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The John Moffat Building, University of the Witwatersrand, Johannesburg

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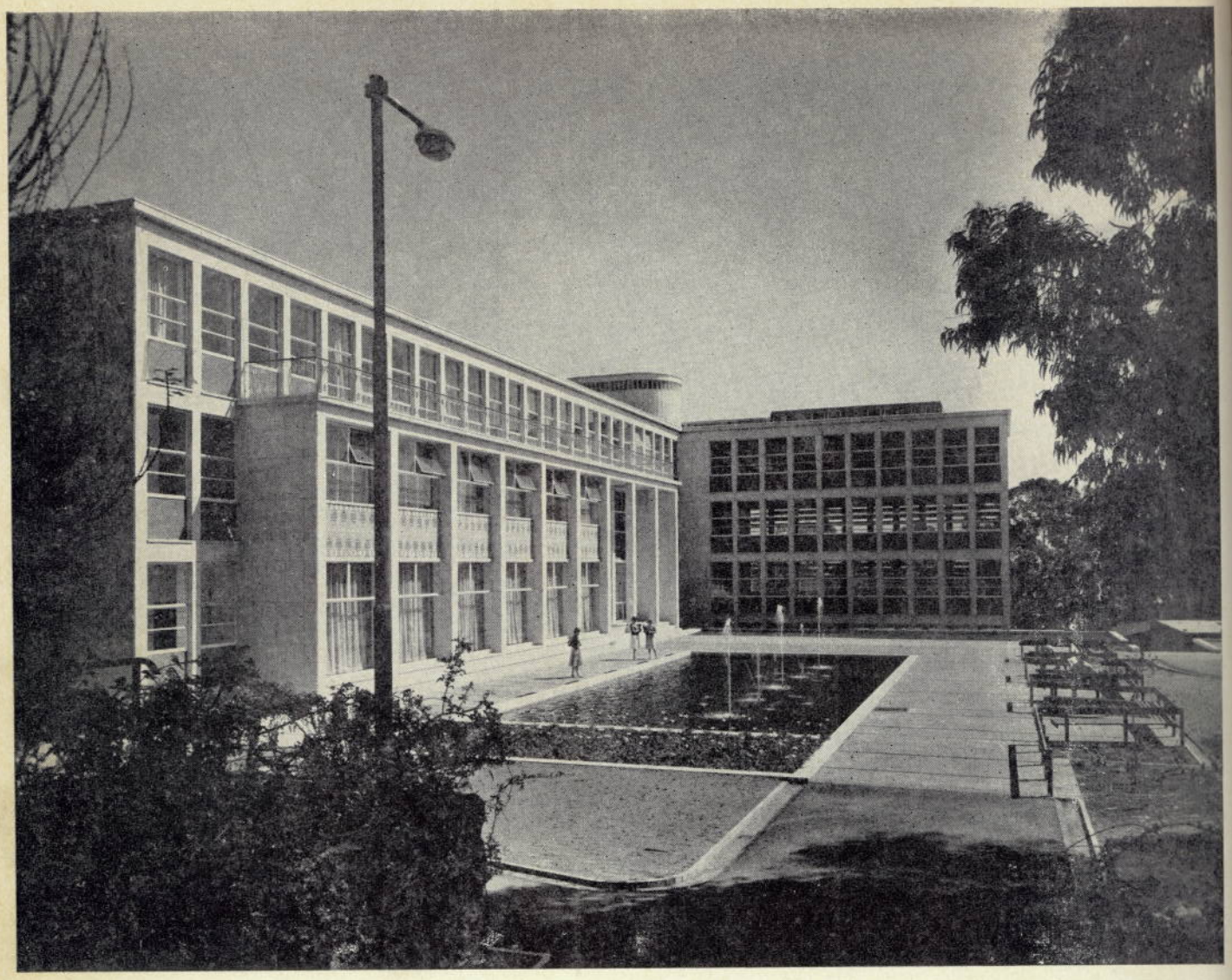

The John Moffat Building

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

THIS GENERAL VIEW IS FROM THE SOUTH-EAST LOOKING FROM THE APPROACH ON THE UPPER CAMPUS LEVEL

ASSOCIATE ARCHITECTS: Professor J. Fassler, W. D. Howie, G. Herbert, J. M. Shunn, U. Tomaselli and J. Morgenstern, M.M.I.A., A.A.R.I.B.A.

CONTRACTORS:

FOUNDATIONS: French and Hollingshead, Ltd.

SUPERSTRUCTURE: J. C. Bitcon and Co. Ltd.

QUANTITY SURVEYORS: Farrow, Laing and McKechnie, M.M.C.Q.S.

CONSULTING ENGINEERS:

STRUCTURAL: M. Marcus, M.I. Struct, E., M. (S.A.), I.C.E.

ELECTRICAL: N. P. Smit, M.I.E.E., A.M. (S.A.) I.E.E.

VENTILATION, FOUNTAINS: D. A. Hill and Partners.

The decision taken by the University Council in 1954 to accommodate both the Faculty of Architecture and the Department of Fine Arts in the new building has continued an association that dates from the establishment of the Department of Architecture in 1921.

It seems a far cry from the days when Professor G. E. Pearse initiated courses in the newly created Department in the "Tin Temple" on what is now known as Plein Square. The profession in the Transvaal is indeed indebted to the stalwarts of the Association of Transvaal Architects and in particular to Mr. D. M. Burton and Mr. D. M. Sinclair, who persuaded the then Principal of the Witwatersrand University College, the late J. H. Hofmeyr, to establish a Chair in Architecture, in spite of the inability of the Association fully to subvent the development. I understand that Mr. Burton was not merely active in pressing for the creation of this Chair but also assisted financially in its foundation.

The Department of Architecture was initially a member of the Faculty of Engineering and from its inception provided a course in the History of Fine Arts that proved attractive to students outside the department. Later the Faculty of Arts decided to inaugurate courses leading to the degree of B.A., with Honours in Fine Arts, which courses were provided by the Department of Architecture. Courses in the History and Appreciation of Art and drawing from Life were offered as well as those in Art History for students reading for the B.A. degree. By 1945, such was the students' response that the organisation of these courses became a major undertaking and it was decided to establish a Department of Fine Arts within the Faculties of Arts and Architecture.

A revision of the regulations for the degree of B.A. Honours in Fine Arts inaugurated courses in painting which, together with those existing, made it possible for the first time for a student to register at this University for practical training as a painter. The University thus came into line with others offering degrees in Fine Arts and this resulted in an increase in the number of students interested in careers in Art.

* * *

With the establishment of a Chair in Fine Arts in 1957 the Department emerged as a fully independent part of the University.

In its early years the Department of Architecture was greatly assisted in the establishment of its library by Lady Phillips, who, keenly interested in fostering the Arts, provided not only plaster casts but also contributed towards the purchase of the library of the late J. M. Solomon; by the Association of Transvaal Architects; by the Witwatersrand Council of Education; by Mr. Burton, and, of course, others who have since contributed to its collection. The Architecture and Fine Arts library now exists as a divisional library housed in the new building under the control of the University Librarian.

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By 1927 the Department of Architecture had increased in stature sufficiently to merit the recognition by the Royal Institute of British Architects, thus exempting graduates from its final examination. Courses in Quantity Surveying were commenced when the University of Pretoria established a Chair in Architecture in 1942, and terminated the by-lateral agreement between the two Universities whereby qualifications in Quantity Surveying had been awarded by the University of Pretoria and in Architecture by the University of the Witwatersrand.

In 1940 the Department was raised to the status of a Faculty and in the same year the Registration Council of Great Britain, under the Architect's Act, gave full recognition to the Faculty's courses leading to degrees, diplomas and certificates. The next important development was the establishment in 1946 of a post-graduate Diploma in Town Planning for architects, civil engineers and land surveyors, which is recognised by the Town Planning Institute of the United Kingdom as exempting diplomates from its final examinations.

For many years valuable assistance was given to the University of Natal when students wrote the senior examinations of the University of the Witwatersrand until a Chair was established in Durban. The Faculty has also been pleased to share its experience in town planning education with the other South African Universities embarking on similar courses.

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During the course of these significant developments the two departments were struggling with unsympathetic accommodation and inadequate facilities; for some twelve year, junior groups were housed in hutments on the Campus; while lecturing facilities were rudimentary. There was a grievous lack of empathy in the departments, so essential to the devlopment of a spirit and purpose in teaching organisations of a professional nature.

In 1954 the University Council gave the new building priority in its post-war building programme and the staff responded enthusiastically to the instruction to proceed with its design. In naming the new building after John Abram Moffat, who practiced Architecture in Johannesburg for many years before ill health forced his retirement to his farm in the Lydenberg area when he died in 1941, the University pays tribute to his profession and his generousity. His will stipulated that, subject to certain specific bequests, the proceeds of his estate be paid to the University fifteen years after his death and that the use to which the funds accruing be put should take a permanent form. The University benefited by approximately £100,000. By naming the largest lecture theatre the Dorothy Susskind Auditorium a tribute was paid to Mrs. Susskind in appreciation of her work as Chairman of the University Towns Festival, held in 1955, to help raise funds for the University Appeal.

THE BUILDING

The location of the building was influenced by a number of basic considerations. Important among these was the creation of a divisional library for Fine Arts and Architecture housed in the building. Since it served both these Departments and the University at large, particularly students in the Arts Faculty, reasonable proximity to the Central Block as well as to the Library was desirable. This was also a factor affecting the large lecture theatre. Moreover, as the largest theatre was to accommodate public lectures, public access and parking which would not congest the main drive was necessary. The site meeting these requirements, and which in addition had interesting features of topography and view, was adjacent to the Library on the fringe of the central Campus space and served by a roadway on the west. Having been used as a spoil dump for the excavations of both the adjacent swimming bath and the library stack room it was a neglected waste that was visually most unattrative and uninviting.

The programme for the building was based on the annual intake of 40 Students in Architecture and 25 in Quantity Serveying. Together with 43 in Town Planning, this gave the Faculty a maximum of 320, while the Department of Fine Arts required accommodation for 45 in practical classes and 270 in academic classes. The divisional library to house 10,000 volumes, lecture theatres seating 290, 80 and 40 respectively with a seminar for 30, the administrative wing, studios, the Materials Museum, exhibition space and staff drawing offices, constituted the essentials.

Six members of the Department of Architecture became associate architects for the project. Five different sketch plans were prepared by individuals or pairs. The best ideas of each

were incorporated in the final sketch plan. These included the set-back of the East Wing to create a forecourt and the arrangement of the exhibition foyer and lecture theatre suite among others. The location of the largest lecture theatre nearest the Campus and accessible from the road met the convenience of B.A. students and of the public on the occasions of public lectures and congresses.

PLANNING

The plan was resolved into the basic T-shape with all the studios, the seminar, crit room and associated staff accommodation in the North Wing, permitting the architectural studios to be lit from both sides and the arts studios to have south light with supplementary roof lights. The East Wing contained the exhibition foyer with lecture theatres, the library the administrative offices and ancillary spaces, while the Dorothy Susskind Auditorium with the staff drawing office underneath developed as an articulated fan shaped form to the South. On the West are the staff garages which define the West courtyard.

The exhibition foyer and lecture theatre suite was thus on the ground floor, the library with its controls and an ante-room providing Fine Arts with display facilities for illustrative material referred to in lectures or special exhibitions, is given prominence in the scheme on the first floor level while the administrative offices, utility units and Materials Museum are situated on the second floor.

The lower ground floor includes a Crafts room so placed to facilitate the delivery of bulky materials and cleaning, since the floor is drained to an outlet for sluicing down. Offices beneath the auditorium presently occupied by the Department of Statistics will accrue to the Department of Town Planning when it is eventually established.

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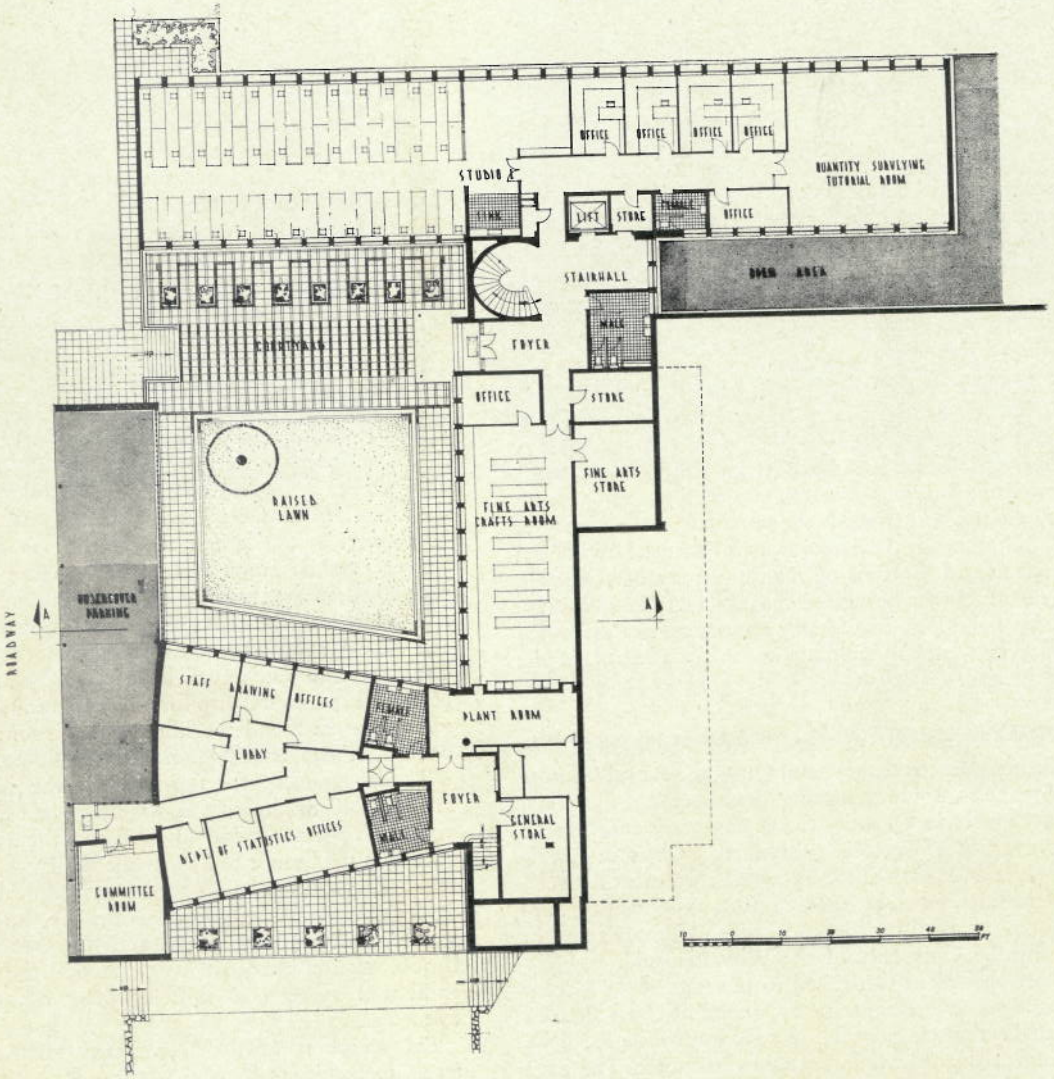
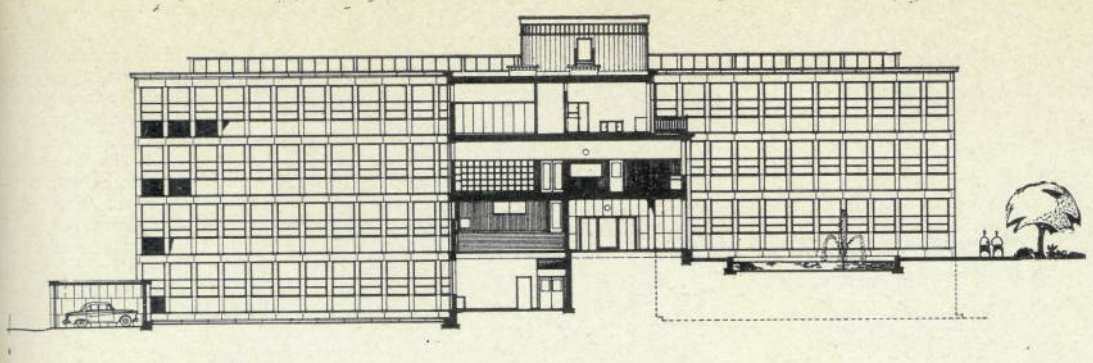
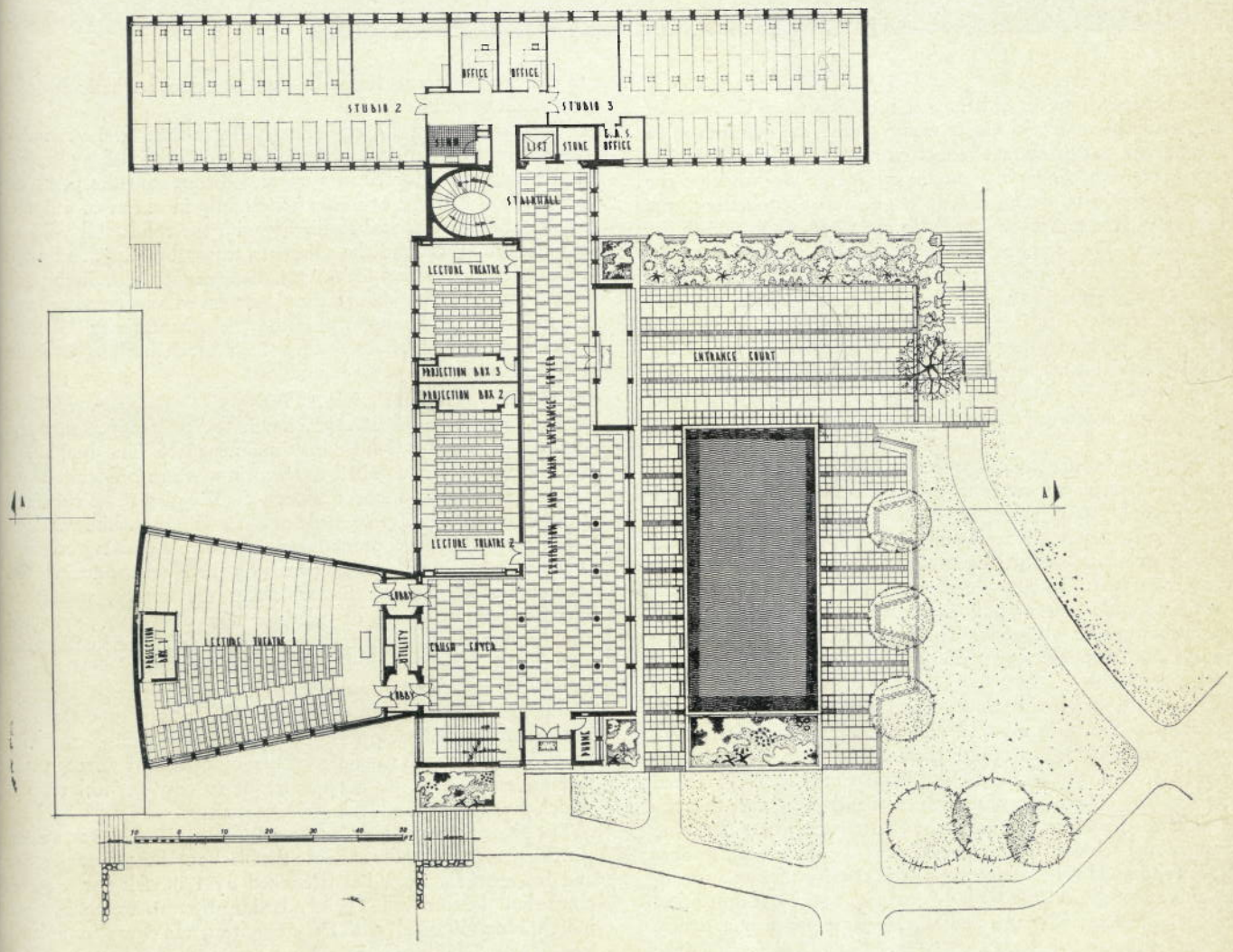
The form of the building produced a series of semi-enclosed and enclosed external spaces which lend themselves to attractive landscaping. The pool, fountains and seats on the East front are intended to form a precinct within the Campus where students can relax between lectures.



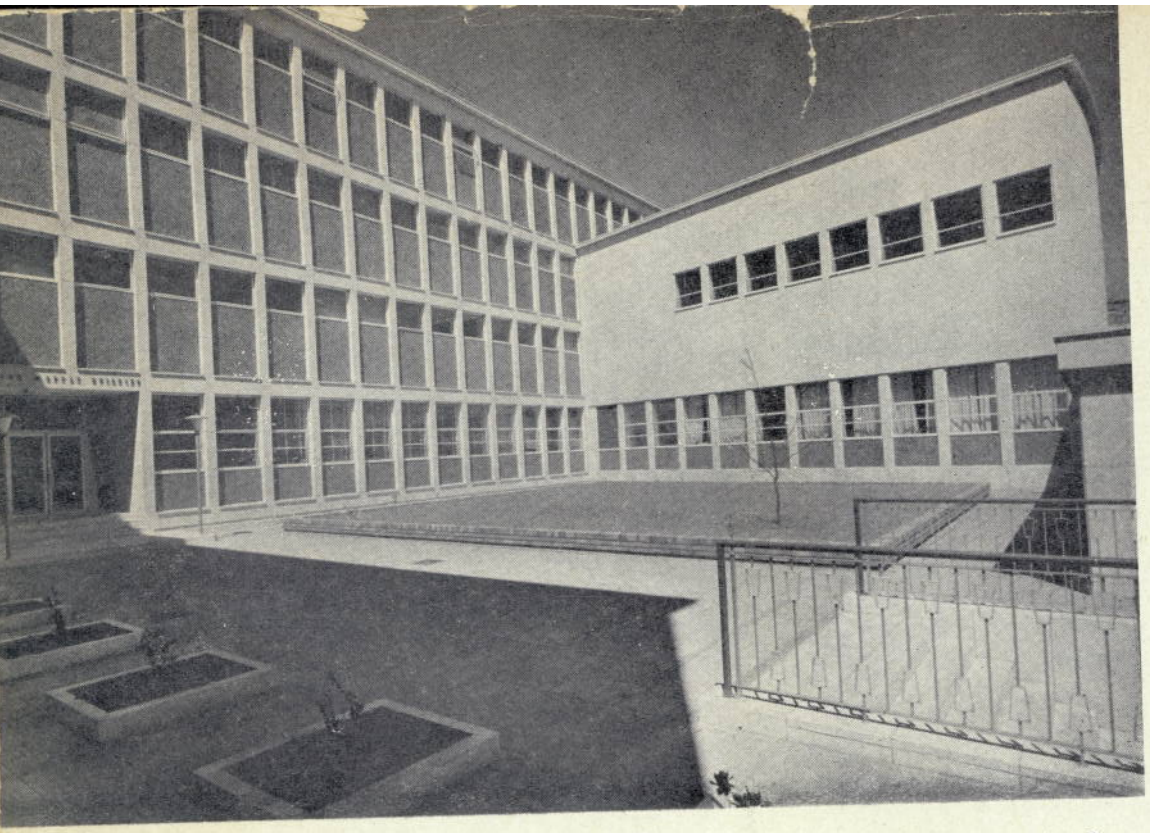
LOWER GROUND FLOOR PLAN



CROSS SECTION A-A.



GROUND FLOOR PLAN.



The West Courtyard, with the entrance at lower gronud floor level. Facings and kerbs are off-white terrazzo while the modular openings have white windows separated from the blue glass-mosaic spandrils by yellow cills. The main auditorium is in the background with the corner of the staff garages on the right. Pavings are patterened in brushed concrete and brick, and the lawn, raised to counter drainage problems in hard shale, has a brick surround.

DESIGN

The introduction of the new building into a Campus of traditional character and classic motifs posed the question as to whether the design should reflect current architectural theory, relying entirely on its contemporary merits or whether the building should be designed with cognisance of its setting, one in which an attempt be made to create harmony with its neighbours. The architects chose the latter, more exacting, approach. An interesting parallel was seen recently in the work of Paul Rudolph who faced the same dilemna when he designed the new Jewett Arts Centre at Wellesley College in Boston, U.S.A. He decided to create a wholly contemporary building which would blend into the "collegiate gothic" Campus. By siting, massing, by detailing and proportion and by sympathetic scale he succeeded in creating a stimulating and harmonious asset.

In the John Moffat Building the approach had the same motivation. An attempt was made to design a contemporary building which would nevertheless be in harmony with its Campus setting. In its height, its scale and its simple massing and in the proportion of its modular openings it has an affinity with that which exists. A "fashionable design" was avoided so that the building should not rapidly date, but rather, that it should exhibit a timeless character. The responsiblity for creating a suitable and harmonious environment for the young student was fully appreciated.

The general design represents a conscious pursuit of the thematic variation of the basic module, and a careful integration of all components with this modular theme. The thematic variations may be seen in the facade of the library unit with its related mosaics, in the pavings and garden seats and in the fact that the cornices of the library unit and the theatre wing bear the same proportional relation to those surfaces as the main cornice does to the full facade. The projection of this cornice throws a strong definitive shadow on the sunlight surfaces, and by reason of its undercut profile and contained shadow it persists as a strong terminal definition on the shadowed elevations. This characteristic is symptomatic of the deliberate exploitation of light and shade to enrich the external surfaces — an important aesthetic device in this sunlit country.

The openings on the facades derive from the 5 ft. 6 in. module which was found most suited to both studio and office planning. and which was adopted as a control throughout the plan. The proportions of these openings are slightly in excess of a double square and bear marked similarity with the solids and voids of the Central Block and the adjacent Library building, and occur repeatedly in subsidiary elements throughout the building.

The structure consists of a simple system of reinforced concrete columns and beams supporting floor slabs comprising "Shofco" precast prestressed beams with hollow block infilling over the uninterrupted spans of 33 ft. and less.

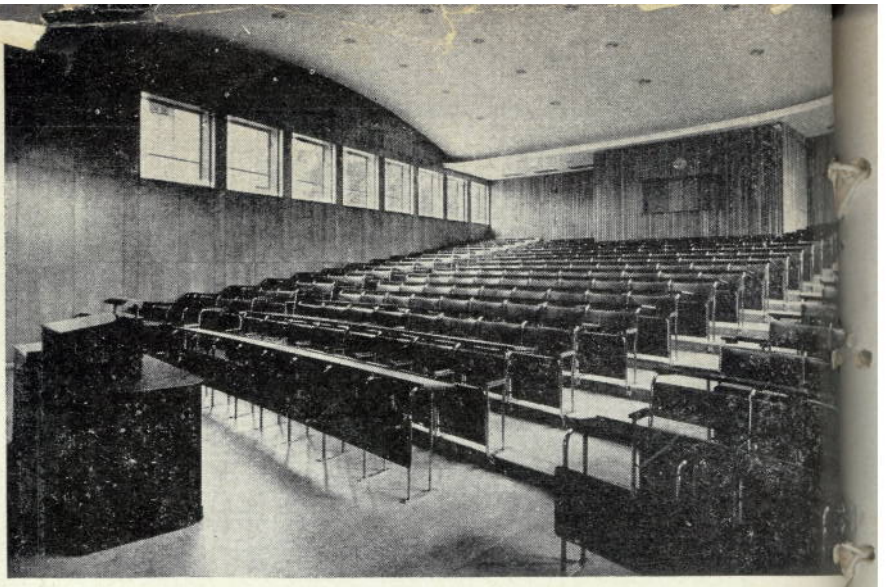
FINISHES AND DECORATION

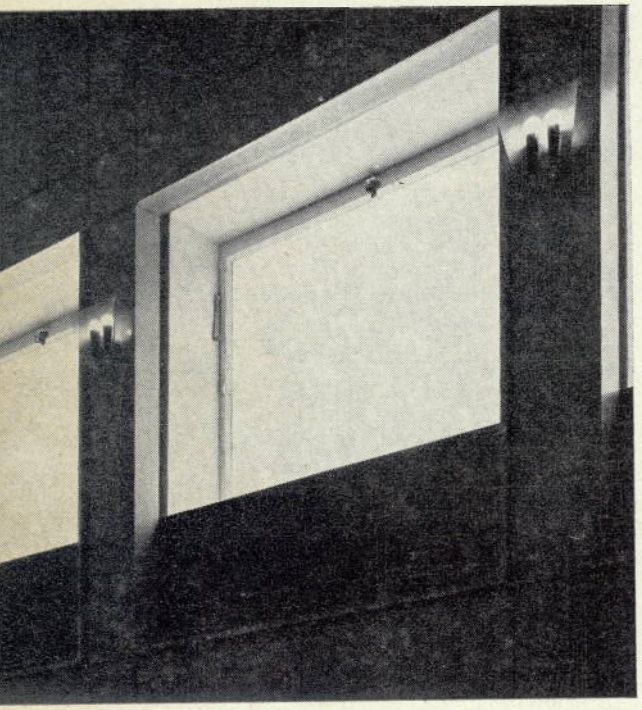
The external finishes were chosen for their appearance and durability so as to avoid costly maintenanace. The building is sheathed in precast combed terrazzo in a warm off-white shade which retains its colour even when wet. The glass mosaic spandril panels, generally in a quiet shade of blue, with the white windows relieved by the yellow pressed steel cills, form a pleasing contrast. The group of six red mosaic panels on the North and the broad mosaic surfaces on the East marking the library, with their intricate running design of pale blue lines on a honey coloured background enriched with darker brown and blue surfaces and accentuated by white glazed tiles, the precast concrete grilles on the West and the wrought metal balustrading picked out in silver, blue and pale umber, amplify the basic theme stated by the repetitive window openings. On the unfenestrated end walls the modular theme is sustained by the joint pattern in the terrazzo facings, emphasised by a sequence of narrow vertical recesses which give interest and scale to these surfaces.

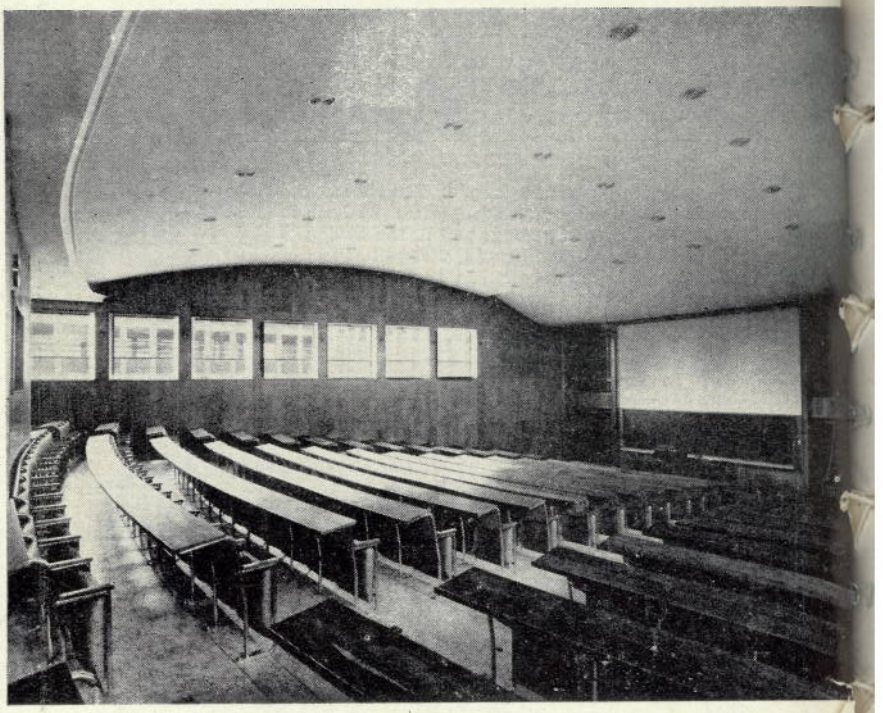
The Dorothy Susskind Auditorium is lined with Oak veneer panelling, removable for access to the blackout shutter installations and has specially shaped slats backed by 1 in. felt for acoustic control on the rear wall. The standard tip-up seats are upholstered in light blue "Vynide" with Kiaat counters, and chromium plated steel frames. The lectern is in Kiaat and the floor grey linoleum. The other theatres have similar treatment on the rear walls, the

THE DOROTHY SUSSKIND AUDITORIUM.

Removable Oak veneered laminated panels cover the side walls and shaped Oak slats over 1 in. felt provide acoustic control on the rear wall. The curved reflective ceiling contains recessed louvred lights on a dimmer circuit to provide glareless illumination for use during illustrated lectures without impairing the projected picture. General lighting is by rear cove and brackets, with spots for the front wall containing fixed double screen, glass chalkboard and grilles masking forced ventilation inlets and speakers wired to 16 mm. cine projector. Dual slide projection is provided in the projection room. The floor is pale grey linoleum, seats pale blue "Vynide" with Kiaat counters, and the lectern and doors are in Kiaat. Below is a detail showing the electrically operated steel blackout screens partly closed.







seats are in dark blue and grey respectively with floors of grey and tan asphalte tiles respectively and similar lecterns. The same suppliers provided the seats in the Great Hall in 1939.

Floors elsewhere throughout the building amounting to some 5,000 square yards, are in "Krommine" marble type linoleum, that in the exhibition foyer being laid in pattern of light grey squares having sequences of light blue and yellow accents in the centre and separated by dark grey stripes, all in a dark blue marginal surround.

The main elliptical stair has *in situ* treads and precast risers in grey-green terrazzo while the wall was given a special stippled plastic finish to avoid the disturbing reflections otherwise apparent.

The library has end walls of slatted planelling and a series of bays with bookcases, having adjustable shelves, all in Oak. Contrast is given by the Sapele Mahogany of the tables and blue upholstered chairs. A feature of the reading room was the use of a sound absorbent ceiling. The effect is most apparent and the conditions for study and concentration are eminently satisfactory.

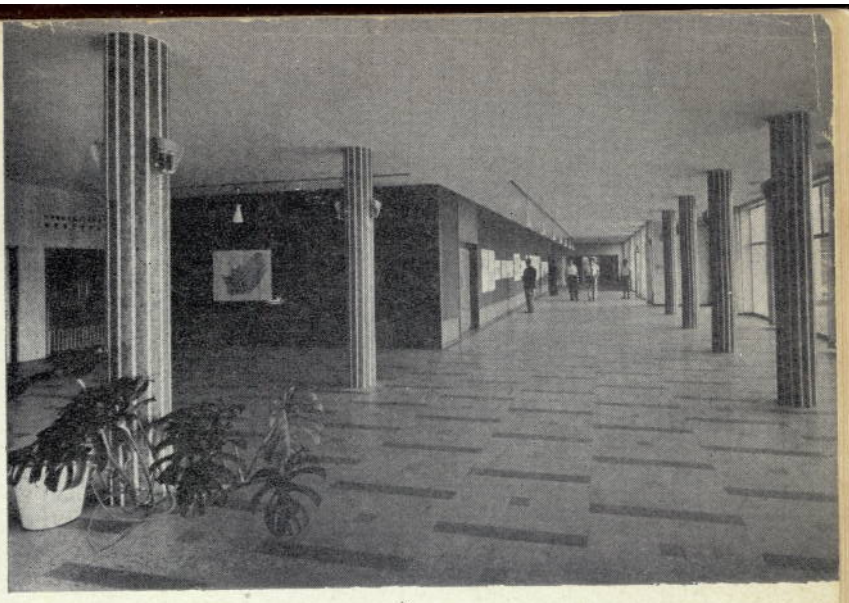
The Materials Museum is being developed as an important teaching aid to which manufacturers and suppliers are enthusiastically contributing. The walls are panelled in pale grey pegboard, which together with matching shelves of varying sizes carried on "Sparrings" fittings provides complete flexibility of display.

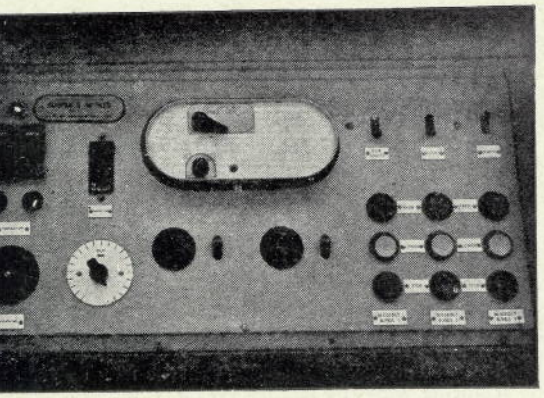
The staff offices have been equipped with appropriate built-in furniture in which Oak and Sapele Mahogany are used in effective combination. These fittings were treated with cellulose sanding sealer with a wax finish.

The plastered wall surfaces generally were finished in eggshell enamel following careful pre-preparation to obtain a superior finish. P.V.A. finish was used in the Crafts room to facilitate subsequent cleaning.

In the selection of colours for painting the architects took particular pains. Each space was treated on its own merits and colours were mixed on the spot. There was scarcely a standard

views of the exhibition foyer appear at right. The accommodates both the numbers of persons using the e theatres as well as exhibitions. As the foyer and e theatres are *en suite* they may be used for congresses, the service kitchen in the crush foyer, seen at left, lustration, may be used for refreshments. The inner are cloth covered in blue over pinning surfaces so that whole surface is available for display, here showing nt work. Floor is in light grey linoleum squares with ts of blue and yellow, separated by dark grey strips, margin of dark blue. Lighting is by brackets, supple- ed by recessed ceiling floods at the window and pen- on a sliding conductor for flexibility against the dis- wall. The lower illustration shows the view over the ain pool. Columns are sheathed in blue and white mosaic.





il of the standard lectern control panel. At left is the mer-winter ventilation control, with microphone jack w wired to the loudspeakers. The ceiling light dimmer rol follows, then the power points with the intercom k-listen unit above. At right the light switches are e the buttons controlling the blackout blinds, with a to operate a future screen curtain.



le used and while the range of applied colours is considerable effect is never aggressive.

he same quality may be seen in the curtaining which includes e beautiful David Whitehead designs prepared by John Piper vell as examples from the well-known House of De Haes of land. All curtains have special dyed linings to tone with the our schemes and were made up by the local suppliers.

he lettering used in the building at entrances and in the foyer specially designed and carried out in gold anodised alu- ium with enamel insets in various colours according to the ing. The same lettering design was skilfully applied by the writer to the glass direction board. Elsewhere the door serial nbers and name panels are in cream on transparent plastic.

ECIAL PLANNING FEATURES

he entrance and exhibition foyer, together with the crush er, *en suite* with the lecture theatres, was deliberately planned generous lines to cater not merely for the large number of dents using the theatres but, since the internal wall surfaces have cloth covered pin boards, to permit the display of current design exercises in all years of study once these have been appraised and criticised. Students are thereby kept in touch with what is happening in courses other than their own. The space is also available for mounting special displays and exhibitions for both academic and public occasions. The facilities thus offering, together with the small service kitchen relating to the auditorium, having a marble counter and "Modernfold" doors in a travertine surround, has already made the building a venue much in demand for official congresses. The lighting of this space is designed for the purpose and includes recessed ceiling floods, background lighting by repetitive wall brackets and pendants and spot lights on a sliding conductor for flexible illumination arrangements.

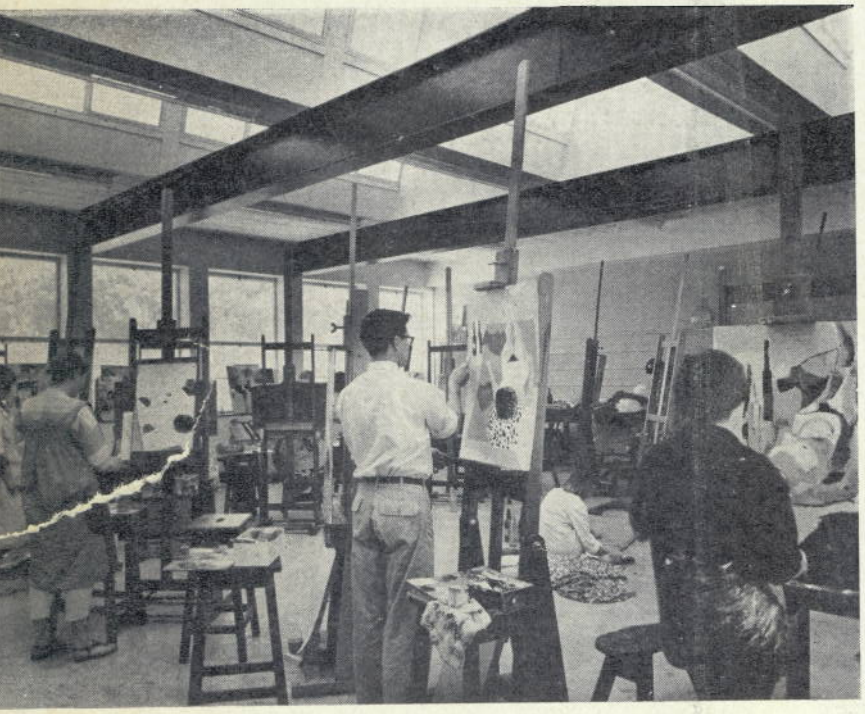
* * *

The lecture theatres were designed to meet the specific require- ments of illustrated lectures as these constitute a large proportion of the programmes of both departments. Nevertheless the architects did not desire permanently darkened theatres as there is





The Architecture and Fine Arts Library, housed in the building, is a divisional unit under the control of the University Librarian. It accommodates 10,000 volumes with a high proportion of large folios. The bookcase fittings with adjustable shelves and the slatted panelling on the end walls are in Oak, with contrasts in the Kiaat doors. The tables and chairs, with blue upholstery, are in Sapele Mahogany. Columns have blue and white glass mosaic sheathing and the floor is in light blue linoleum. The ceiling is entirely covered with highly absorbent acoustic tiles with dustproof flourescent light fittings.



Opposite: The Materials Museum has pale grey pegboard panels with Kiaat cornice and adjustable shelves of various sizes. The room is designed for complete flexibility of display so that the exhibits may be arranged to coincide with the lecture syllabi, and accommodate the extensive collection of the various items.

Left: A view of the senior painting studio, with a "life" class in progress. The model is clothed and resting. These studios on the top floor have windows to the south with saw-tooth roof lights. The structure comprises steel girders and frames to which the windows are fixed, carrying precast concrete units forming the ceiling and sloped surfaces. The light from the small windows on the north elevation is controlled by individual shutters. Individually switched flourescent lights give artificial lighting control.

Right: A typical architectural studio. The view shows the North windows with their neutral tint glass louvres which control sun penetration and even out the light intensity on both sides of the rooms. Continuous flourescent strips give evenly dispersed shadowless lighting. At right is seen a corner of the briefing space. Face brick is used on side and end walls, where different colours and bonds have been exploited in the different studios. Drawing desks are at intervals corresponding with the modular window mullions.

