

University of Manchester
MATHEMATICS BUILDING

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ARCHITECTURE & PLANNING LIBRARY
University of Manchester

UNIVERSITY OF MANCHESTER / MATHEMATICS BUILDING



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University of Manchester

(C0342)

Client	Victoria University of Manchester
Architect	E C Scherrer of Scherrer & Hicks, Manchester in association with H Thomas, Planning Officer, University of Manchester
	Associate in Charge R G R Clark E C Percey E B Kenyon A Wild
Quantity Surveyors	Rider Hunt & Partners, Manchester
Structural Consultants	W V Zinn & Associates, Manchester
Services Consultants	Oscar Faber & Partners, Manchester
Sculptor	M Yeomans
Clerk of Works	H Massey
University Mathematics Building Planning and Construction Sub-committee members	G H Kenyon (Chairman) J F Adams A H Allman M G Barratt W T Fuller N. L. Hanson C R Illingworth N H Johannesen M H A Newman (until retirement) F J Ursell P Whittle (until resignation) R A Rainford Bursar

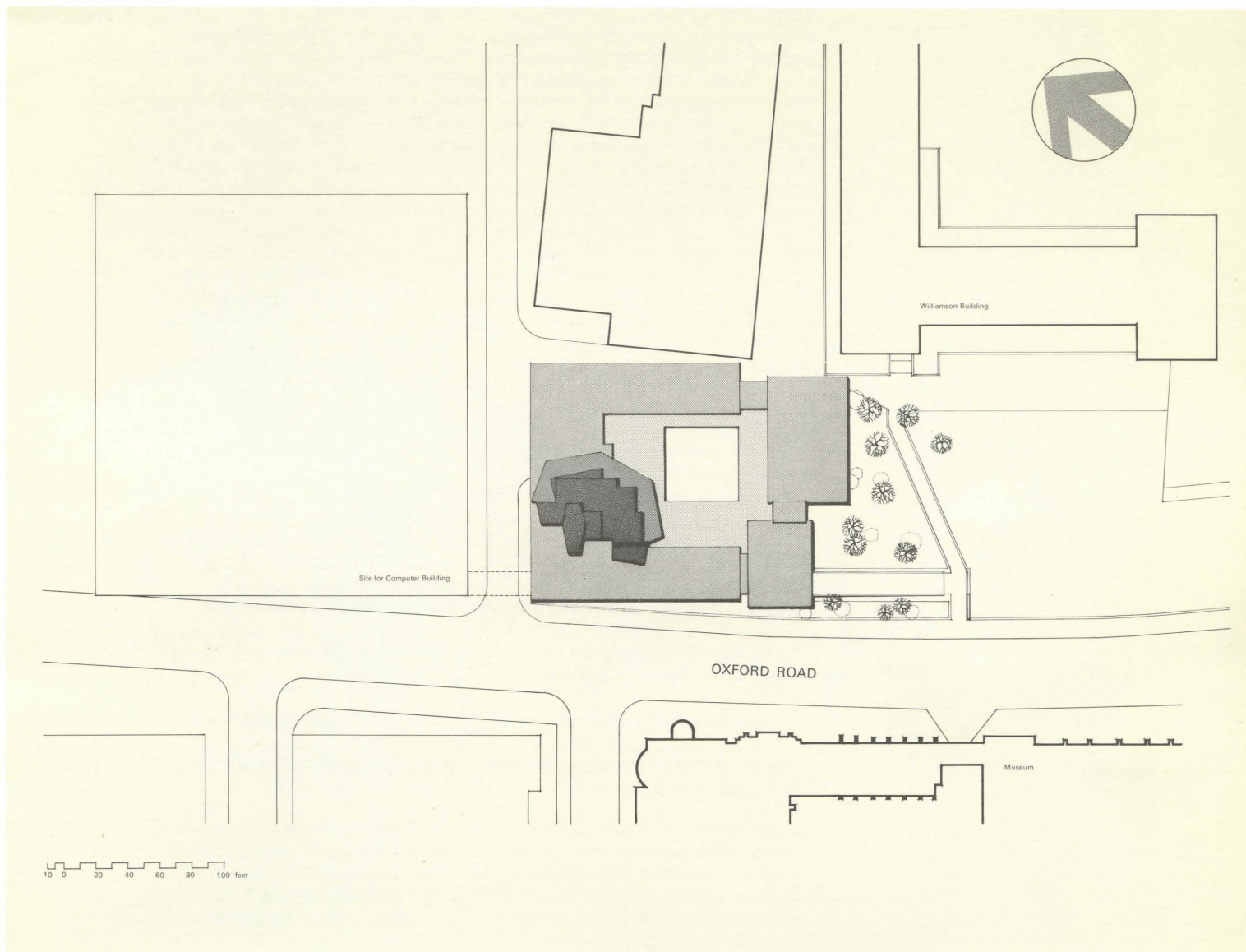
Nov. 1969

Mathematics Building

When the Consultant Planners presented their proposals for the University precinct, this building, which is designed to house facilities for one of the most generally applied disciplines, was sited for this reason at the centre of the University opposite the Old Quadrangle. It was also the planners' wish that it should form a link between the existing ground level circulation for pedestrians and the new higher level pedestrian deck, and constitute the main vertical feature of the new development. This directive was valid not only psychologically but also rationalised the high cost of urban land in terms of accommodation.

The close proximity of the resultant 19-storey tower to Sir Giles Gilbert Scott's excellently modelled tower of the Church of the Holy Name and to Alfred Waterhouse's Whitworth Tower presented a challenge to the architects in that lively modelling of its form was necessary in order that the new tower should live graciously beside its older neighbours. The University Authorities understandably laid great stress on the absolute necessity for quiet working conditions and the position of the site immediately adjoining a main traffic artery presented considerable difficulties in this respect. For this reason the three large lecture theatres, none of which has windows, have been placed on the south west elevation adjoining Oxford Road and these, together with the mass of the podium, protect the lower floors of the tower against the noise from Oxford Road. The majority of rooms in the podium have windows opening on to the quiet patio. The shape of the tower and the position of its brick-faced walls and opening windows were planned in such a way as to provide further protection against noise from this source. Dark bricks were chosen for the walls of the tower and below the third floor of the podium to contrast with the light grey mosaic facings and glass spandrel panels elsewhere. The roofs of the podium and the floor and terraces of the patio are carefully designed as surfaces that will be seen from the large conference room and from many other rooms in the building.

The main entrance is at first floor level along a ramp from the south which forms the first stage of the public access to the pedestrian deck. The entrance hall and the adjacent library are designed in such a way that from them one overlooks many parts of the building — the rooms surrounding the patio, the patio itself and its richly modelled pre-cast concrete sculpture, the large projecting conference room and the lower rooms of the tower. The architects laid great importance on this element of transparency in creating a corporate setting which it is hoped will be beneficial to the Departments in the building.



Site Plan

The building will be occupied by over 450 undergraduates, 75 post-graduate and research students and 60 academic staff in the Departments of Mathematics and the Mechanics of Fluids. The number of undergraduates will frequently be increased by students from other departments. The accommodation has been arranged with the undergraduate and principal teaching rooms on the three lowest floors, with accommodation for individual departments, post-graduate and research students, and staff in the upper part of the building. The undergraduate library is placed on the ground and first floors and overlooks both the patio and the gardens to the south-west, carrels being placed along the south-west wall. The ground floor contains the heating and ventilating plant and electrical service rooms. The three large lecture theatres are based on the second floor and are approached from a foyer adjacent to the upper part of the two-storey entrance hall which forms a glazed link between the public ramp and the patio. The principal divisions of accommodation within the upper part of the building comprise rooms for the Statistical Laboratory (within the Department of Mathematics) and the Department of the Mechanics of Fluids on the third floor, the administrative offices on the fourth floor, senior academic staff rooms on the fifth floor and a large conference room on the sixth floor where all users of the building, except undergraduates, may meet. Above this lies the accommodation for research and diploma students and academic staff.

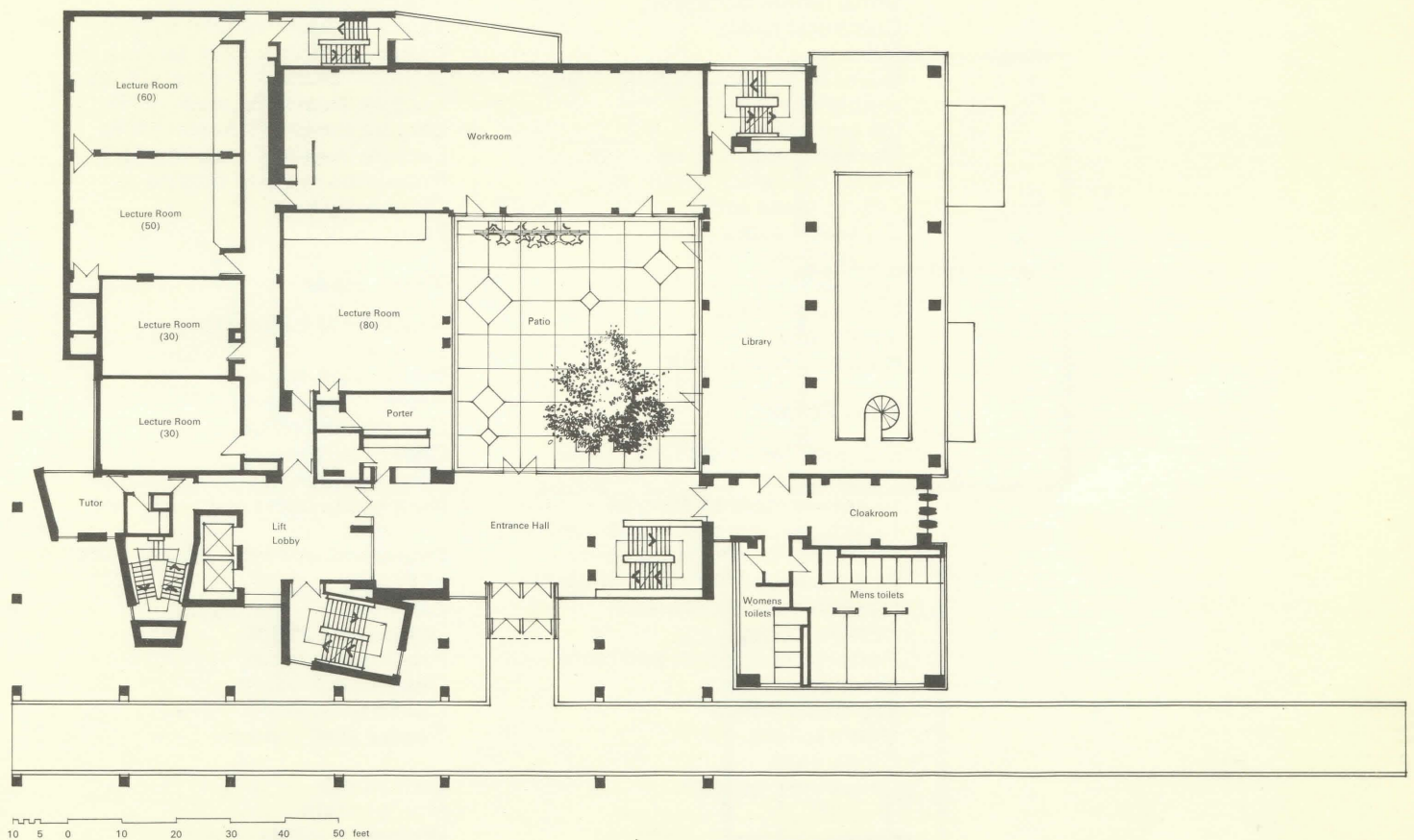
The maximum use has been made of the garden area lying between the Williamson Building and Oxford Road in that this has been extended northwards to the library windows in order to create a pleasant and quiet area in this important position. This also enhances the setting of the new building as seen from the main entrance to the Old Quadrangle.

The building is served by an oil-fired heating installation which will also serve the adjacent proposed Computer Building.

Two passenger lifts are provided, each with a speed of 350 feet per minute.

The nett usable floor area is 64,361 square feet and the gross floor area 102,775 square feet.

By agreement with the University Grants Committee, a procedure of "competitive negotiation" was adopted to select a main contractor with whom to negotiate the contract. As a result of obtaining preliminary tenders, J Gerrard & Sons Ltd were selected and negotiations were completed in a total contract sum of £819,926, including certain items of furniture and fittings.



First Floor Plan

**Schedule of
Accommodation**

Ground Floor

4 Lecture rooms, each seating 50
2 Lecture rooms, each seating 30
Wind tunnel laboratory
Computer room
Library
Boiler house and heating and
ventilation plant
Oil storage
Electrical sub-station
Electrical switch room
Office: mess room
Cleaners' mess room
Locker room
Cleaners' stores
Cleaners' toilets
Men's toilets
Refuse disposal unit

First Floor

Entrance hall and lobby
Tutor's room
1 Lecture room seating 80
1 Lecture room seating 60
1 Lecture room seating 50
2 Lecture rooms each seating 30
Library (quiet work areas)
Porters' room.
Porters' mess room and store
Cleaners' store
Women's toilets
Men's toilets
Cloakroom
Paved internal patio

Second Floor

3 Tutors' rooms
2 Lecture rooms, each seating 80
1 Lecture room seating 60
1 Lecture room seating 50
2 Lecture rooms, each seating 30
Diploma students' room (statistics)
Lecture theatre A (seating 176)
Lecture theatre B (seating 178)
Lecture theatre C (seating 178)
Projection room to theatre A
Cleaners' store
Foyer

Third Floor

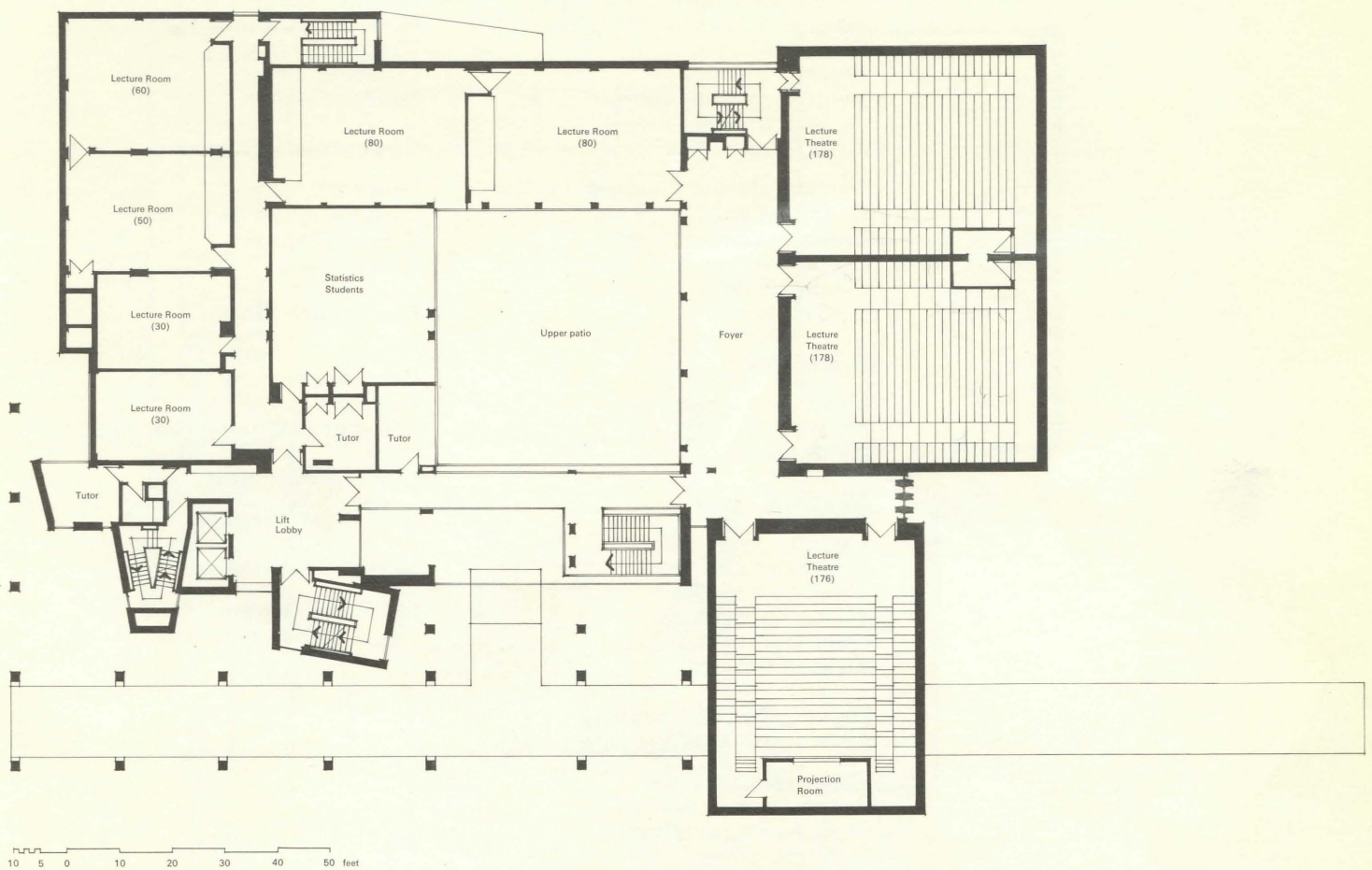
Statistical Laboratory

Library
Discussion room
Professor's room
Department office
Computer room
Five research rooms
Nine staff rooms

**Department of the Mechanics
of Fluids**

Library
Discussion room
Professor's room
Department office
Conference room
Twelve staff rooms

Two stores
Men's toilets
Women's toilets
Ventilation plant room



Second Floor Plan

Fourth Floor

Copy room
Process room
Administrative officer's room
General office and reception
Cleaners' store
Women's toilets
Ventilation plant room

Fifth Floor

Three professors' rooms
Chairman's room
Senior executives' room
Discussion room
Cleaners' store
Staff toilet

Sixth Floor

Conference room
Preparation room
Men's toilets

Seventh Floor

Two computer rooms
Computer staff room
Three staff rooms
Women's rest room
Cleaners' store
Women's toilets

**Eighth, Tenth, Twelfth,
Fourteenth & Sixteenth Floors**

Five staff rooms
Research students' room
Diploma students' room
Cleaners' store
Men's toilets

**Ninth, Eleventh, Thirteenth &
Fifteenth Floors**

Professors' room
Five staff rooms
Research students' room
Discussion room
Cleaners' store
Men's toilets

Seventeenth Floor

Four staff rooms
Diploma students' room
Cleaners' store
Men's toilets

Eighteenth Floor

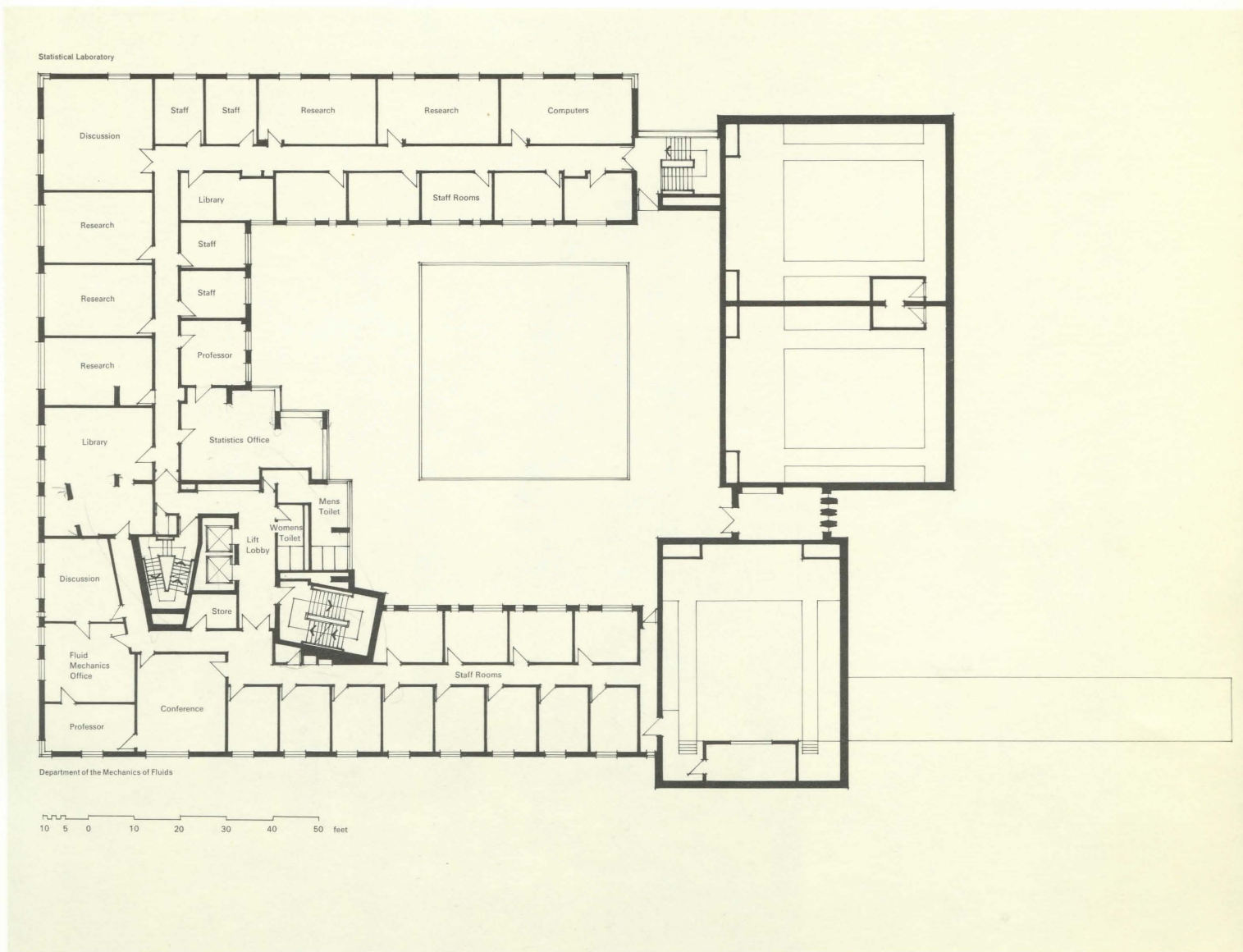
Five staff rooms
Discussion room
Cleaners' store
Tanks and lift motor room access

Lower Penthouse

Cold water tank room

Upper Penthouse

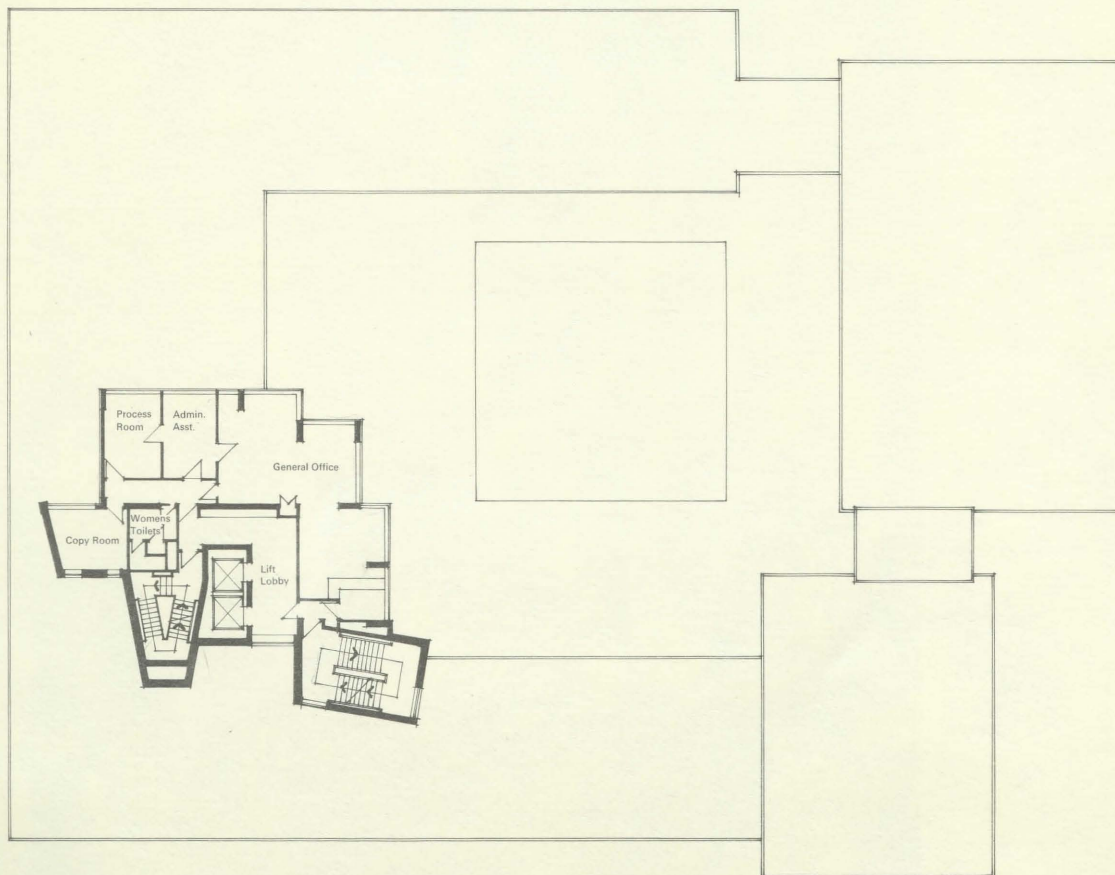
Lift motor room



Third Floor Plan

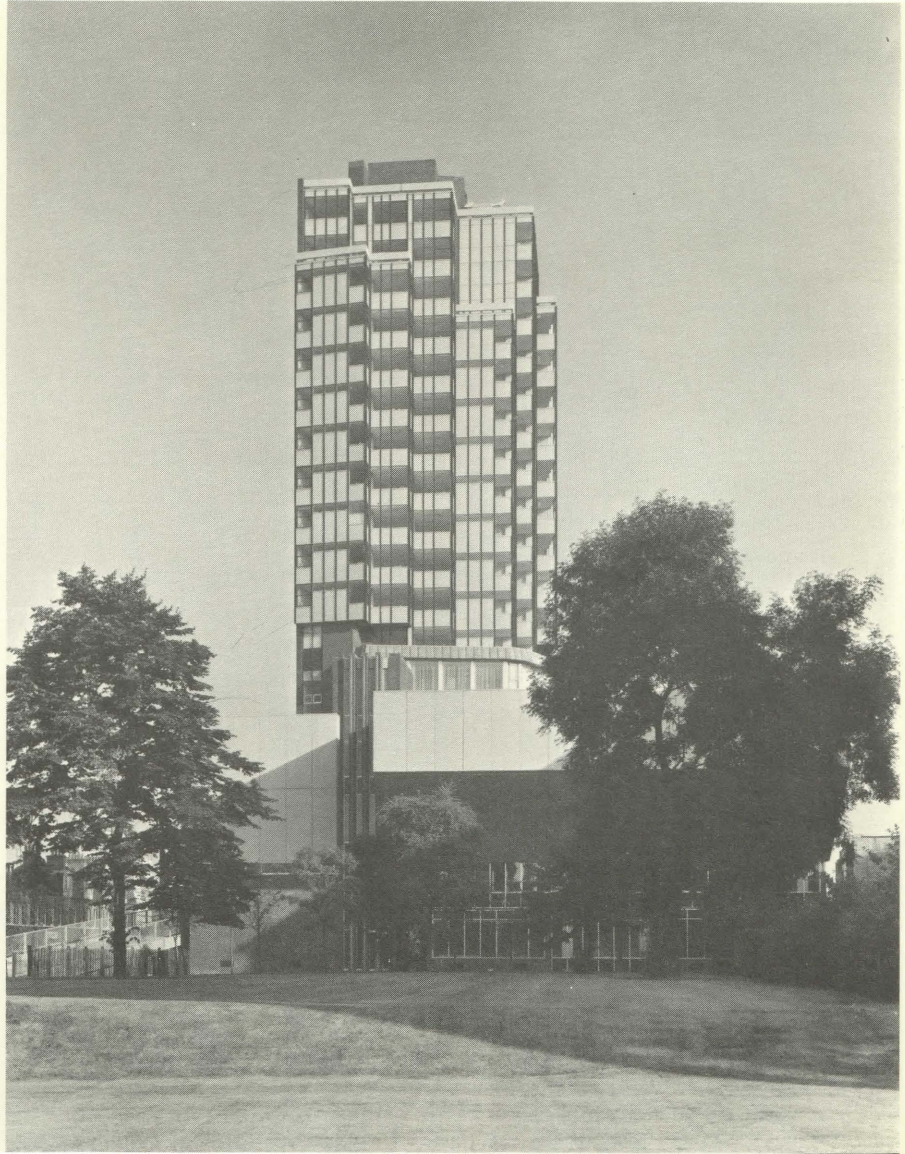


From South West



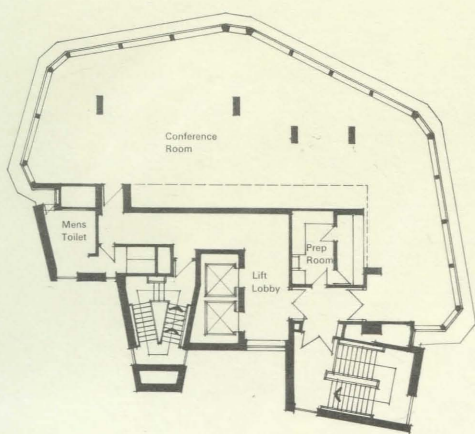
10 5 0 10 20 30 40 50 feet

Fourth Floor Plan



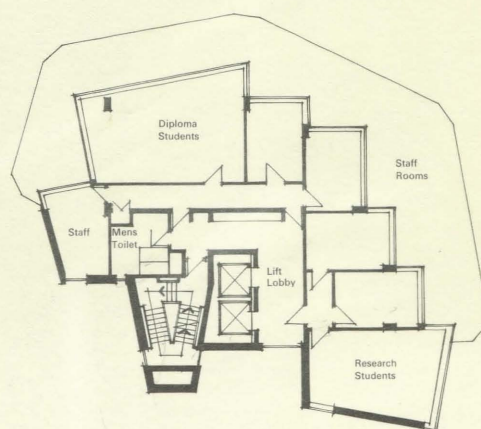
From South

Si:

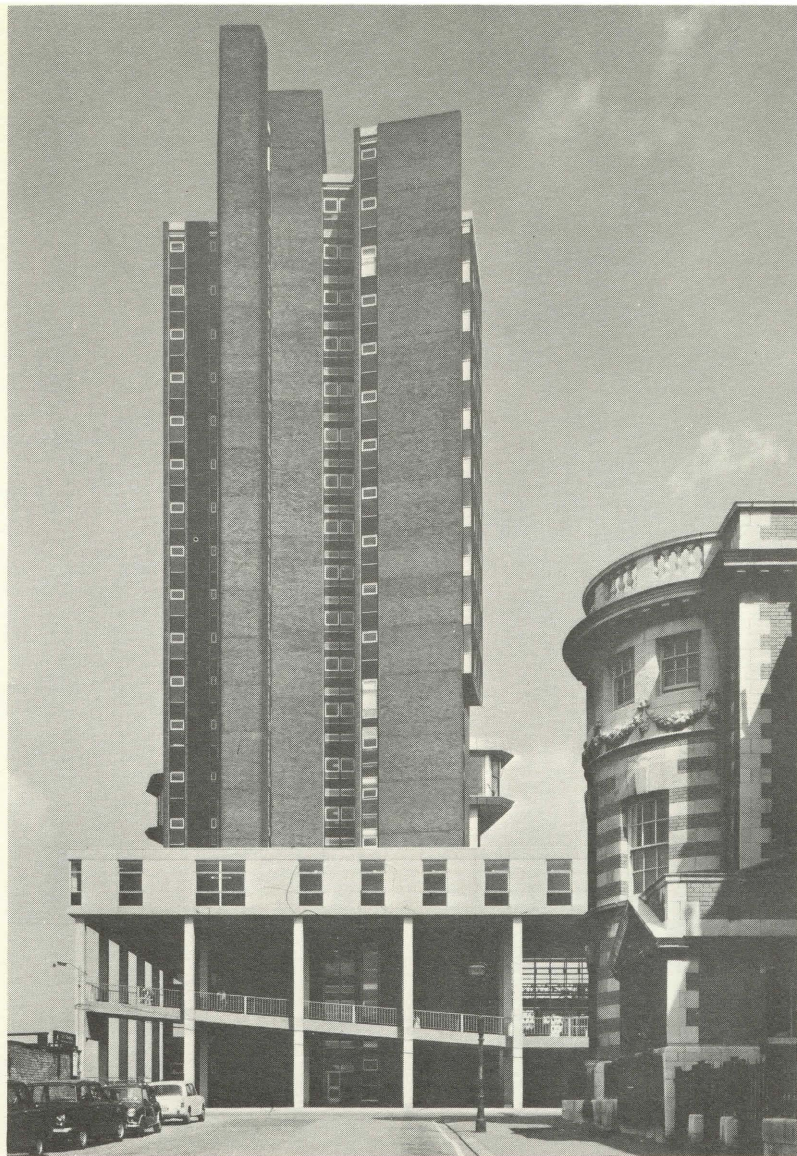


10 5 0 10 20 30 40 50 feet

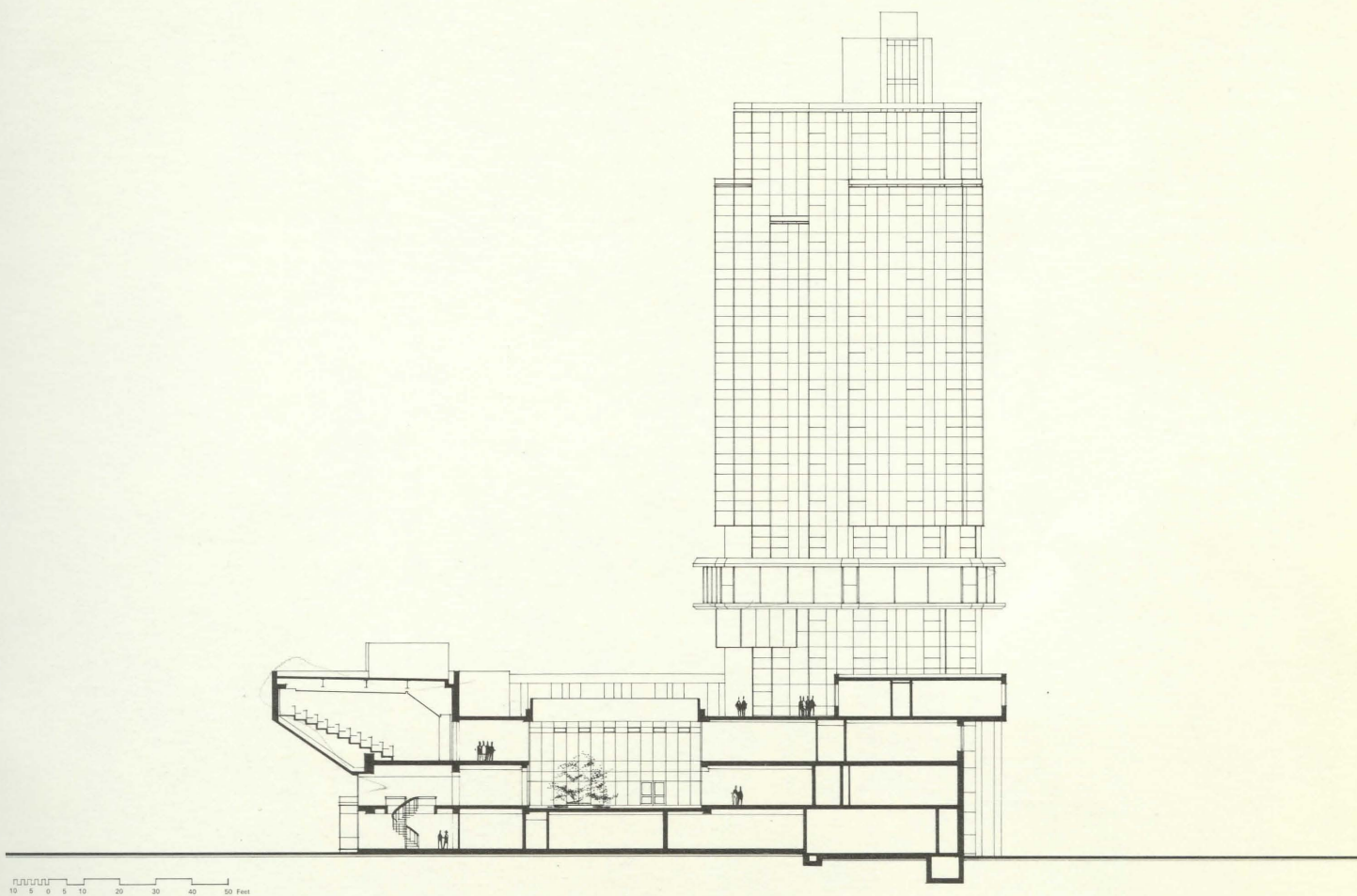
Sixth Floor Plan



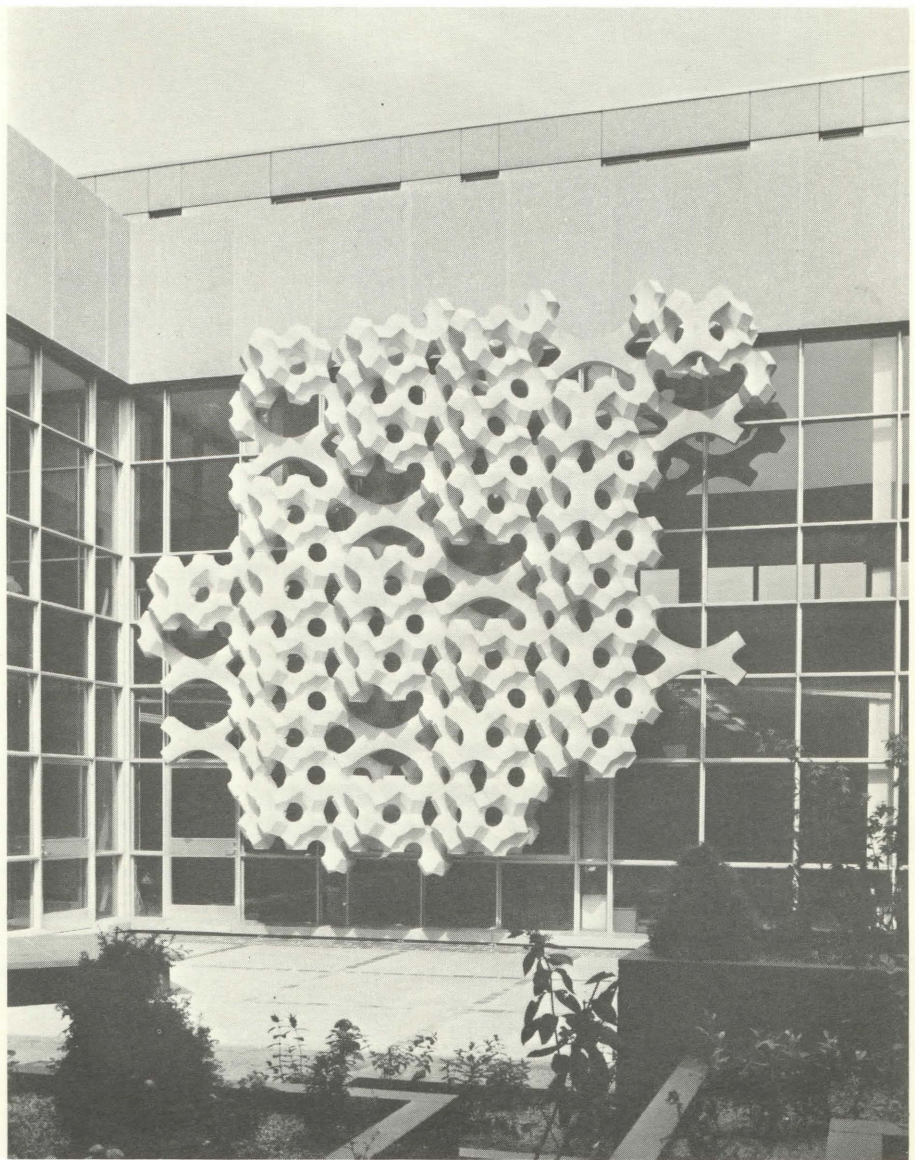
Typical Floor Plan



From West

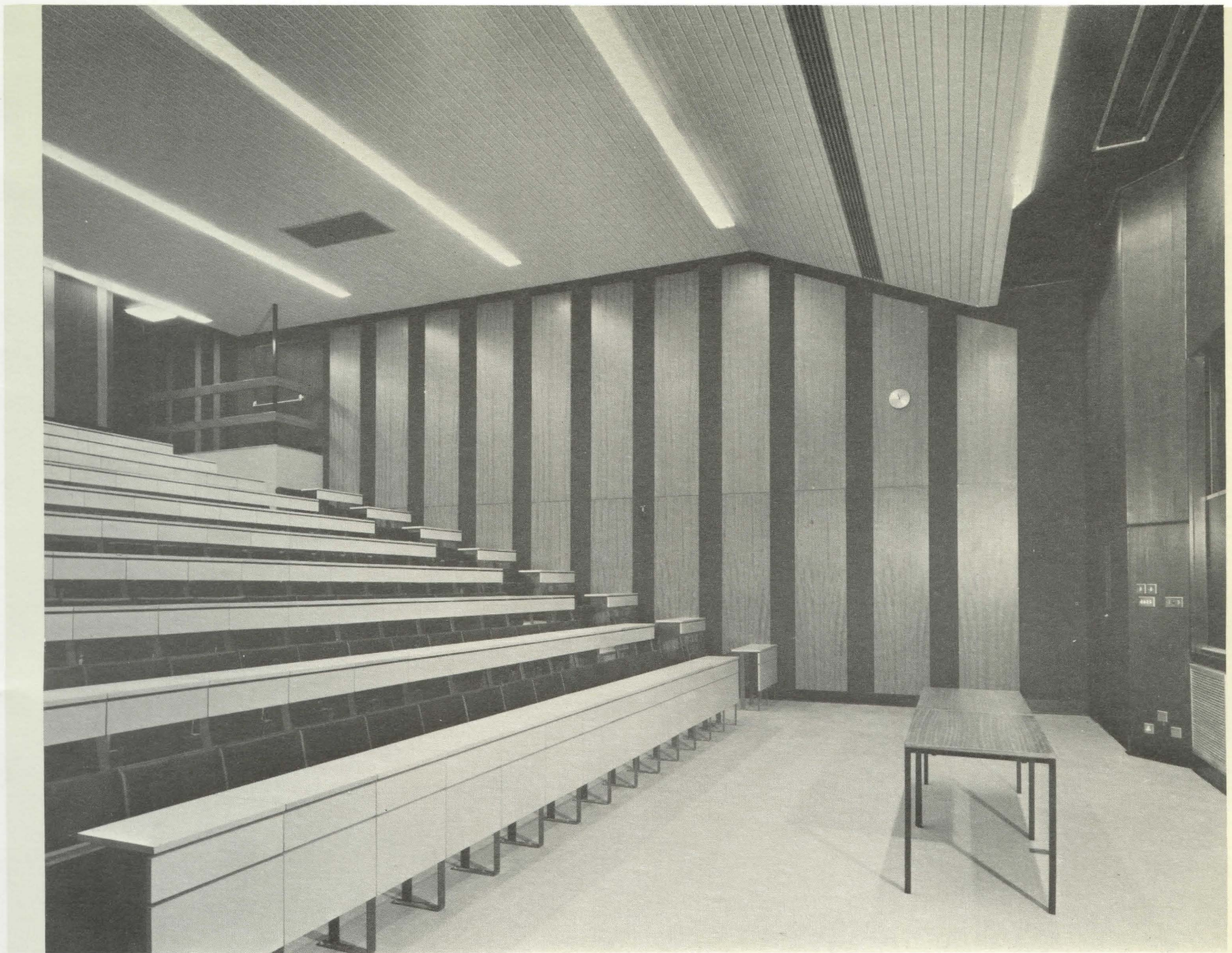


Section through Podium



Patio from South West showing Sculpture

Le



Lecture Theatre A

Contractors	Main contractors	J Gerrard & Sons Ltd., Swinton, Manchester
	Windows and curtain walling	Mellowes & Co Ltd., Sheffield
	Heating and ventilating	Sulzer Bros (London) Ltd., Manchester
	Electrical	Drake & Scull Engineering Co Ltd., Manchester
	Lifts	Platt-Schindler Lifts Ltd., Manchester
	Suspended ceilings	Dunlop Semtex Ltd., Salford, Manchester
		Stilsound Ceilings Ltd., Stockport
	Patio sculpture	Truscrete Ltd., Oldham
	Window cleaning equipment	Mills Scaffold Co. Ltd., London
	Lightning conductors	John Faulkner & Sons Ltd., Manchester
	Ramp handrail and library staircase	F A Norris & Co Ltd., Salford
	Lecture theatre chalkboards and seating, and venetian blinds	Pathe Equipment Ltd., Manchester
	Leadwork to conference room	Norman & Underwood Ltd., Leicester
	Plastering	J McDonough & Co Ltd., Poynton, Cheshire
	Flooring and doors	J Gerrard & Sons Ltd., Swinton, Manchester
	Painting	Arthur Lord & Sons (Rochdale) Ltd.
	Tiling	Ashcrofts (Wall & Floor Tilers) Ltd., Salford
	Asphalting	Limmer & Trinidad Co Ltd., Manchester
	Scaffolding	Palmer's Scaffolding Ltd., Manchester
	Roof screeds	Isocrete Co. Ltd., Altrincham
	Pre-cast concrete panels	Trent Concrete Co Ltd., Nottingham
	Rooflights	Haywards Ltd., London
	External facing bricks	Wilnecote Brick Co Ltd., Tamworth, Staffs.
	Internal facing bricks	Dovedale Brick Co Ltd., Stockport
	Common bricks	The London Brick Co. Ltd., Leeds
	Partition blocks	Burns Building Supplies Ltd., Manchester
	Fire doors	Mather & Platt Ltd., Manchester