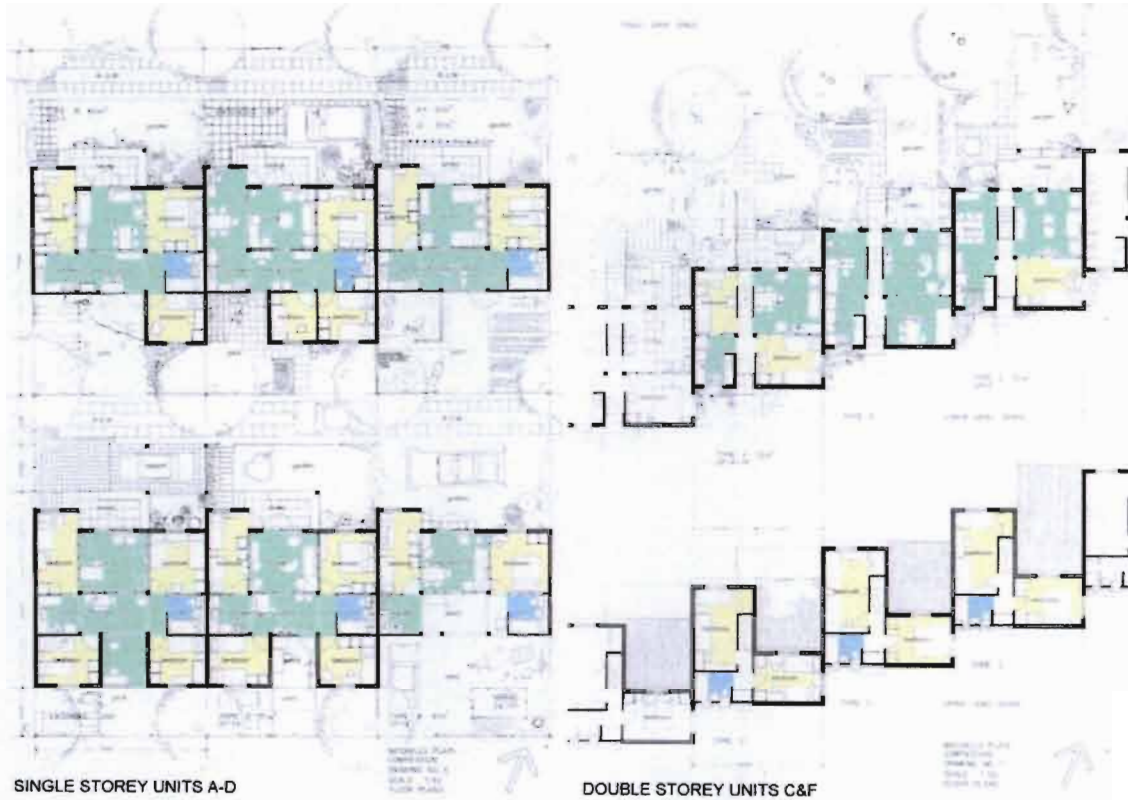
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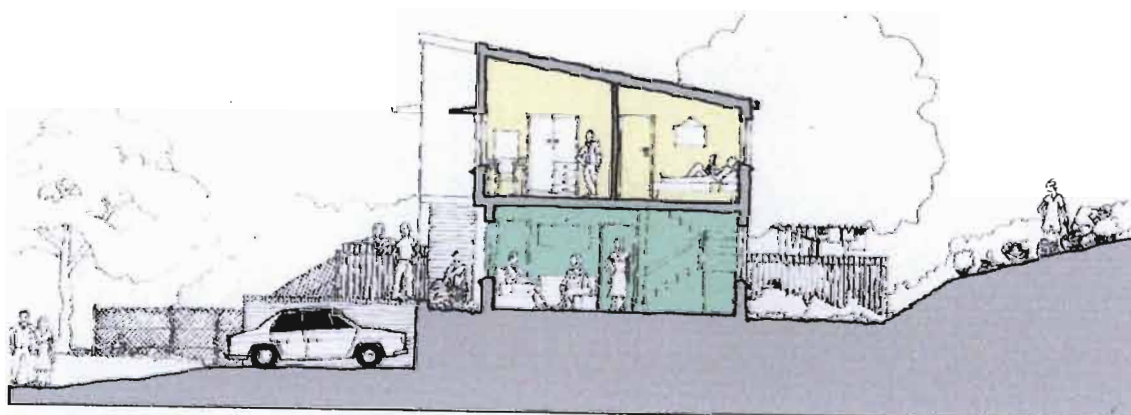
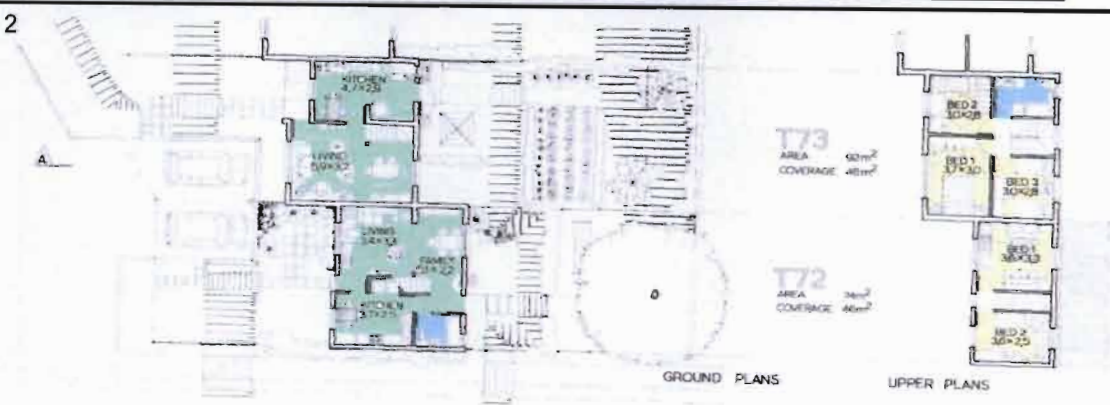
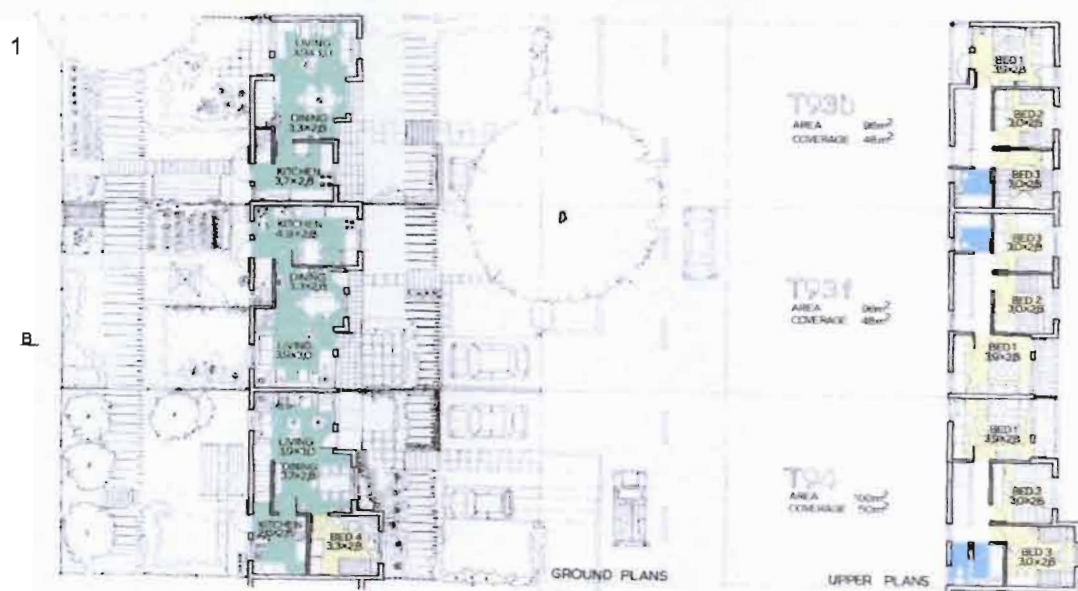
Ref: Urban Foundation poster c. 1977



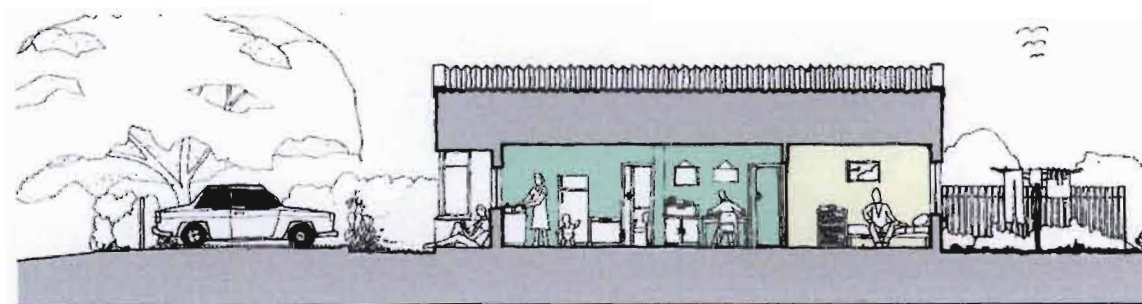
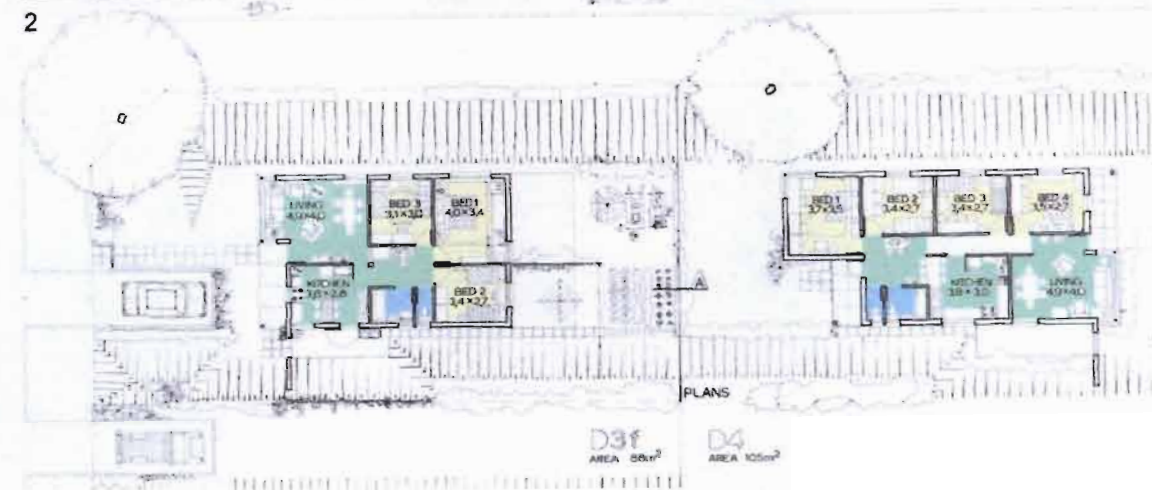
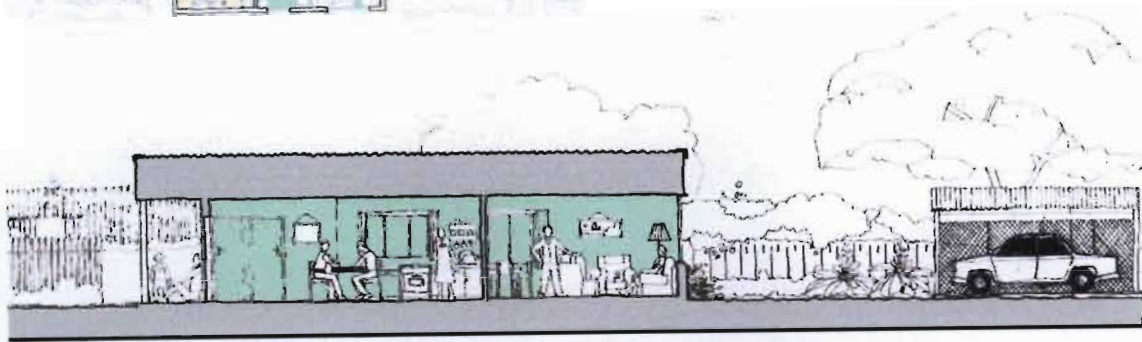
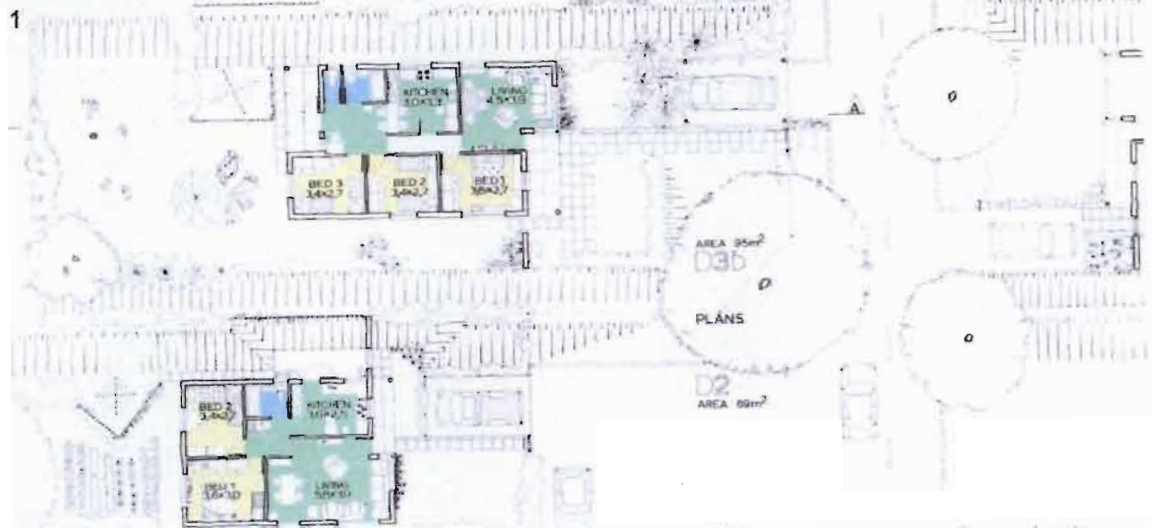
1 Mitchells Plain Competition (1977) 2 Briardale (1977)



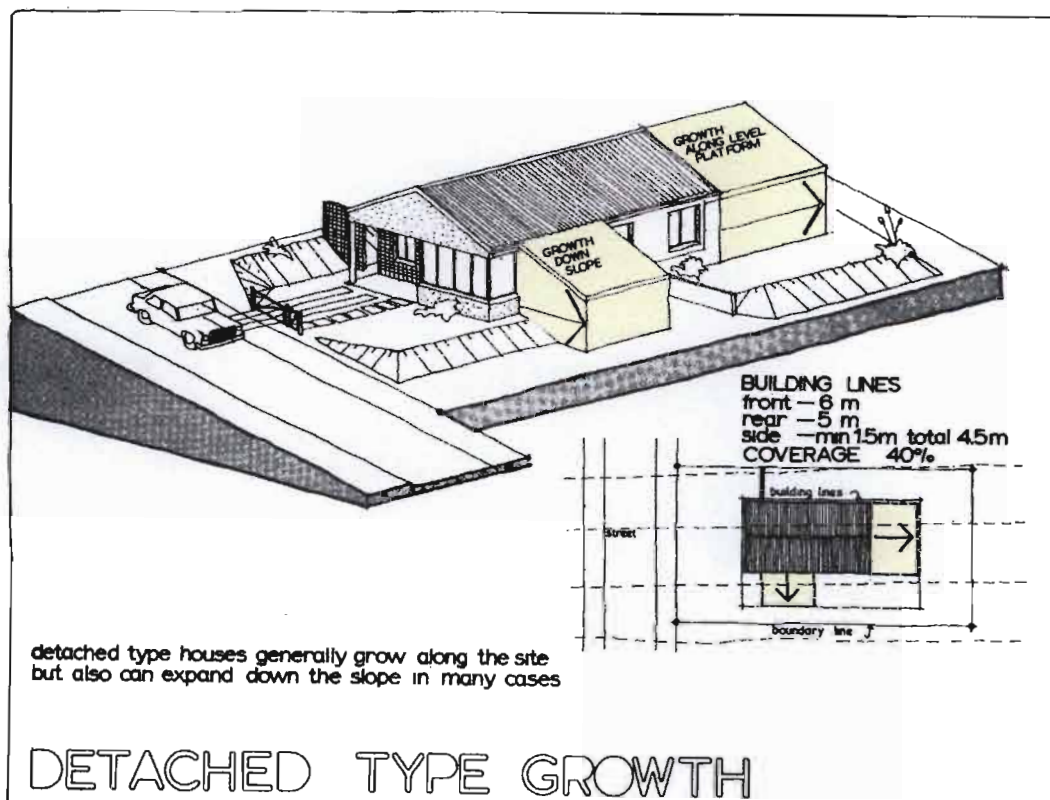
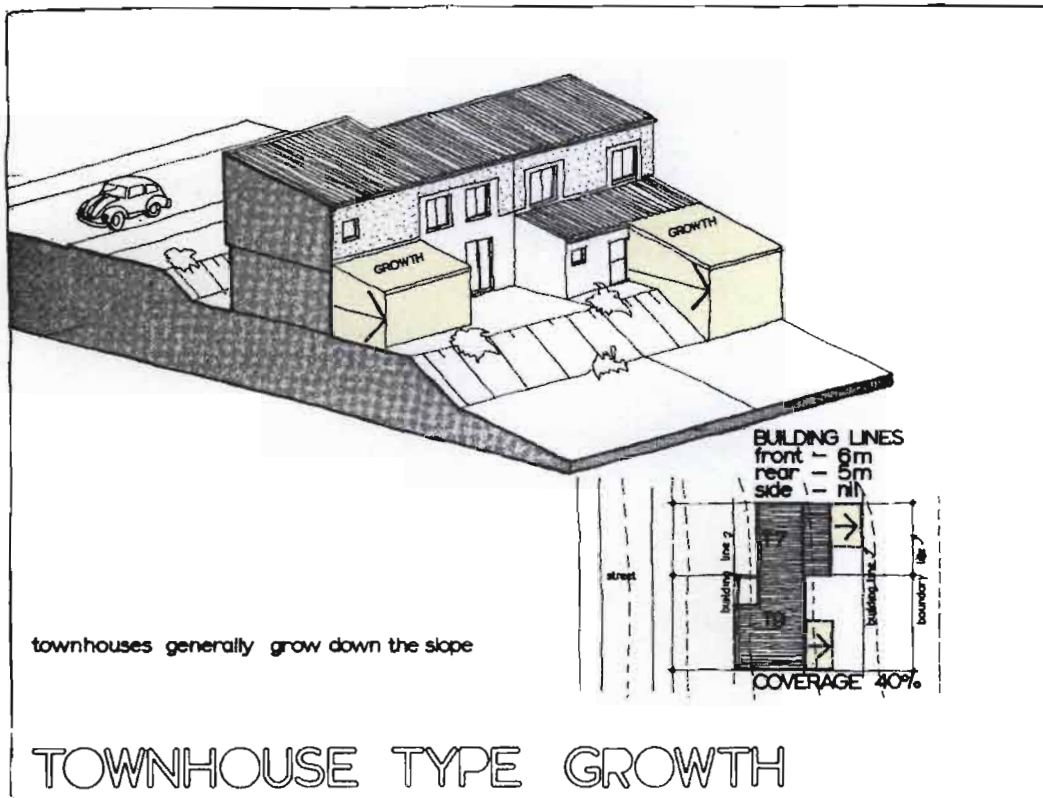


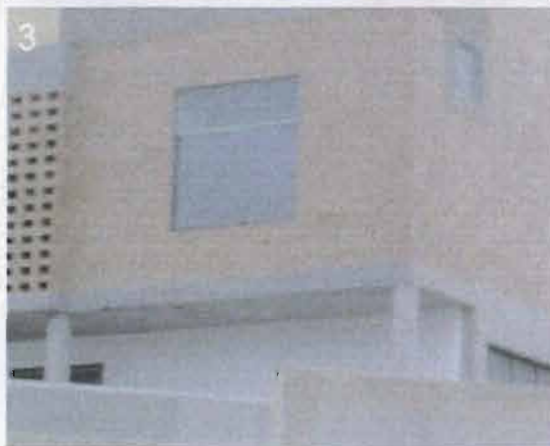


KEY Living space Bedrooms Bathroom



KEY Living space Bedrooms Bathroom





5.6 Architectural Elements - Plates 5.6.P1/P2/P3/P4

5.6.1 Doors

Plate 5.6.P1 is a composition which reveals an interest in the door as a statement of entrance, space divider or component of external walling.

Entrances are often simple doors set into an articulated approach as at House Mikula (1965), House Marian (1965), House Bestall (1972) and House Burgess (1973). Sliding screens are a reoccurring theme as at House Mikula (1965), House I.M. Paruk (1966) and House Dawood Timol (1971). Large pivoting doors are also a regular feature as illustrated at House D'Avicé (1970), House Edgar (1971), House Jordaan (1973), Sunningdale Visitors Centre (1973) and Farmhouse Cooper (1975).

The over-riding distinctive characteristic of the doors is the baked enamel finish which is a feature of the graphics designed by Colin Savage at House D'Avicé (1970) and House Dawood Timol (1971) and the applied geometric patterns at House Jordaan (1973), House T. Lazarus (1975) and Sunningdale Visitors Centre (1973).

5.6.2 Stairs

Plate 5.6.P2 illustrates how the open stair tread was a common detail for internal staircases and how quarry tiling was preferred where solid steps were detailed.

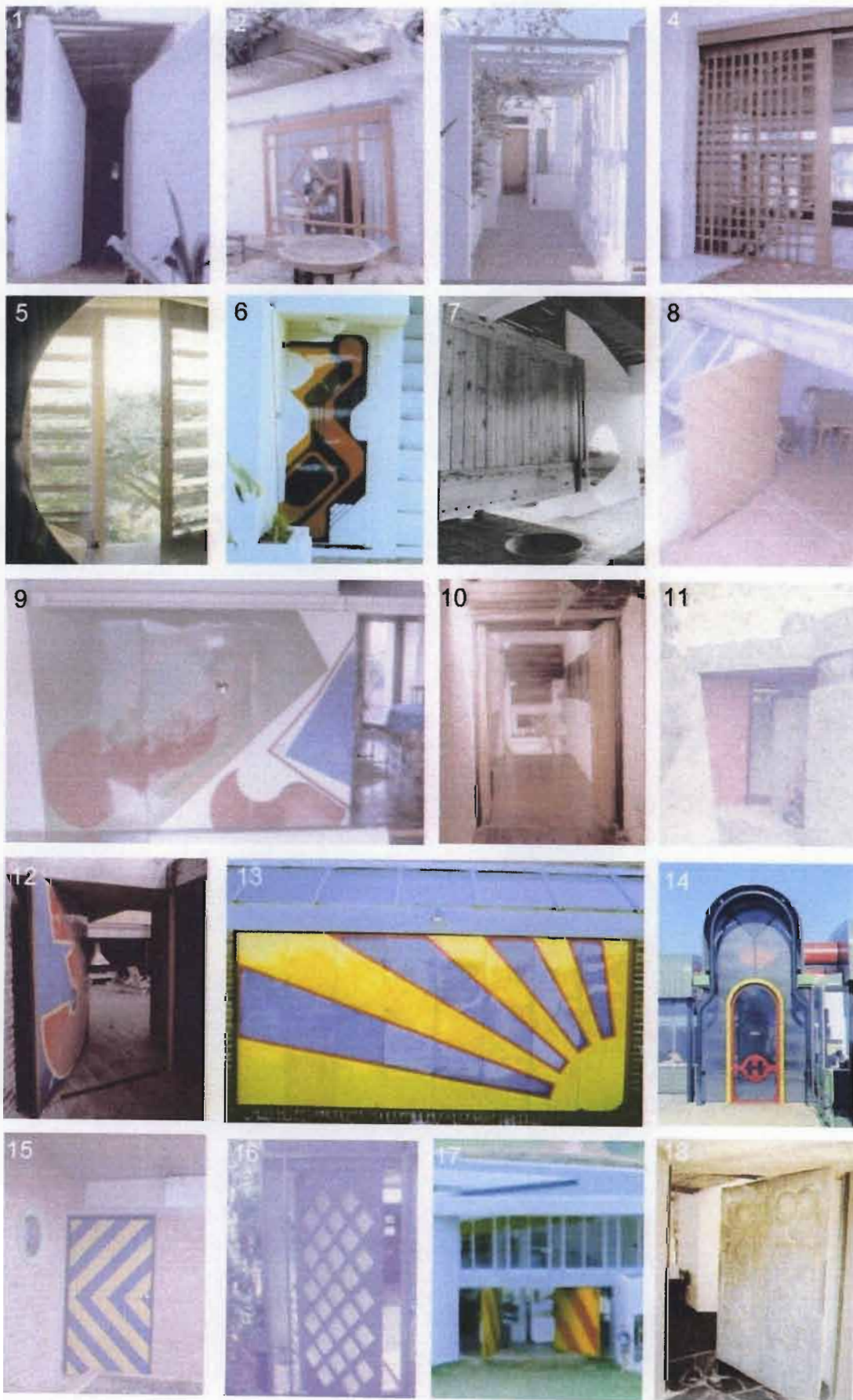
The offset treads that Mikula refers to as their "Greek staircase" (Mikula *SA Garden & Home* 1971: p21) was used on several occasions and is illustrated here at House Mikula (1965), House D'Avicé (1970) and House Dawood Timol (1971).

5.6.3 Patent glazing

Plate 5.6.P3 illustrates the regularity with which patent glazing was used throughout BDG's work, used in earlier residential work as an element to manipulate natural light, and to the later commercial and industrial projects where it was used as a cladding system.

5.6.4 Corner windows

Plate 5.6.P4 illustrates the preference in many residential projects for the detailing of the corner window.



1 House Mikula (1965)
5 House D'Avico (1970)
9 House Burgess (1973)

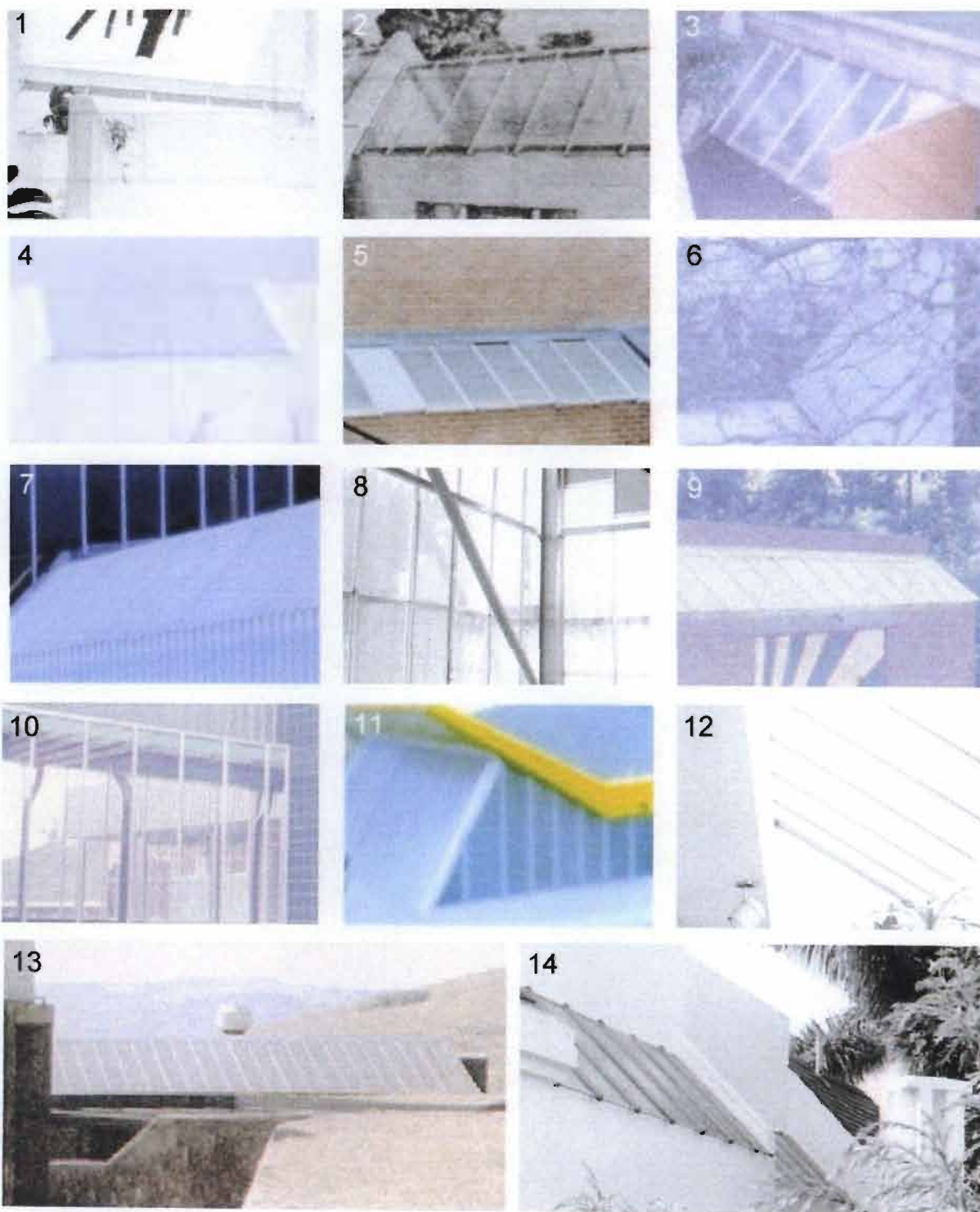
2 House Mikula (1965)
6 House Edgar (1971)
10 House Jordaan (1973)

3 House I.M.Paruk (1966)
7 House Timol (1971)
11 House Jordaan (1973)

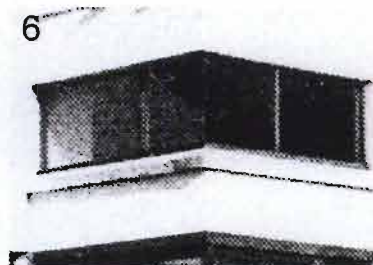
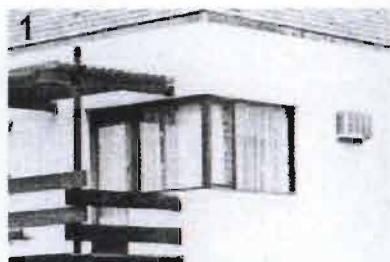
4 House Kearney (1969)
8 House Bestall (1972)
12 Hulefta R&D I sha (1973)



1 House Mikula (1965)	2 House Marian (1965)	3 House Y.M. Paruk (1966)	4 House Azizollahof (1967)
5 House J.N. Reddy (1968)	6 House A.E. Paruk (1968)	7 House Harrington (1968)	8 House D'Avica (1970)
9 House D'Avica (1970)	10 House Timol (1971)	11 House Bestall (1972)	12 Hulett's R&D Labs (1973)



- | | | | |
|----------------------------------------|-----------------------------|---------------------------------------|----------------------------|
| 1 House Dr.Chetty (1969) | 2 House Sutherland (1970) | 3 House Edgar (1971) | 4 House Bestall (1972) |
| 5 Ladysmith Presbyterian Church (1972) | 6 House Wilson (1973) | 7 Richards & Barlow (1973) | 8 Julia Road Office (1973) |
| 9 House Jordaan (1973) | 10 Huletta R&D Labs. (1973) | 11 Sunningdale Visitors Centre (1975) | |
| 12 House Cooper (1974) | 13 Farmhouse Cooper (1977) | 14 Pendennis Gardens (1972) | |



1 House Y.M. Paruk (1966)
 5 House Ramkisson (1969)
 9 Flats & Shops (1971)

2 House Dr. Goga (1967)
 6 House Suttie (1969)
 10 Maisonette Newman (1972)

3 House Naidoo (1967)
 7 House Dr. Chetty (1969)
 11 Ladysmith Presbyterian Church (1972)

4 House J.N. Reddy (1968)
 8 House Dr. Timol (1970)
 12 House Moola (1973)

CHAPTER 6: PHILOSOPHIES

6.1 Ethos

As illustrated in Chapter 5, BDG from the outset was established as a community of architects who were committed to testing the realms and boundaries of architecture within a collaborative and supportive environment.

Wilson explains;

"Apart from the quality of the work produced, one of the great attractions of BDG was the conscious attempt to practice architecture differently from the prevailing norm. It was intentionally set up to be easy to expand or shrink the partnership as circumstances changed and the name chosen and even the design of the letterhead reflected this. It was egalitarian and very informal, the hierarchical structure of most architectural offices was anathema, and the consequence was that recent graduates or even drop-out architectural students were given enormous opportunities to influence the work in the office." (Wilson 2001-personal communication).

"In retrospect BDG was the closest thing one could get to a Studio Atelier " (Jordaan 2001- personal communication). Uniquely, within the environment of a collaborative workshop, BDG gave a platform to all who were willing to participate.

"Although the partners had a sense of control they handed down a lot of responsibility and decision making. It was a co-operative spirit with the sharing of resources. Everyone worked very hard, seven days a week, each project was to be special." (Noero 2001-personal communication).



Fig 6.1: Tony Wilson in discussion,
Photo: P. Mikula



Fig 6.2: Denis Jordaan and Kevin MacGarry in conference.
Photo: D. Jordaan.



Fig 6.3: Jo Noero worked for BDG in 1975. Has subsequently established the practice Noero Wolf, and is currently Professor of Architecture at the University of Cape Town.
Photo: School of Architecture records.

Edgar continues:

"The dynamic of the office was very much a 'federal' organisation – partners who bought in a job would be responsible for it, but with input from others within the practice. The philosophy was architecture with a capital A, and anyone with the same focus was welcome to participate. Because of the amount of work and energy put into projects, financial return was often minimal. Students and full time staff were prepared to work for the love of it, rather than high salaries." (Edgar 2001-personal communication).



Fig 6.4: John Edgar.
Photo: P. Mikula

Savage elaborates:

"The way the office ran its projects was very interesting: irrespective of where you sat, you were sized up to whether you could take the responsibility. Time was of little object, if you had to work over the weekend you had to work, irrespective of children's birthdays. Wives were getting a bit anxious, and that was not part of the deal. It was part of an ethos that said we are committed to this place, almost like a religious sort of thing in a way (hopefully not). It virtually controlled you, because of its momentum, energy and personalities." (Savage 2001-personal communication).



Fig 6.5: Colin Savage.
Photo: P. Mikula

Underlying an uncompromising attitude to their architecture, BDG were paradoxically ambivalent to self-appraisal or peer accolade. "There is a modest natural reticence about Paul Mikula and he doesn't discuss his work." (Noero 2001-personal communication).

Wilson continues:

"Within the office there was quite a strong anti-intellectualism, originating with Paul. To some extent this was a consequence of Paul's extraordinary and entirely intuitive talent. His strong anarchistic streak meant that he was a principled egalitarian and because this resulted in the necessity to give equal weight to all opinions in the office, it became necessary to adopt a flippant attitude to the work, in order to avoid the divisive consequences of critical judgement. The issue of 'Plan' magazine devoted to BDG's work had something of this ambience about it." (Wilson 2001- personal communication)



Fig 6.6: Paul Mikula
Photo: P. Mikula

Plan 74, edition 74.3.74, is the only comprehensive account of BDG's work to date. Danie Theron had been appointed as Editor of the national publication in 1973, and with the assistance of Wilson, Kearney and Lee (all BDG); with Cornford, Claude and Harber, had considerably raised the quality and content of the journal whilst simultaneously fostering attention to current architecture in Natal.

This particular edition was compiled in BDG's office and comprises photographs and diagrams of buildings that are arranged on the pages, somewhat in the form of a scrapbook collage. Slogans and anecdotal passages of texts are arranged, sometimes sideways, in-between the illustrations and serves as a distraction belying the integrity of the built work.

Stafford recalls:

"I remember when *Plan* magazine was put together, it was like a big joke and a real reproof to the Institute and the corporate profession. It's a completely pretentious thing yet obviously at the same time showing what BDG could do. Also you had the Archigram³⁶ guys doing this stuff and so there was a whole other level underneath it which was really hip." (Stafford 2002 – personal communication)

Plan magazine had superseded *The South African Architectural Record* in 1969 as the official Journal of the Institute of South African Architects and therefore the opportunity to have a swipe at the establishment was not missed.

In 'Perspecta', the editorial column of *Plan*, Theron discusses the local phenomena of architects setting up practice at a young age and producing notable work which would normally be associated with much older practitioners. "Especially since the 1960s quite a few extensive practices have been established by young architects in South Africa. It is an undeniable fact that the majority that made a tangible contribution to architecture during the last decade (1964-74) were built by young



Fig 6.7: Cover of *Plan* special feature on BDG. Collage of BDG personalities set into upward looking photo of House Schmidt bathroom.
Ref: *Plan* 74.3: Cover.

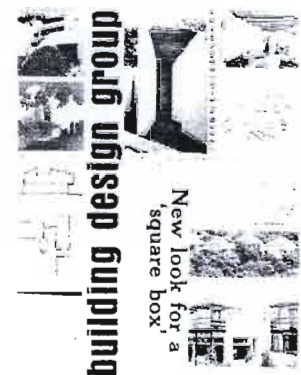


Fig 6.8: Inside page of *Plan* special feature on BDG.
Ref: *Plan* 74.3: p4.

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Archigram: First published in 1961, "this broadsheet amounted to an architectural telegram (hence the name) of all the current issues jammed together in one information-studded image." (Jenks- 1973: p282.)

See also Chapter 1.2

architects. BDG without doubt fell into this category and despite their youth the firm has designed a large number and variety of buildings that evidence a highly personal view and commitment." (Theron 1974: p3).

The issue of *Plan* magazine enhanced the reputation of BDG to a national status as a cutting edge practice and the office became a sought-after destination for students. "Everyone wanted to work for BDG, a lot of guys didn't even try because it seemed to be almost impossible to get in." (Stafford 2002 – personal communication).

"In *Plan 74* I was intrigued by the work, it was different to any work at the time. The drawings looked very interesting". (Noero 2001-personal communication).

The quality of drawing was a very important part of the way BDG developed the designs and communicated their ideas. Drawings would be hand-crafted and generally reductive, whereby plan and section would be the drawings exclusively used to describe a building as was the case of *Plan 74*. Elevations were omitted in preference for photographs of the completed building or design model. Photographic representation of completed built work being preferred to renderings, implying that in BDG's view, the priority of the architect was to build and not merely speculate or assimilate through drawing. The extent of BDG's built work was clearly accounted for in the particular edition of *Plan 74*.

Nevertheless, the quality of drawings and models were particularly important to BDG; the intrinsic qualities of a design needed to be portrayed on paper before being realised in built form.

"There was a very specific BDG drawing ethic, freehand sketches, the House Schmidt plan was like an icon in the office". (Stafford 2002- personal communication).

Fig 6.9: Bruce Stafford in the studio at Julia Road.
Photo: P. Mikula



"Everything was done by hand, so you touched every line." (MacGarry 2000- personal communication)

Fig 6.10: House Schmidt (1972).
Plan of Bathroom extensions.
Ref: *Plan 74.3*:p12.



6.2 Approach to Architecture

There is little doubt that each commission which was received into the office, was viewed as an opportunity to develop the architectural scenarios within the practice. BDG were a group of young architects, eager to experiment in design and conscious of the mounting collective expectation to be innovative and excel through their built work.

An architectural focus did develop over time that related to the evolving profile of commissions. The early years were mostly occupied with single family dwellings for private clients, and were mostly exercises in form and space making; these attributes were later applied to in a number of town house developments.

"The early work of BDG was about buildings responding to their site in a sculptural way, in the way that you would take the site as your sort of piece of sculpture and you would then carve the thing out of the site, enhance the vegetation with views. Paul always had this tremendous three dimensionality, almost in a sculptural kind of sense." (Kearney 2001-personal communication).

"Architecture in the '60s had very strong sculptural leanings, strong forms, a separation of solid and void, the flow of space between inside and outside space, a desire to experiment with forms and space, and the courage to throw aside convention and "go for it". (Edgar 2001 – personal communication).

"There was a strong belief at BDG in a 'regional' architecture, based on functional conceptualisation and innovation. There was little obvious reference to international trends or architecture. Buildings evolved in response to site conditions, client brief and strong concepts, rather than fashionable trends. BDG's work was varied but recognisable.' (Wilkinson 2002 – personal communication).

A common thread throughout the projects was a pre-occupation with technology and the examination and re-interpretation of building systems; this focus on the detailing culminated in a number of commercial and industrial projects.

"BDG produced work of a refreshing new quality, using simple and inexpensive materials to realise their designs, which always seemed to me to flow from a careful and detailed understanding of the clients requirements. Accompanying this approach was the willingness to test the building envelope, particularly the one containing the city by-laws. Paul's (Mikula) house on Ridge Road with a roof whose description could not be found in the regulations was a case in point. Enjoyment seemed to be at the top of their list in terms of what they wanted out of their work, but at no stage did they sacrifice the very serious matter of making architecture." (Smith 2001- personal communication).

"It is not unreasonable to say that we felt quite special - I now know that others saw us as arrogant. On reflection I think we had every right to be so; we certainly asked more questions of others and ourselves, than most." (Jordaan 2001- personal communication).

The backbone of the intellectual activity in the office was the establishment of BDG's own architectural library, which would have been one of the better collections outside of the university and one that eventually required the services of a librarian, Jill Lane, to maintain. Initially it was an amalgamation of private collections that included original copies of the *Archigram* magazines, but was subsequently augmented with new acquisitions and journal subscriptions which included *The Architectural Review* and *Architects Journal*. The library was the source of reference and a stimulation for debate, and would have been a fertile resource.



Fig 6.11: Lance Smith, in partnership with Luis Ferreira da Silva rented working space from BDG in the Julia Road office in 1977 (NPIA Newsletter-3 1977, p23).

Photo Ref: *UIA International Architect* Issue 8. 1985. Cover.

6.3 Influences

There are interesting dichotomies with respect to influences, which although not patent or readily acknowledged, are evident in the work, and are suggestive of different dynamics within the practice. Whereas all members in the group had been subjected to the local influences of the talented teachers and lecturers at the Natal School of Architecture, there were contrasting strains in the international scene of which the intellectually based formalism of British Brutalism³⁷ was a dominant factor. This however was often counterpoised by the strong intuitive sculptural qualities of the German Expressionism of Hans Scharoun and others.

"There was an influence through Hallen and later Theron who were powerful local influences, and one couldn't escape the influence of Kahn and Corbusier, the platonic forms and interpenetration of space. Ronald Lewcock was a common denominator of all four of us however Biermann was more an influence on Bryan Lee. There were the white walls of Hallen, Fox and Fagan and the sensible use of materials in the work of Norman Eaton. Internationally there was the Brutalism and there was the sense that if you wanted to re-invent architecture you had to go back to the bare bones approach and say; Why do we need this? What do we do here? How do we put things together? How do we make things in such a way that would be a reflection of a new world? Probably quite strongly influenced by the British Brutalism of Stirling and Gowan as well as The Smithsons.

Bryan and I (Kearney) were influenced mainly by the British scene. Paul however did not gain as much influence from journals and magazines; his was from travel, the Mediterranean and other parts of the world." (Kearney 2000 – personal communication).

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Influence of British Brutalism already noted in Chapter 2.2 as an influence on Lee & Kearney's student projects.

Through the subscriptions of *Architectural Review* & *Architects Journal*, BDG were kept in constant touch with architectural developments in the UK.



Fig 6.12: Stirling & Gowan. Leicester University Engineering Building 1959-63. One of the icons of British Brutalism. Ref: *AD Profile* – James Stirling 1982: p29.



Fig 6.13: Alison & Peter Smithson. Hunstanton Secondary School 1949-54. Established 'New Brutalism' in the UK. Ref. R.Banham 'The New Brutalism' 1966: p33.

In contrast, it appears that Mikula's approach was more emotive: "Although Herbert Baker and later the Internationalists were good architects, they weren't really addressing anything. Things changed a bit with the likes of Norman Eaton, because they were also good architects but they actually loved their place, they loved Africa. Gawie Fagan is a little bit like that and in a very direct way starts bringing in little bits of Ndebele things³⁸ which made wonderful buildings. There were basically two groups, those who saw their salvation in the United States in Kahn, and then there were the home grown boys who knew that there was another mystery about this whole thing. Barrie Biermann was also one of those. Willie Meyer, Danie Theron and all that crowd were just too clever for themselves and were at the stage where the intellect overrides the heart." (Mikula 2001- personal communication)

Clearly Mikula was suspicious of the International trends which suggested that architecture was universal and could be transplanted to a location without particular reference to the *genus loci*. To Mikula, architecture resonated from a spirit that was fed by the environment and culture of a place and was channelled through the intuitive skills of a designer.

Mikula's influences were therefore more subliminal than the others at BDG, his regular travels to Europe being a major source of inspiration and in particular his family heritage brought him in touch with Germanic architecture.

"Paul had books on Hans Scharoun and also liked the drawings of Friedrich Hundertwasser, who was like the ultimate organic painter and architect". (Stafford – personal communication)

38

"The 1950s trend of incorporating african art into their architecture had been introduced by architects such as Meiring & Partners and Helmut Stauch."

Peters 2003 – personal communication

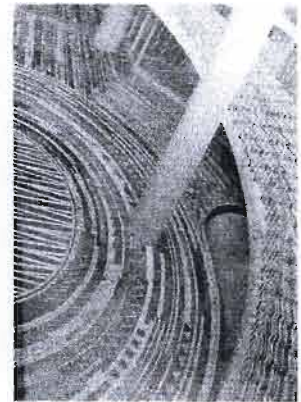


Fig 6.14: Norman Eaton – Polley's Arcade, Pretoria (1953) "Paving drew inspiration from African motifs and for which was used the off-cuts from a local stonemasons yard". (Fisher 1998)

Ref : *Architecture of the Transvaal* 1998: p122.

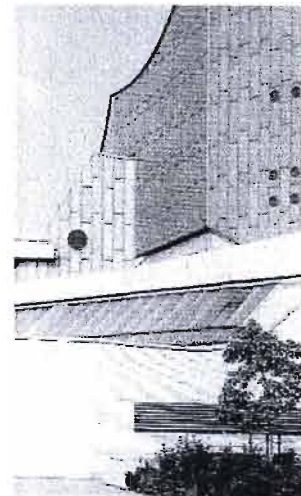


Fig 6.15: Hans Scharoun – Berlin Philharmonie (1956-63). Note the inclined glazing reminiscent of BDG's use of patent glazing.

Ref: Blundell-Jones – *Hans Scharoun* 1995: p189.

The work of Guedes would have informed many discussions. Lee's ties with Lorenzo Marques would have put him within constant proximity to the Mozambican master. The formal clarity, exuberant expressionism and integration of the arts would have struck a chord with the thinking at BDG.

6.4 Craft

Fundamental to the crafting of BDG's buildings was the attention to the textures on the surfaces defining space. In many instances the fine detail and integration of art pieces was implemented in collaboration with specialists as defined below:

Ceramics

Paul Mikula's appreciation of the arts was undoubtedly enhanced through his marriage to Maggie Suttie, a ceramic artist who's work was recognized for its African sensibility. The Mikulas were highly appreciative of traditional African craft, and were active collectors of beadwork and other Zulu artifacts. The incorporation of mosaic and hand made tiles into floor and wall surfaces at their first home at 207A Ridge Road was an immediate demonstration of the synthesis of architecture and art in building.

Graphics

Furthermore experiments in the use of applied graphics on walls was also pursued at House Mikula, 207A Ridge Road, which were designed and implemented by Colin Savage, while a student at University.

"During 2nd year in 1968 we were given a competition to do for a mural in the School of Architecture in Centenary Building which was won by Magda Zakrzewski, but part of the winning profile of the project was that you had to do it, you had to physically paint it. Magda was not into



Fig 6.16: Pancho Guedes. Prometheus apartment building in Lourenço Marques, photographed by Lee, the quality of the framing of the picture reveals an appreciation of the detail and form.
Photo: B. Lee

Fig 6.17: Maggie Mikula – ceramic tiles.
Photo: P. Mikula

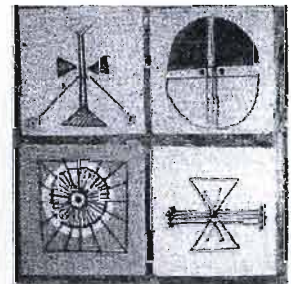


Fig 6.18: House Mikula (1965). Painted mural on staircase walls by Colin Savage.
Photo: P. Mikula



doing the painting so it was negotiated that I would do it. I was keen to do it and wanted to get my stuff onto the wall. There were guys like Denis Jordaan who had done a Jimi Hendrix mural on one side of the stair in Centenary Building and I was doing one on the other. While I was doing the painting Paul Mikula came past and had a look at it and said 'that's quite interesting, I've just built my home down the road, do you want to come and talk to me about doing a thing on my staircase?' That was the engagement. My involvement in BDG was through Paul. It was the mural on the staircase that went down to the studio." (Savage 2001 – personal communication).

The application of graphical elements continued at House D'avice (1970) in Reservoir Hills where Savage was this time asked to design various external screens.

"The feeling was that we wanted a more permanent medium than just paint on board, so we looked at baked enamel. Jean Powell a local artist, had introduced me to the whole process through Mr. Saunders, the owner of the factory Enamel Products, whose main line of business was road and railway signage. They had an engineering works on one side that used to make basic simple angle frames for display, and in this factory they would make up some of the components we would ask them to do. The panels had edges on them which needed to be bolted to the framework and so the positions of holes and fixings needed to be co-ordinated. The panels would be fired and then assembled, that is how it all happened." (Savage 2001 – personal communication).

At House D'avice the enamel elements started with the post box and then other panels were added including the front door and wall screens. Visually these were tied together with painted wall motifs.

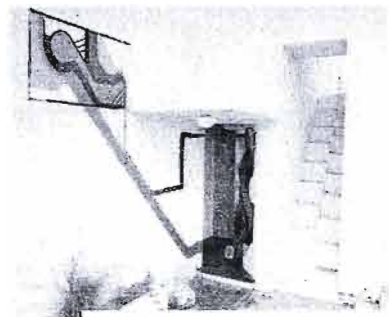


Fig 6.19 : House D'avice (1970). Enamel wall and front door panel linked by painted graphic, by Colin Savage.

Fig 6.20: House D'avice (1970). Enamel post box by Colin Savage.

Photo ref: Daily News property supplement – undated.



The following commission was at a house in Kenville for Dr. Timol (1970) where Savage was asked to make an angled cover to an exposed hot water geyser.

Up to that point the panels were quite low key and experimental and then Savage was asked to design a sliding door (see 5.6.P1) between the living and dining spaces to the adjacent house in Kenville for Mr. Dawood Timol (1971).

"The sliding screen really had to start to take on a dynamic role in the living space and not just an afterthought to cover up a geyser. That's where I suddenly realised that we were into major stuff, four metres of graphics that really had to perform a principal architectural function as well as a graphic." (Savage 2001- personal communication)

The culminating project during this period of enamel panels was for a three storey high external cover to screen the plumbing duct to an office building at Antelope Place (1971) in Overport. The duct was the strong vertical element that bisected the prominent elevation of the building. This presented the designers with an intriguing challenge.

"We were playing with some ideas, looking at all sorts of graphics to break up the idea. The panels were not done as abstract objects, they needed to make some conceptual link between what the building was doing. Then Paul suggested the Zip! " (Savage 2001 – personal communication)

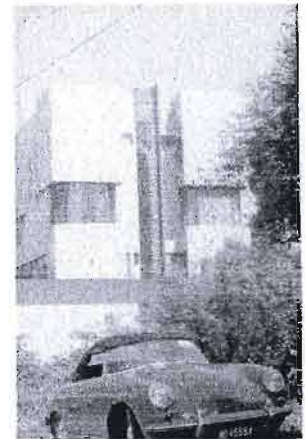


Fig 6.21: Flats at Antelope Place (1970). Duct screen by Colin Savage. Photo: P. Mikula

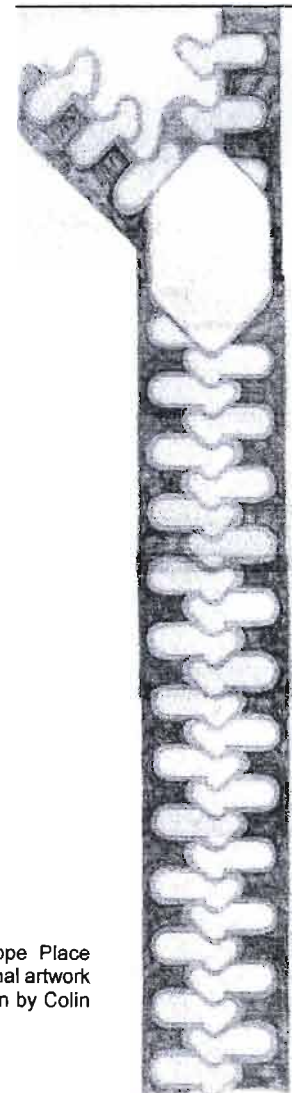


Fig 6.22: Flats at Antelope Place (1970). Illustration of original artwork for the enamel duct screen by Colin Savage.

Furniture

Mikula and Lee were often asked to design the furniture to compliment the architecture of their early houses, the clients relying on their architects to deliver a consistent interior. In many cases Russell Walford, a local cabinet-maker, was engaged to manufacture purpose made fittings. Walford's craftsmanship was appreciated for its elegance and precise detailing and his furniture added tactility to the bold interior forms.



Fig 6.25: House I.M. Paruk (1966). Furniture by Russell Walford.
Photo: P. Mikula

6.5 Technology

"There was a definite interest in technology, good form making through design." (Noero 2001 – personal communication).

A consistent theme in the work of BDG was the attention to the way buildings are assembled and the testing of technological boundaries. There was widespread interest in the mechanisation of the building industry, a fascination with prefabrication as well as the re-examination of the role of building systems and components.

Edgar explains:

"The '60s were times of overthrowing accepted norms, and this carried into our architecture. Gravity was being 'escaped' in space exploration, and this was reflected in large hovering masses. In the striving to achieve new exciting forms and expressions, traditional architectural elements were often thrown out plinth, cornice, window frame etc.' (Edgar 2001 – personal communication).

Fig 6.26: House Edgar (1973). Large hovering roof mass.
Photo: P. Mikula



Experimentation in the detailing of buildings was a part of the design and budgetary challenge in most of the buildings. From the intricate

detailing of common brickwork in early houses to the inventiveness of prefabricated systems in the later work at the Hulett's Research and Development Laboratories (1973), BDG creatively engaged with the making of buildings.

The use of materials 'as found' was applied and even drew a letter of complaint from the brick manufacturers, *Coronation*, who objected to the use of their common plastering bricks in face brick applications. To BDG the 'honest' appearance of the unfinished brick was aesthetically true to the design as well as having an economic benefit³⁹.

39

The use of materials 'as found' was the terminology of Brutalist architects to describe the use of industrial objects and 'raw' materials (off-shutter concrete, fairface common brickwork etc.). Ref: Jenks 1985: p259.

Many of the technological proposals would often readdress the role of conventional components and detailing. Risks were taken in the development of certain ideas; compromise was regarded with disdain and innovation was encouraged.

One such detail was to place layers of glass at the top of a wall before casting a reinforced concrete slab on top.

Edgar explains:

"The glass wall plate experiment in my house was done in order to allow light to penetrate between walls and roof, and so achieve this illusion of floating mass." (Edgar 2001 – personal communication).

Mikula continues:

"The floating roof was a wonderful detail; instead of putting the wall plate up there we put a couple of layers of glass smeared with Vaseline to act as a slip joint, the roof just floated up there. What we didn't realize was that glass does not make a good expansion joint and slowly the dust and sand gets in-between and starts producing glass powder, the whole thing settles in and collapses and disappears and leaks. In the end not a very good detail!" (Mikula 2000 – personal communication).



Fig 6.27: House Edgar (1973).
Glass wall plate experiment.
Photo: P. Mikula.

In the case of House Tony Lazarus (1975) in Burlington Heights, Chatsworth, the whole concrete slab roof had to be propped to remove the glass wall plate and the joint was caulked up.

"The questioning in building technology had not really taken place since the Second World War, there was a considerable change in stylistic ideas and I think people carried on building in the same way. The building by-laws hadn't changed, the building suppliers were still supplying the same sort of thing etc. It took a generation to really say; how are we building? Why are we building this way? Do we have to have windows that produce both light and air and view? Can we start splitting windows into something that is a ventilator, a fixed element for a view and so on? What is a window? What is a door? What is a light fitting?" (Kearney 2001 – personal communication).

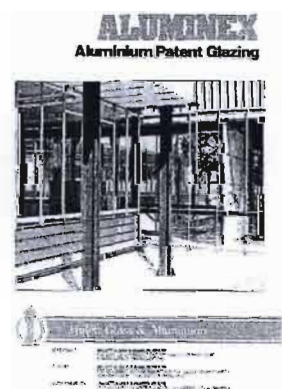
Experimentation in concrete was also explored. The Cowey Centre development was one of the first application of the coffered slab in South Africa upon the recommendation of structural engineer Mr. 'Zank' Zietkiewicz of LSC Brunette. Following an initial inquiry, the UK supplier had sent the first batch of moulds for the project free of charge with the hope of developing further interest in the system.

Patent glazing systems were a regular feature of BDG detailing (see Chapter 5.6.P3). Encouraged by the aesthetic qualities of the light glazing bars and horizontal banding of glazed elements, the system was widely used. The commissions to design the offices and workshops of the main supplier, Richards and Barlow (1973), as well as the home of its Director Ian Sutherland (1970), were ideal opportunities to advance this detailing. Patent glazing was used most prolifically at the Julia Road offices (1973) and at Hulett's Research and Development Laboratories (1973), an image of which was used on the aluminium suppliers catalogue for many years.



Fig 6.28: House T. Lazarus (1975). Concrete roof under construction.
Photo: P. Mikula.

Fig 6.29: 'Aluminex' patent glazing catalogue. Illustrating Hulett's Research and Development Laboratories (1973) on cover.
Ref: Hulett's glass and Aluminium.



At Hulett's Research and Development Laboratories the fascination for purpose-made components was typified in the details for the laboratory fittings which were conceived as 'steel suitcases' that clipped on to the service 'umbilicals', providing the infrastructure for the laboratory technicians. This extended also to the purpose-made fibreglass modular partitioning system.

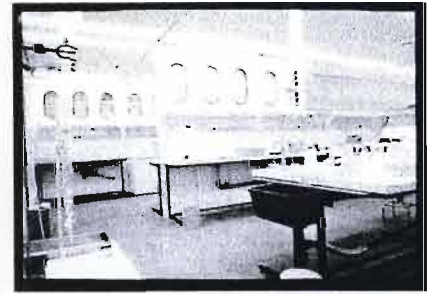


Fig 6.30: Hulett's Research and Development Laboratories (1973). Laboratory fittings manufactured as yellow 'suitcases' above the worktops. Photo: D. Jordaan.

One of the consequences of engaging with relatively large expanses of glass is the problem of solar penetration. Many of the buildings take reasonable cognisance of orientation, however preferred aspect was occasionally overlooked in favour of view or site massing. The Julia Road Office is a case in point, where formal gestures give rise to a problematic west facing elevation. The façade was clad with profiled louvres to cut out direct sunlight, however the heat build up in the space was noticeable.

Noero recalls; "the Julia Road office was an uncomfortably hot building, people migrated around the office as the sun moved." (Noero – personal communication 2001).

Reflecting on BDG's approach to climate, Kearney concludes; "We didn't ignore climate, we probably took climate more seriously than the early modernists which were just transplanted contemporary European ideas to Africa; we were much more concerned about an Africaness." (Kearney 2001 – personal communication).

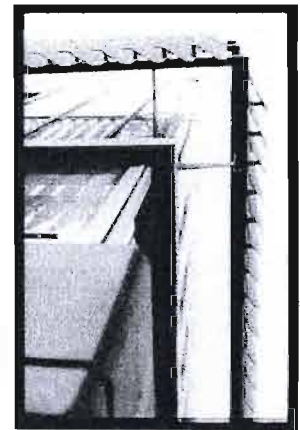


Fig 6.31: Julia Road Offices (1973). Detail of external louvres. Photo: D. Jordaan.

6.6 Consultants

BDG were fortunate to engage the support of a high calibre of professional consultants, especially the relationship that was struck with the firm of structural engineers LSC Brunette & Partners, in particular Mr. 'Zank' Zietkiewicz, who designed the structure for many of the completed projects. He was a part of the creative team whose input was most appreciated at BDG, and significantly contributed to the success of many schemes.

"Zank seemed to understand the design role of the architect and his input was sensitive to the designers' needs". (Stewart 2002 – personal communication).

"BDG received the good support of consultants. You didn't have to say the whole sentence, because they knew what you were talking about and even the things you weren't talking about". (MacGarry 2000 – personal communication).

Creative support was also provided by the Quantity Surveyor, Arthur Lane, who worked with the team in the studio, "another BDG 'sacred cow'! an in-house QS." (Lee – personal communication) His ability to digest the often eccentric design proposals and still keep a lid on budgets was invaluable.



Fig 6.32: 'Zank' Zietkiewicz on site at House Naidoo (1966).
Photo: B.Lee

CHAPTER 7: DISSOLUTION OF BDG

By 1978, South Africa was in an economic recession which had been steadily deepening since 1971, and was exacerbated by the political turmoil of the Soweto uprising of 1976 (Meredith 1988). Consequently there was a slump in the building industry which had led to a depletion in the amount of work for architects.

A survey was conducted among members of the Natal Provincial Institute of Architects, and the results of which were reported to the Provincial Committee meeting on 22nd September 1977.

Table 7.1: Economic state and morale of the profession survey, NPIA, September 1977.

Practice operates under high pressure due to large extent of commissions.	5
Practice is busy but work is slowing down due to drop in new commissions.	17
Practice is busy but no new commissions.	25
Practice is being reduced due to little work.	36
Practice is completing present work but if no new commissions are received shortly practice will have to close	20
Public Sector	
19 practices have work in sketch design stage.	84 practices have not.
27 practices have work in working drawing stage.	76 practices have not.
44 practices have work in supervision stage.	59 practices have not.
Private Sector	
50 practices have work in sketch design stage.	53 practices have not.
54 practices have work in working drawing stage.	49 practices have not.
101 practices have work in supervision stage.	26 practices have not.

Ref : 22/09/1977 - Minutes of Executive Committee of the NPIA

The survey which attracted a 80.4% response from members indicates that practices were experiencing difficulties due to the impact of a reduced influx of work. Few new commissions were reported in the Public Sector with the majority of practices not involved at all in this sector. Approximately half of the members had no private commissions in the sketch design or working drawing phases.

For BDG a decision had been taken to amalgamate with the multi-disciplinary practice of ZAI (Inc), with effect from the 1st July 1977. (01/12/1977 - Minutes of Executive Committee of the NPIA) BDG

had developed a working relationship with ZAI (Inc) through their association on the residential and Visitors Centre projects at Sunningdale, and it has already been noted in Chapter 5.4.1 that BDG were seeking to penetrate into the Public sector social projects programme through their incorporation into ZAI (Inc).

In a letter to the Secretary of the NPIA on 25th July 1977, the details of the amalgamation appears on a new letterhead which reads Building Design Group Architects Incorporated, address; 78 Julia Road; with directors being Mikula and Lee; with architect H.R.M. Cloete; engineer J.M. Pet; and quantity surveyor D.R. Hall.

John Edgar having located to Lesotho, ceased to be a partner of BDG from 1st July 1977, confirmation of his change of address to a box number in Maseru, was recorded at a Provincial Committee meeting on 6th June 1977. Tony Wilson had also withdrawn from the practice at the time of the merger, leaving South Africa to pursue his architectural career in the UK.

The era of BDG had effectively ended, although the name would be sustained within the umbrella of ZAI (Inc) most of the pivotal figures had dispersed. Mikula's intense involvement in the Urban Foundation soon led to his appointment as Development Manager for the Natal region and consequential resignation from BDG. (15th May 1978 - letter to ISAA and copied to NPIA), establishing the Urban Foundation Development Offices at the Julia Road Office.

Lee however remained as a director of BDG and oversaw the eventual sale of the Julia Road Offices and relocation to ZAI at 245 North Coast Road (22/11/1979 - Minutes of Executive Committee of the NPIA)

The rupture in the BDG 'family' was concluded with MacGarry, Savage and Wilkinson following Mikula to the Urban Foundation, Jordaan and Barwise leaving for overseas and Stafford remaining temporarily at ZAI.

Stafford comments;

"I was part of that whole move to ZAI. I think that they both (Mikula & Lee) lost a lot when they parted company, the two of them did make a really good team". (Stafford 2002- personal communication).

Wilson summaries;

"After the move to the Julia Road offices, Paul left on extended leave to Europe, and the practice seemed to fragment somewhat. This was exacerbated by the way in which a growing workload and larger size of projects was dealt with - particularly the ZAI related work at Sunningdale for which several additional staff were recruited. These were mostly people who were not particularly talented or even interested in architecture but were just available. The intensity of the practice became diluted and this tendency was not helped by the endeavors to extend BDG into Lesotho with JC Laederach, and into Johannesburg with Italo Lupini. As a consequence, the quality of the work suffered.

In my opinion, the successes and finally the failure of BDG can be traced back to Paul's role within the practice. His was the vision, talent and personality around which BDG formed. When the difficulties (perhaps impossibility) of realizing and sustaining that vision became apparent, Paul's disappointment and departure were the effective end of the practice." (Wilson 2001- personal communication).

CHAPTER 8: CONCLUSION

The practice of Building Design Group Architects occupies an important niche in terms of continuities in the account of modern architecture in South Africa, particularly with respect to the Natal region.

Setting out on the path established through the inspirational teaching of Lewcock and Biermann at the University of Natal, and following the examples of Biermann's own house and the early buildings of Hans Hallen; BDG forged a body of work over the course of a decade, which engaged with the broad architectural issues surrounding late modernism and at the same time was guided by an appreciation of the local condition, in a working environment which challenged the conventions of professional practice.

Kenneth Frampton, in his book *Modern architecture – a critical history* (1992), writes;

“Critical regionalism is not vernacular as spontaneously produced by the combined interaction of climate, culture, myth and craft; but to identify those recent ‘regional schools’ whose primary aim has been to reflect and serve the limited constituencies in which they are grounded.

Critical regionalism has to be understood as a marginal practice, one which, while it is critical of the modernisation, nonetheless still refuses to abandon the emancipatory and progressive aspects of the modern architectural legacy. ” (Frampton 1992: p327.).

The ‘Natal school’, to which BDG represent the second wave or generation (after Biermann and Hallen), was based on the lessons of modernism from Wright, Mies and Le Corbusier through to Kahn and the ‘New Brutalists’. However a specific inflection in the work is evident which can be attributed to the influences of regional vernacular architecture, and environmental sensibility.

BDG furthermore represents a significant collaborative of graduates from the University of Natal, and who's work can therefore be gauged as a barometer of the architectural thought and practice in the region.

The theoretic discourse in BDG's work is veiled, with the preference to discuss the act of building, and its impact on the natural and human environment. Andrew Metcalf, in his book *Thinking Architecture* (1995) explains;

"There are now a large number of different ideas which architects engage to initiate their aesthetic production and this appears to be on the increase. It is therefore possible to see theory, in a discipline like architecture, as an extensive collection of disparate ideas which coexist with one another. In fact, one salutary gain of the last decade or so (the period of post-modernism, or perhaps more accurately pluralism), is the enormous widening of the discipline's theoretical scope through increased dialogue, criticism and academic activity. However, this has introduced a change; the ideas that architects now use are neither cohesive or formed into a total theory of the kind that we would associate with modernism." (Metcalf 1995: p7).

Ultimately the end of the practice was a combination of the prevailing economic recession and a natural digression in the career objectives of its members. Douw van Zyl has suggested (2003-personal communication) that perhaps it was also the natural end of an experimental cycle, in the lives of the young participants, that had run its course. A period of testing boundaries and expanding architectural horizons, succumbing to a maturing of attitude and personal direction.

"Certainly, the work of the firm had a great impact on students. BDG were really the leading experimental firm of the time." (Lewcock 2002 – personal communication).

To return to the stated hypothesis, it is the conclusion of this research that BDG made a notable contribution to architecture in South Africa. Not only through the quality of their extensive built oeuvre, but also the office provided an architecturally fertile environment, which provided the creative stimulus for the projects; and furthermore a place where the incubation of another generation of influential architects took place.

"BDG were one of the most important practices that we've (South Africa) had. They produced some of the most interesting and remarkable work of the period and made a significant contribution to architecture in South Africa." (Noero 2001 – personal communication).

Impressions

The personality mix and chemistry at BDG is an important factor in the working environment that was able to spawn a committed and rich architecture. The following series of quotations are impressions of the various personalities within BDG;

Colin Savage on the personalities at BDG:

"I had a close working relationship with Paul and was most inspired by him. He was a mentor to me, drove me crazy, drove me beyond the boundaries that I would ever have set for myself. Very inspirational from that point of view, both frustrating and exhilarating.

Bryan was looked on as the gentleman of the office, along with John.

John was very much an individualist who worked on his own things, occasionally needing support.

Tony was the most incredible architect, just an understated and wonderful person.

Denis was like a round thing in a square hole." (Savage 2001 – personal communication).

Brian Kearney on Lee and Mikula:

"Bryan was our technology man, an interest John also shared. Paul was much more the conceptual man and my interests lay in the historical. Paul was the quick sketch, lets explore the plan concepts, lets explore the form. Paul had a messianic influence on the people who worked with him, one used to observe some of those students almost becoming other Paul's. Kevin, Colin, Peter and Luis were strong characters in themselves and yet were ready to be 'moulded'. Paul was the strongest character without any doubt, Bryan and I about the same sort of force and John was the quieter and sensitive designer". (Kearney 2001 – personal communication).

Kevin MacGarry on Mikula and Lee:

"Bryan Lee ran the thing, was good with contracts and the commercial side of practice. Paul set the mood and designed 'from the gut'. Brian Kearney once said of Paul's perfectionism that he had never seen so many good schemes thrown away." (MacGarry 2000 – personal communication).

Tony Wilson on the personalities at BDG:

"Paul was the dominant personality of BDG. He did most of the sketch design work. He was an outstanding talented and charismatic figure, and although others had a bearing on the character of the practice, Paul's personality defined it.

Initially, Bryan was largely autonomous and had his own clients and was assisted by Denis and later Roy Owen.

John kept to himself and spent most of his time doing working drawings for jobs that nobody else wanted to be involved with, for example the school at Scotburgh for the NPA, and various town houses.

Bob was asked to build the amazing Schmidt bathroom and later, the Cooper farmhouse. He also built beautiful models and took photographs.

Kevin joined after failing 4th year to do the Hulett's R&D facility at Mount Edgecombe, which was an extraordinarily daring and innovative building." (Wilson 2001 – personal communication).

John Edgar on the personalities at BDG:

"Mikula – sculpture, philosophical aspects, spatial organisation, human scale.

Lee – business contacts, large scale perception, strong geometrical organisation.

Wilson – enthusiasm, energy, incisive perception.

Kearney – academic and historical influences.

Jordaan – attention to detail, love of refinement in components.

Macgarry – technology, detailing.

Savage – graphics, human scale.

Stewart – good with people and staff." (Edgar 2001 – personal communication).

Denis Jordaan on Mikula & Lee:

"For Paul a new day meant a clean sheet. Bryan read widely and would pick up an idea from almost anything. For Bryan, a glimpse of the Rosetta Stone in a particular light would give him an idea that might be stored for years before being distilled into something quite different. Brian Kearney and John Edgar appeared to act as foils and worked solo." (Jordaan 2001 – personal communication).

Peter Wilkinson on the personalities at BDG:

"Bryan struck me as the more formally aspirant partner. Astute; talented and bright. Always answered the phone with "Lee. Architect"! The Paul McCartney of the group; always on the go. Leappy Lee!

Paul was the great Motivator. Talented; astute; informal approach; did great drawings; wicked, often cynical sense of humour. Aka John Lennon. I did most of my projects with Paul. He was also very influential in my career with the Urban Foundation.

John was the George Harrison of the group. Quiet, talented. I worked with him on some houses with copper roofs (not built), and again in Lesotho.

Tony. Also bright, talented and full of energy. Never worked with him though. Met him and Denis at their office in London a few years later, and was taken around some of their work there.

Kevin and Colin - I got to know them both from when I first joined BDG and for me they epitomized the BDG ethic and design style - talented guys who could draw like God. Denis was another.

As well as all the others, most of whom became friends as much as colleagues Bruce Stafford, Johan Wessels, Ken Moull, Peter Boon, Agrippa Nyembe, Priscilla Dindar, Maori (or was it Kiwi?), Benjamin (who together with Peter Boon produced lunches still worth talking about).

Julia Road was a great environment to be a part of - the work, the personalities (I can still hear Roy dotting the day away, or Denis sucking on his gums before the dentures arrived), the late night competitions, assisting with the annual thesis models or drawings (we all had our turn), the table tennis, and the lunchtimes! (Wilkinson 2002 – personal communication).

Peter Stewart's impressions of BDG:

"Problems one has with any practice where the names are not inherent in the title are the loss of individual identity. I was aware that to the outside architectural world BDG was essentially 'Paul Mikula'. Paul had a reputation as a good conceptual designer... one of the few, I believe, in Durban. The other office personality was Bryan Lee, who was more of a 'commercially orientated' partner. He was a good job getter. When I was involved at the School of Architecture it was always good to get either Paul or Bryan involved in crits, depending on the particular project and its stage. Both were good at this aspect, Paul at the initial or conceptual stages at any year level and Bryan at third year level and above with works appropriate to that scale of project.

Colin Savage, together with Kevin, were the kind of creative designers who made their mark with BDG. They were fully involved in their designer roles". (Stewart 2002 – personal communication).

Bruce Stafford's on the personalities at BDG:

"Paul was a visionary with amazing sense and very strong ideas. Paul had the respect of people in Durban at that time; he was very controversial. I think from the clients he had that kind of respect and integrity to get away with doing radical stuff. Paul had a tremendous command of space, he

could really mould space beautifully. He was a great motivator of people, cynical but with a kind heart; that guy would do anything for you. Paul was also an extremely cynical person, and he would have a full go at anyone and everyone. Paul just saw me as an object of great amusement; he used to have so much fun with me. He had a word for me all day and every day. I just loved the guy, everyone who worked there would tell you the same thing; he changed all our lives really. He was an amazing beacon in my architectural life.

Bryan is the fastest drawer that I have ever seen in my life – he was amazing, he had a very quick and organized brain and in his own right had a fantastic sense of design. Bryan could place things in order so beautifully.

Bryan and Paul were different, Paul was a very emotional and organic designer. Bryan was far more ordered and organized.

Tony Wilson was totally uncompromising, the pure BDG guy. He was softly spoken but would just rip into people. He was a very good designer, the perfect product of BDG. He was like the urban terrorist, he was so radical.

Colin was gentle and Denis was complex. Bob was the Glenroy Road guy, very eccentric.” (Stafford 2002 – personal communication).

Lance Smith on Mikula and Lee:

“Mikula was and still is more complex. While I found Bryan easy to know and outgoing, Paul was the opposite. Over the years Bryan seems to have been the organised communicator with Mikula the less disciplined designer.” (Smith 2001 – personal communication).

‘Zank’ Zietkiewicz on BDG.

“They were certainly very innovative, I think they were the most at the time. They seemed to be able to market themselves quite well. They got a fair range of work between them and I think that the interaction of partners was very good; they each had their own strengths. Paul was probably the most visionary in a way.” (Zietkiewicz 2001 – personal communication).

Name	Address	Authors
1965		
House Mikula	207a Ridge Road Durban	P Mikula
House Marian	12 Ward Road, Overport	P Mikula
House Lazarus	10 Ward Road, Overport	P Mikula
1966		
House I.M. Paruk	21 Meerut Road, Westville	B Lee / D.Jordaan
House Y.M. Paruk	23 Meerut Road, Westville	B Lee / D.Jordaan
House Randeria	72 Amlock Drive, Parlock	B Lee / D.Jordaan
House AG Steele (alts)	51 Marine View Ave, Durban Nth	P. Mikula
Church	Redacres	B Kearney
1967		
House Dr Goga	7 Derwent Street, Pietermaritzburg	B Lee / D.Jordaan
House Azizollahoff	144 Lamont Road, Durban	B Lee / D.Jordaan
House Sukkuma	43 Hope St, Overport, Durban	P Mikula / J Edgar
House A.R. Naidoo	11 Coull Drive, La Mercy	B Lee / D.Jordaan
St. John's Chapel	Eagle's Peak High School, Qachasnek	B Kearney
1968		
House A.E. Paruk	67 Devon Terrace, Westville	B Lee / D.Jordaan /
House J.N. Reddy	32 Parkside Rd, Silverglen	P Mikula
House M.N. Reddy	25 Parkside Rd, Silverglen	P Mikula / D O'Beirne
House Shoba	97 Winchester Drive, Res. Hills	P Mikula / J Edgar
Building Design Group – established on 06/05/68 at 4a Glenroy Road – Partners PM, BL, BK & JE		
House Fulcher	14 Woodside Avenue, Cowies Hill	B.Lee
Catholic Chapel	Mackenzie Road, St Lucia Estuary	B. Kearney
House Herrington	7 Glenroy Road, Durban	B Kearney
1969		
House Ramkisson	20 Westborough Road, Westville	P Mikula
House van Schalkwyk	56 Kransview, Kloof	B. Kearney
House Kearney	4 Kinmont Crescent, Glenmore	B. Kearney
Beach Cottage for Mrs Suttie	14 Hewitt Rd, Salt Rock	P Mikula / L da Silva
Shops & Offices - Lancewill	59 Lancers Road, Durban	B.Lee
House Griffiths	55 Pitlochry Road, Westville	P Mikula
Pinetown Mews: Shops & Offices	49 Crompton Street, Pinetown	B Lee / D Jordaan
House Dr. B.T.Chetty	11 Gleneam Rd. Overport	B Lee / D Jordaan
Terrace Housing	Kloof Park, Longwood Road, Kloof	B Lee / D Jordaan /R Owen
Group Practice Surgery for Dr. Goga	106 Retief Street, Pietermaritzburg	B. Lee / D. Jordaan
1970		
Change of address to 39 Helston Road on 03/04/70 – BK resigns. PS joins as partner		
House Dr. Timol	5 The Knoll, Kenville, Durban	P Mikula / J Baskin / Pamm
House D'Avice	6 Tedford Cres, Reservoir hills	P Mikula / C. Savage
House Jacobs	167 Springfield Rd, Durban	B Lee
House I. Sutherland	49 Bridle Road, Forest Hills	P Mikula
House Gerson	39A St Peters Rd ,Houghton.	B Lee / R Owen
House Davis	8 Glenroy Road, Durban	P Stewart / P Mikula

1971

House van Eck	115 Methven Road, Westville	B Lee / R Owen
House Dawood Timol	7 The Knoll, Kenville	P Mikula
Flats & Shops	17 Antelope Place, Sydenham	J. Edgar
House Edgar	49 Essex Grove, Westridge	J. Edgar

1972

Barbeito	Regal Crescent, New Germany	B Lee / P Mikula
House Schmidt (Alts)	29 Essex Grove, West Ridge	P Mikula/ B Barwise/ C Savage
House Bestall (Alts)	39 Cherry Avenue, Durban	P Mikula / C Savage
House Hawke	1 Boast Street, Eshowe	P. Mikula
Maisonettes Newman	501/503 Essenwood Road, Durban	B. Lee / D Jordaan
Townhouses - Pendenis Gardens	449/451/453/455/457/459 Musgrave Rd 442-444 Essenwood Rd	P Mikula / B Lee
Offices for Gitsav	96/98 St George's Street, Durban	B. Lee / D. Jordaan
Presbyterian Church	Ladysmith	P Mikula / C Dale

1973

House Wilson	13 Rockhaven Rd, Cowies Hill	P Mikula
Factory & Offices for Richards & Barlow	5 Joyner Road, Prospecton	K Macgarry / T. Wilson
Flats, Shops & Offices	107 Cowey Road, Durban	B Lee / P Mikula /
Offices & Shops	78 Julia Road, Durban	P Mikula / B Lee
Cobblestone Mews cluster housing	Top of the Hill, Sunningdale	P Mikula / B Lee
House M.E. Buijs	4 Clackmannan Road, Westville	B. Lee / T. Wilson
House Burgess	25 Fyfe Road, Westville	P Mikula
House F. Moola	48 Halpin Ave, Reservoir Hills	P. Mikula / C. Savage
House Jordaan	3 Minerva Drive, West Riding	D Jordaan
Offices & Store for Kamac Holdings	11 Livingston Road, Pinetown	T. Wilson
Hulett's R & D Laboratory	20 Marshall Drive, Mt Edgecombe	K MacGarry / B Lee

1974

Change of office to 78 Julia Rd – PS resigns, TW becomes a partner.

Factory & Offices/ Chicks	38-44 Jeffels Road, Prospecton	T. Wilson / P Mikula / B. Webber
House M. Cooper	38 Madeira Drive, Morningside	B Lee / T. Wilson / P. Mikula / R Owen
Maisonettes	22 & 24 Farmon Road, Glenmore	J. Edgar
Houses	Fig Tree Rise, Sunningdale	B. Lee/ T. Wilson

1975

Show Centre / offices	Sugarfarm Trail, Sunningdale	T. Wilson / P. Mikula / P. Thomsett
Townhouses – Silverton Gardens	160-164 Silverton Road	B. Lee / P. Mikula
Beach Cottage for J. Zietkiewicz	Lot 32, Falkland Place, Trafalgar	P. Mikula / B. Lee
House T. Lazarus	48 Midmar Road, Burlington Hts	P. Mikula / K Macgarry / B. Stafford
Showroom & Offices for GKN	62 Edwin Swales vc Dr, Rossb'h	B. Lee / D. Jordaan

1976

House Charles / Lazarus	145 Villa Road, Overport	P Mikula / B Stafford
Maisonettes/Teambuild	7/9/11/13/15 Somme Rd, Durban	P Mikula / K Macgarry

1977

Farmhouse for M.Cooper	Pineta Forests, Ixopo	B Lee / C Savage/ B Barwise
Briardale Housing	Skipdale Rd. Newlands West	P Mikula / B Lee / C Savage

BDG Incorporated into ZAI on 01/07/77

1978

YMCA	Kwamashu	K. Macgarry
John Dube High School	Kwamashu	K. MacGarry
Mzuvele School	Kwamashu	K. Macgarry
Inhlakanipo School	Kwamashu	K. Macgarry
House Docrat	27 Manton Crecent, Reservoir Hills	C.Savage

PM resigns from BDG(inc) on 08/06/78

Undated Projects

House Levy	Potchestroom	P.Mikula/R.Pullon/(B.Britz)
Isandlawana School	Isandlawana	B Lee / B Barwise
House Tshabalala	Claremont	P.Mikula/P.Wilkinson
House Vadwa	Kenville	
House Vahed	Kenville	
House Soosiwalla	Overport	P.Mikula / J. Edgar
House Meer	Stanger	P.Mikula / B.Lee
House Cunningham	Sheffield Beach	P.Stewart / R.Owen
House Hawke 2&3	Boast Street, Eshowe	C.Savage / P.Mikula
Shops, Reddy's Corner	Silverglen	P.Mikula
Shop, Adams	Eshowe	P.Mikula
House Dhadabhai	Pietermaritzburg	B. Lee
School	Scotburgh	J.Edgar
Hotel	Scotburgh	J.Edgar

Competitions

Paarl Civic Centre – 1967/68	Unplaced	
La Lucia Civic Centre - 1972	Commendation	with Italo Lupini
Omega House Competition – 1973	Award of Merit	
Tongaat Community Centre –1976	2nd Place	
Mitchells Plain – Housing – 1977	Design Award	
Pinetown Library-1978	3rd Place	
Madrid Mosque – 1979	Unplaced - published	

Unbuilt Projects

House Doorgapersad	Claremont	Luis fd Silva
Townhouses	Fernglen, Furness Road	P Mikula / B.Lee
Ladysmith Flats Project	Ladysmith	P Mikula
Trematon Mews	Morningside Durban	B. Lee
House for Andrew Walford	Shongweni	P. Mikula
House Younge		P Mikula / T. Wilson
House Mehta	Westville	B. Lee
House Dhoda	Pietermaritzburg	J.Edgar
House Leask	Umhlanga	P. Mikula / B. Stafford
Apartment Building	Goble Road	P.Mikula
Shop & offices additions, Show centre	Sugarfarm Trail, Sunningdale	T.Wilson



B. Lee	1	House IM&YM Paruk (1966)	2	House Randeria (1966)	P. Mikula	3	House JN Reddy (1968)	4	House MN Reddy (1966)
	5	House Shoba (1968)		Building Design Group		6	House AE Paruk (1967)	7	House Fulcher (1968)
	8	House Ramkisson (1969)	9	House van Schalkwyk (1969)		10	House Griffiths (1969)	11	Pinetown Mews (1969)
	12	Kloof Park (1969)	13	House Dr. Timol (1970)		14	House D'avice (1970)	15	House Sutherland (1972)
	16	House van Eck (1971)	17	House Dawood Timol (1971)		18	Barbeito (1972)	19	House Wilson (1973)
	20	Richards & Barlow (1973)	21	Cobblestone Mews (1973)		22	House Bujijs (1973)	23	House Burgess (1973)
	24	House Moolo (1973)	25	Offices for Kamac Holdings (1973)		26	Hulelts R&D Labs. (1974)	27	Chicks (1974)
	28	Houses, Sunningdale (1974)	29	Visitors Centre, Sunningdale (1975)		30	House T. Lazarus (1975)	31	Briardale Housing (1977)
	32	YMCA, Kwamashu (1978)	33	John Dube High School (1978)		34	Mzuvele School (1978)	35	Inhlakanipso School (1978)
	36	House Docrat (1978)							



P. Mikula	1	House Mikula (1965)	2	House Marian (1965)	3	House Lazarus (1965)	4	House AG Steele (1966)
B. Lee	5	House Azizollahoff (1967)	P. Mikula	6	House Sukkuma (1967)			
Building Design Group			7	House Herrington (1968)	8	House Kearney (1969)	9	Lancewill (1969)
	10	House Dr. Chetty (1969)	11	House Jacobs (1970)	12	House Davis (1970)	13	Antelope Place (1971)
	14	House Edgar (1971)	15	House Schmidt (1972)	16	House Bestall (1972)	17	Maisoneetes Newman (1972)
	18	Pendennis Gardens (1972)	19	Offices for Gilsav (1972)	20	Cowey Centre (1973)	21	Julia Road Offices (1973)
	22	House Cooper (1974)	23	Maisoneetes, Farmon Rd (1974)	24	Silverton Gardens (1975)	25	Offices for GKN (1975)
	26	House Charles/ Lazarus (1976)	27	Teambuild Maisoneetes (1976)				

JOHN MURRAY EDGAR

BORN 14/05/38 VEREENIGING

SCHOOL POTCHEFSTROOM HIGH

UNIVERSITY OF NATAL

1ST YEAR CREDITS IN MATHS / APPL. MATHS/CHEM1/PHYS 1 / ENG. DRAW FROM UNIVERSITY OF WITSWATERAND 1956

1 ST YEAR	1959	D1-55	BC1-55	HA1-46	ED-51	RWS-C	1A-52
2 ND YEAR	1960	AD2-49	BC2-49	HA2-57	AS1-58	LS-C	DD2-C
3 RD YEAR	1961	AD3-49	BC3-53	HA3-53	AS2-42	DD3-54/C	
4 TH YEAR	1963	AD4-56	BC4-67	HA-4-56	PP1-48		
5 TH YEAR	1964	AD5-54	BC5-50	PP2-50	DT-60		

WORK EXPERIENCE

1958 Jun-Feb 59	CROFTON & BENJAMIN, DURBAN.
1960 Dec- Feb 61	GOLDFIELDS, JO'BURG –ARCHITECTURAL OFFICE.
1962 Jan-Aug	GEORGE WEST & PARTNERS, LONDON.
1962 Oct- Feb 63	UNILEVER ARCHITECTS OFFICE, LONDON.
1964 Jan-Feb	DUNCAN GILL & BASIL POWELL, JOHANNESBURG.
1964 Dec-July 65	BASIL POWELL, , JOHANNESBURG.
1965 Aug-Mar 66	MARKOWITZ & MARGOLES, LONDON.
1966 April – April 67	ANTHONY SLAVEN, LONDON.
1967 April – May 68	JOHN EDGAR ARCHITECT, DURBAN.
1968 May – July 77	PARTNER: BUILDING DESIGN GROUP ARCHITECTS, DURBAN.
1974 Oct – July 77	PARTNER: BUILDING DESIGN GROUP ARCHITECTS, LESOTHO.

BRIAN THOMAS KEARNEY

BORN 24/02/1941 PIETERMARITZBURG

SCHOOL ST. CHARLES COLLEGE, PIETERMARITZBURG

UNIVERSITY OF NATAL

1ST YEAR ENGINEERING 1958 PIETERMARITZBURG

1 ST YEAR	1959	D1-44(F)	BC1-53	HA1-55	RWS-C	1A-64
1 ST YEAR	1960	D1-61	BC1-56	HA1-77		
2 ND YEAR	1961	AD2-70(com)	BC2-57	HA2-77(com)		
3 RD YEAR	1962	AD3-61	BC3-60	HA3-76	AS2-53	DD3-B-
4 TH YEAR	1964	AD4-60	BC4-60	HA-4-74(com)	PP1-58	
5 TH YEAR	1965	AD5-64	BC5-65	PP2-80(com)		DT-70
MArch	1967	Distinction				

Public service commission loan/bursary

MArch (*Cum Laude*), awarded in March 1968 for thesis 'Architecture in Natal from 1824-1893'.

DArch 1992 – Published documents presented for the Senior Doctoral Degree in Architecture.

WORK EXPERIENCE

1959 July	PROVINCIAL ARCHITECT, PIETERMARITZBURG.
1961 Jun-Feb 62	MEANWELL & ANDERSON, PIETERMARITZBURG.
1963 Jan-Oct	NPA BUILDING SERVICES, PIETERMARITZBURG.
1963 Oct-Feb 64	T&RP COMMISSION , NPA, PIETERMARITZBURG.
1966 Feb – Jan 93	LECTURER – UNIVERSITY OF NATAL
1967 April –May 68	BRIAN KEARNEY ARCHITECT , DURBAN.
1968 May – Aug 69	PARTNER: BUILDING DESIGN GROUP ARCHITECTS, DURBAN.

BRYAN HOWARD LEE

BORN 05/07/1941 DORKING, ENGLAND

SCHOOL NORTHLANDS BOYS HIGH 1958

UNIVERSITY OF NATAL

1 ST YEAR	1960 (NPJA PRIZE FOR 1 ST YEAR)	D1-65	BC1-64	HA1-78	RWS-B+	1A-B+
2 ND YEAR	1961	AD2-72(com)	BC2-65	HA2-71	AS1-52	DD-58
3 RD YEAR	1962	AD3-66	BC3-70	HA3-92(com)	AS2-65	DD3-B-
4 TH YEAR	1963 (NPJA PRIZE FOR 4 TH YEAR)	AD4-63	BC4-68	HA-4-76	PP1-63	
5 TH YEAR	1964 DISTINCTION	AD5-71(com)	BC5-75(com)	PP2-76(com)	DT-85(com)	

Durban Municipal Bursary 1962/63/64

M.Sc Town Planning – registered between 1971-75 (thesis not submitted)

WORK EXPERIENCE

1961 Jan-Feb	FRIDJHON & FULFORD, DURBAN.
1962 Jan	L.T.CROFT, DURBAN.
1963 Feb	E.TOLLMAN, DURBAN.
1964 Jan	A.MIRANDA GUEDES , LOURENÇO MARQUES.
1965 Jan -Dec	HALLEN & DIBB, DURBAN.
1966 Jan- Dec 69	LECTURER – UNIVERSITY OF NATAL
1966 Jan- May 68	BRYAN LEE ARCHITECT, DURBAN.
1968 May – July 77	PARTNER: BUILDING DESIGN GROUP ARCHITECTS, DURBAN.
1974 Oct – July 77	PARTNER: BUILDING DESIGN GROUP ARCHITECTS, LESOTHO.

PAUL MIKULA

BORN 31/05/1940 REICHENBACH / FILS, GERMANY

SCHOOL LADYSMITH HIGH SCHOOL

UNIVERSITY OF NATAL

1 ST YEAR	1961	D1-59	BC1-62	HA1-62	RWS-B	1A-72/B+
2 ND YEAR	1962	AD2-48	BC2-47	HA2-54	AS1-36	DD2-B-
2 ND YEAR	1963	BC2-48	AS1-43			
3 RD YEAR	1964	AD3-49	BC3-49	HA3-51	DD3-58	
4 TH YEAR	1965	AD4-69	BC4-63	HA4-55	PP1-60	
5 TH YEAR	1966	PP2-65				
5 TH YEAR	1967	AD5-53	BC5-50	DT-65		

MArch – registered 1968 – 'The Hindu temples of South Africa' – withdrawn.

WORK EXPERIENCE

1960 Jan-Feb 1961	MAGNIE & MOORE, LADYSMITH
1961 Dec-Jan 1962	W.J. ELLENS, LADYSMITH
1963 Jan-April 1963	FRIDJHON & FULFORD, DURBAN.
1963 May-Feb 1964	KEITH GOW & HOWES, DURBAN.
1966 June – July 1967	HALLEN & DIBB, DURBAN.
1967 July – Dec	VICTOR POLFREMAN, DURBAN.
1968 Jan- May 68	JOHN EDGAR, DURBAN.
1968 May – July 77	PAUL MIKULA ARCHITECT, DURBAN.
1974 Oct – July 77	PARTNER: BUILDING DESIGN GROUP ARCHITECTS, DURBAN.
	PARTNER: BUILDING DESIGN GROUP ARCHITECTS, LESOTHO.

PETER ROBIN STEWART

BORN 10/08/1933 PIETERMARITZBURG

SCHOOL PIETERMARITZBURG COLLEGE

UNIVERSITY OF NATAL

University records not available

Graduated BArch in 1959.

MArch obtained 1973 for thesis 'An Investigation into Urban Climate and the Siting of Buildings on the Natal Coast'.

PhD awarded 1990 for thesis 'The Siting of Low Income Housing in the Durban Region of Natal/ Kwa-Zulu'.

WORK EXPERIENCE

vacations	CORRIGAL & CRICKMAY
vacations	J.D.COBB & PARTNERS
1955	CLEMENT.R.FRIDJHON & FULFORD, DURBAN.
1958	CHICK, BARTHOLOMEW & POOLE, DURBAN.
1959 Jan- April	E. HUDSON-BENNETT, DURBAN.
1959 May- Jan 65	CASSON CONDOR & PARTNERS, LONDON.
1965 April – April 70	PETER STEWART ARCHITECT, DURBAN.
1965 Dec- Jan 94	LECTURER – UNIVERSITY OF NATAL
1970 April – July 74	PARTNER: BUILDING DESIGN GROUP ARCHITECTS, DURBAN.

ANTHONY WILSON

BORN 24/06/46 PRETORIA

SCHOOL PRINCE EDWARD, SALISBURY (HARARE)

UNIVERSITY OF NATAL

1 ST YEAR	1966	AD1-54	BC1-73	HA1-63	ED-51	RWS-C	1A-52
2 ND YEAR	1967	AD2-55	BC2-50	HA2-56	AS1-70	LS-46	
3 RD YEAR	1968	AD3-50	BC3-47	HA3-71	AS2-46		
	1969	AA3-68	AS2-68				
4 TH YEAR	1970	AD4-73	BC4-75	HA-4-75	PP1-56		
5 TH YEAR	1971	AD5-63	Atech-65	PP2-65	DT-70		

Awarded 4th Yr NPI Book prize & Senior History prize

WORK EXPERIENCE

1967 Dec- Feb 68	WALES SMITH, SALISBURY (HARARE)
1969 Aug-Feb 70	F.H.VOS, DURBAN
1970 Dec-Jan 71	A.C.MACDONALD
1972	F.H.VOS, DURBAN
1972 late –July 74	BUILDING DESIGN GROUP ARCHITECTS, DURBAN.
1974 July – July 77	PARTNER: BUILDING DESIGN GROUP ARCHITECTS, DURBAN.

Primary Sources

Municipal records of drawing plan submissions.

Natal Provincial Institute of Architects, Records of Committee and Sub-Committee Meetings 1967-1979.

Natal Provincial Institute of Architects, Member Files: Lee, Mikula, Kearney, Stewart and Edgar.

University of Natal, Barrie Biermann Architectural Library, Star Drawings Collection.

University of Natal, School of Architecture records. File: *Hindu Temples Research Project*. February 1968- March 1970.

University of Natal, School of Architecture records, File: *Visit of Eduardo Villa and Colin Sinclair*. 1966.

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University of Natal, School of Architecture records. File: *Commission of inquiry into the education and training of Architects*. Durban, 1976.

University of Natal, School of Architecture records. Minutes of Staff meetings 1965-1973.

University of Natal, School of Architecture records. Minutes of meetings of Committee for Studies in Architecture 1965-1970.

University of Natal, School of Architecture records. Student Records

University of Natal, School of Architecture records. Schedule of student names.

Private drawing archives: Brian Kearney, Bryan Lee, Paul Mikula, Colin Savage.

Private Photograph and slide archives : Paul Mikula, Bryan Lee, Bryan Kearney, Denis Jordaan, Walter Peters.

Letters and personal correspondence: Paul Mikula, Bryan Lee.

Secondary Sources

Books

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Alexander, C (1968), '*A Pattern Language which generates Multi-Service Centers*', Center for Environmental Structure, California.

Alexander, C (1964), '*Notes on the Synthesis of Form*', Harvard university Press, Cambridge, Massachusetts.

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Architectural Association (1984), '*Cedric Price*', Architectural Association Works II, London.

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Blundell Jones, P (1999), '*Hugo Haring*'. Axel Menges, Stuttgart / London.

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Plan 74.3.74 (1974), Thema : 'Building Design Group – buildings and projects'. Editor: Theron, D.

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NPIA Journal (1984) 'Some Projects of the Architectural Section of the Natal Region of the Urban Foundation', 2-1984.
Editor: Peters, W. (John Dube High School / Briardale)

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Journals / Broadsheets

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Editor: Theron, D

Credo No 18 (1969), 'Tribute to Wilhelm Arnold Pabst', August 1969, Editor: Theron, D.

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Selected Journal articles

Architect and Builder (1971), 'House, Durban, Westville', October 1971, pp 14-19. (House A.E. Paruk)

Architect and Builder (1972), 'Doctor's House, Overport, Durban', July 1972, pp 10-14. (House Dr. Chetty)

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- Artlook* (1970), 'House D'avice', Vol 5 No 4 April 1972 pp 26-29.
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- Coleman, C. (1971), 'A Living Sculpture', *South African Garden & Home*, March 1971. pp 20-21 (House Mikula)
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Journal articles

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'Epidermis & Metabolism: Some observations on the technology of comfort: Part 2'. *Plan* December 1971 pp14-19.
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Interviews

Interviews with the following people were held during the study period. The discussion were electronically recorded with direct transcripts subsequently produced.

Alan Gerson August 2002

Brian Kearney January 2001 & April 2002.

Bryan Lee numerous impromptu discussions were held.

Italo Lupini	telephonic conversation – May 2002.
Kevin Macgarry	February 2000
Paul Mikula	Lecture to 2 nd year students, UND September 16th 1999. August 2000 & November 2001 and numerous impromptu discussions.
Jo Noero	telephonic conversation – December 2001.
Colin Savage	August 2001
Bruce Stafford	May 2002
Zank Zietkiewicz	November 2001

E-mail correspondence

John Edgar	04/08/2001 – 15/08/2001 – 20/01/2002
Revel Fox	28/01/2002
Hans Hallen	05/09/2001 – 14/01/2002 – 27/02/2002 – 08/08/2002
Denis Jordaan	20/12/2001 – 21/12/2001 – 10/01/2002 – 11/01/2002 – 14/01/2002 18/01/2002 – 21/01/2002 – 20/03/2002 – 27/05/2002 – 28/05/2002- 29/05/2002 – 08/06/2002- 13/06/2002 – 03/07/2002 – 05/07/2002 – 10/09/2002.
Ronald Lewcock	29/08/2002
Lance Smith	13/01/2002
Peter Stewart	18/12/2001 – 31/12/2001 – 13/01/2002.
Natasha Whiteley	11/02/2002 (R.I.B.A)
Peter Wilkinson	23/06/2002.
Tony Wilson	27/11/2001 – 30/11/2001 – 23/03/2002.