



to mark the centenary of the birth of Louis Sullivan the Art Institute of Chicago has assembled a major showing of his work. This image of the Auditorium Building, the first fruit of his association with Adler, is taken from the material assembled for the exhibition. **THE ARCHITECTURAL REVIEW** celebrates the event with a reassessment by Colin Rowe (pages 285-289) of Chicago's contribution to the modern movement.

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MARGINALIA

Significant Americana

In connection with the Centenary of the American Institute of Architects, the New York *Architectural Record* has asked an expert panel (consisting of practically everybody who is anybody in US architecture) to name 'about twenty' buildings that have been significant in the development of the art in America. Seven buildings out of the first eleven were tall city office blocks (the aberrant four were Richardson's Trinity Church, GM Technical Centre, Lakeshore Apartments and the Johnson Wax buildings) and of these seven three were in New York, viz., the Rockefeller Centre, Lever House and the Daily News Building (voted third, fourth and eleventh respectively), one in Philadelphia, viz., Howe and Lescage's Savings Fund tower, two in Chicago and one in St. Louis. It need hardly be added that these last were the Monadnock Block, by Burnham and Root, which only rated a surprising tenth place, and Louis Sullivan's Carson Pirie Scott store (illustrated on page 332, q.v.), and Wainright Building, which tied for first place. It is clear that Louis Sullivan is still the preferred native genius, and the choice of these two buildings suggests that American opinion in architecture is still performing its (apparently constituent) two-way stretch between classicism and empiricism, for the Wainright building is Beaux-Arts stretched to breaking, and held together by the will of a Master, while the dead-regular flat-face grids of Carson Pirie Scott are the same Master's prevision of the architecture of a statistical rentable democracy.

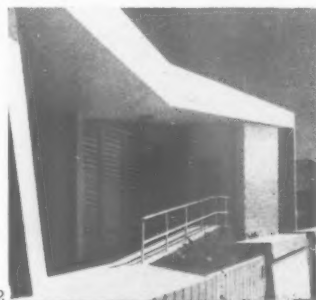
Pioneer Swiss Motel

Though the motel is, of course, a new building type in Britain (AR, February, 1956) it is surprising that Switzerland, through which a torrent of motorized tourists pours every year, should have had no motels until 1955. The first, at Interlaken, is of straightforward courtyard plan, with the twenty-one guest rooms flanking two sides of the court, and common services, administration, restaurant, etc., in the centre. I. The architects, Eduard Helffer and Franz Füeg, have enjoyed the initial advantage of an admirable site by the river Aar, on which the rear windows of the rooms at the left of the illustration command a fine view. As will be seen also, planting is lavish, but has not yet grown up sufficiently to form an effective screen between one parking-space and another. Even so, this scheme gives a good idea of how much a well-designed and

unstinted planting programme can contribute to the visual amenity of motel design.

Split-level Butterfly

The adaptability of the Brazilian *mariposa* silhouette seems unlimited, and if this form needs further functional justifications they are always forthcoming. Thus a recent house by Francisco Bolonha employs the butterfly outline as a logical envelope for a split-level house with bedrooms and study at a higher level than the living room, patio and garage. Externally, 2, a ramp rises from entrance-level to the door of the vestibule that serves the study - but rises parallel to the rise of the roof-slab. Internally, 3, the split manifests itself as a raised gallery at the back of the living room, leading to an internal ramp at the other side of the house (not seen in this picture), also parallel to the fall of the roof. A noteworthy feature of this house is the use of uncommonly rich textures and materials for a Brazilian interior.



Demountable Studio

For a site near Sydney that will eventually be obliterated by an express highway, Gordon Andrews's studio had perforce to be a recoverable and transportable structure,



Work

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capable of being re-erected elsewhere. Essentially, the studio consists of four parabolic arches of plywood, carried by the ends of four main cross-beams, 4, two deep side plates that act as the lower parts of the walls, as well as carrying the canti-

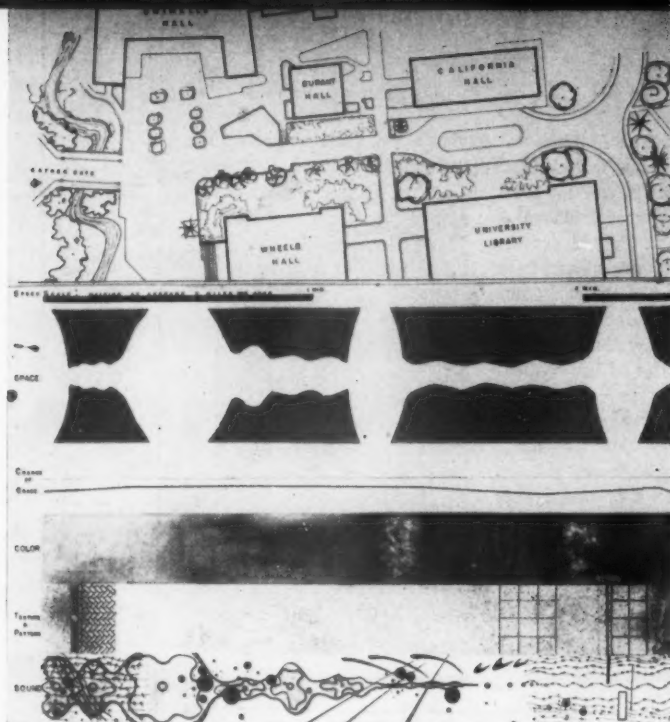


levered front and back sections of the floor-platform, and sheets of plywood screwed down to the arches to form the roof. On one side at the rear, the roofing is continued down to the cill line to form a small photographic dark-cupboard, but elsewhere the zone between the six-foot datum and the cill is entirely glazed.

CIAM X

The tenth congress of CIAM was held in August at Dubrovnik, Yugoslavia. Jacqueline Tyrwhitt writes: 'The theme was the interrelationship of elements of the human habitat—such as the relation of the automobile to the household (US examples), the relation of family composition to the form of a housing group (Dutch groups and others), etc. Four of the congress working parties concentrated upon extracting material of a general nature from the information presented in nearly 40 grilles from over 20 CIAM Groups, representing almost as many countries. The other three commissions devoted themselves to the study of different aspects of a book to be brought out by CIAM called, in French, *La Charte de l'Habitat* and in English, *The Human Habitat: First Propositions*.

'Apart from the study of the grilles and the preparation of the book, CIAM X had yet another task which was to decide upon the future organization of CIAM in view of the retirement from active participation of its founder members, which include the president, J. L. Sert, vice-presidents, Le Corbusier, Gropius and



6, graphic analysis of a walk through the campus at Berkeley, California: see 'Sequence Studies'.

van Eesteren, and the secretary-general, Giedion. Their impending retirement had been announced in 1953 and, since that date, an active group of younger members, under the general leadership of J. Bakema of the Netherlands, has been operating under the name of Team X. After a full day of discussion, during which all working parties were suspended, it was decided in effect that the work of CIAM should be taken over by an enlarged version of this younger group, and a committee of reorganization was set up consisting of four of its members plus three others who have worked closely with CIAM for many years, who will report to a general meeting of group delegates early in the New Year.

'Everyone considered this to have been a very fruitful congress, but the conditions under which this result was achieved were fantastic. Yugoslavia is a country of dramatic landscapes and friendly faces. The long training of its peoples in retaining personal independence under the rules of various foreign powers has resulted in a very casual acceptance of its present form of political dictatorship, which is characterized by a tremendous amount of detailed paper work upon matters of small concern and sudden arbitrary changes of decision upon matters of greater moment. After months of preparation the Congress, which had been invited by the Yugoslav government in the first place, found upon arrival at Dubrovnik that the hotel in which a large number of its members had been scheduled to stay had been suddenly commandeered for some other purpose, as had also the congress meeting place, the Palazzo Sordo. This news came on top of two days spent in a boat with under 100 berths that had picked up some 1,000 passengers during its journey from Venice to Dubrovnik. Members of the Congress found that, far from being able to hold preliminary organizational meetings and friendly discussions, they were obliged to remain glued to their bunk, or their deck chair. Any movement entailed tripping over babies asleep upon suitcases and huddled groups of older people.

'Luckily the retiring president,

J. L. Sert, knows how to laugh, and he set the tone of the Congress. Laughter was needed for it was decided to hold all Congress meetings at the Modern Art Gallery, some 5 miles away, on the far side of Dubrovnik from the hotels; but all meals had to be taken in the hotels. As a result transportation—one way and another—consumed at least three hours a day, and the most vivid recollection of the Congress in the minds of many members will be tantalizing glimpses from the bus of the fabulous walled city of Dubrovnik and the blue Adriatic coastline; and of long periods of waiting for the bus seated on the hot stone wall outside the Gallery.

'Everyone snatched some hours to visit Dubrovnik: a perfect Renaissance City still living in the twentieth century: the paintings of Piero della Francesca come to life: a city from which all vehicles are excluded, where people walk with a proud freedom between great stone walls of exquisite masonry and the dignified reticence of the town houses of wealthy merchants. Dubrovnik is more "perfect" than Venice could ever be for it had the fortune to be rebuilt almost completely at one moment, after a devastating earthquake, at a time of great wealth and power—and of high civilization.'

Sequence Studies

Sir Hugh Casson's study of the Temple of Heaven, Peking (AR, December, 1955) as a serial experience of levels and textures, spaces and closures, stopped and open vistas, has recently been used as a demonstration exhibit to introduce an interesting programme of student work at Berkeley, California. Taking the Cassonian method of Townscape analysis as a model, students were invited to prepare similar studies of, e.g., the Berkeley campus itself, certain well-documented ancient buildings, or other accessible serial experiences such as local arterial routes, and to render as full as possible a record of the total experience of passing through them. Not the least interesting of the results were the different methods of notation employed in logging the simul-



Above, left, Stanley Amis; centre, William Howell; right, Gillian Howell.

taneous evolution of the different sensory records—a typical example, 6, recording a walk through the campus, employs not only the almost obligatory 'sound-track' image for the spatial experience, but also draws heavily on Bauhaus material, such as Moholy's and Kandinsky's painting, to record its tactile and aural qualities.

CORRESPONDENCE

The Leine Schloss

To the Editors,

SIRS,—Referring to the Leine Schloss at Hanover, and particularly to the Gothic style employed by Laves in the remodelling of its chapel, the idea that 'English influence' was at work can be advanced more positively than in Mr. Rosenau's note.

I was recently in Hanover, and there saw the gutted shell of the Leine Schloss, including the windows through whose frames the relics of Bandel's stucco decoration are still visible. I was also fortunate in meeting Prof. Georg Schnaht, the Archivist of the Land of Lower Saxony, whose book *Die Geschichte des Leineschlusses* is a full and recent treatment of the subject. From information which he kindly gave me, and from page 130 of his book, it appears that the nineteenth-century Gothic of the chapel was not merely a matter of respect for the pre-existing (and retained) vaults of the Franciscans' church, nor a sudden burst of romance by Laves who was not, like his friend Nash, an architect 'bilingual' in Greek and Gothic. The style used in the chapel, with its somewhat sparse 'fan' panelling applied to the earlier vaults of a thirteenth or fourteenth century pitch, was the result of William IV's insistence on Gothic as the appropriate style for a religious interior; Prof. Schnaht refers to *Wunsch seiner hohen Auftragegeber* as a possible explanation of Laves' Gothic deviation on this occasion. Prof. Schnaht is still more positive in attributing the choice of the Tudor period, with its fan vaulting, as the model for much of the decoration, to the preferences of a king who had got accustomed to the productions of the early sixteenth-century English court designers.

Yours, etc.,

BRYAN LITTLE.

Bristol.

Architects of the Houses in Hampstead (pages 290-295).

Stanley Amis was educated at Merchant Taylors', served as an observer in the Fleet Air Arm, was at the AA School, 1946-50, and in the LCC Housing Division 1950-54. Joined Easton and Robertson, 1955. He likes lying in bed and flying. William Howell took a double first in Architecture at Cambridge, was in LCC Housing Division 1950-56, and is now in practice with his wife and John Killick. His favourite summer sport is listening to cricket on the radio;

favourite winter sport is watching rugby on television. His ambitions are to meet Marilyn Monroe and to be the first man to climb Mount Everest. Gillian Howell was at the Royal School, Bath, and then at the AA School; in the LCC Housing Division, 1950-53, she married William Howell in 1951 and has two sons. Member of the group which designed the CIAM project illustrated in AR, July, 1956. She is a confirmed Simple Lifer—i.e., she believes in having refrigerators, washing machines, sliced bread, central heating—all the little simple things without which life is so complicated.

Intelligence

The Chicago Joint Civic Committee of Italian Americans, and the Chicago Junior Association of Commerce and Industry have announced a competition for a memorial building with auditorium and exhibition space in honour of the late Enrico Fermi, the Italian atomic scientist who, at the University of Chicago, achieved the first chain reaction. The competition which has a distinguished jury, including Mies van der Rohe, Sert, Nervi, Gordon Bunschaft and L. L. Whyte, closes on Feb. 1, 1957; all details may be had from: John O. Merrill, 100 West Monroe Street, Chicago 3, Illinois, USA.

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THE ARCHITECTURAL REVIEW

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This Month's Cover draws timely attention to the rough, rhetorical rustication of Louis Sullivan's Auditorium Building in Chicago. This massive masonry appears to deny the existence of a framed structure behind it, and thus focuses attention on two aspects of Chicago architecture which are discussed in this issue. On pp. 285-289 Colin Rowe weighs the aesthetic, as against the economic justifications of framed structure in Chicago, and suggests that for mid-western architects and their patrons of the 'nineties, unlike their equivalents in Europe in the 'twenties, the aesthetic ones were secondary. And on pp. 331-332 a note on the centenary exhibition of Sullivan's work in Chicago draws attention to a little-studied aspect of his architecture; the decoration, which was normally more prolific at ground level than elsewhere.

281 **Marginalia**

282 **Correspondence**

284 **Frontispiece**

285 **Chicago Frame by Colin Rowe** The frame structure has become one of the most prized aesthetic elements of modern architecture, and its origins are commonly referred back to the Chicago School. Yet, to a European mind, there must always be some mystery that Frank Lloyd Wright, the prime Chicago aesthete, hardly ever availed himself of this potent mode of expression, and avoided it in his skyscraper designs. In a pioneer re-appraisal of the great Chicago skyscrapers of the 'eighties and

'nineties, against the background of local building economics, and in contrast to contemporary work in Europe, Mr. Rowe uncovers a series of circumstances that seem to take Chicago out of the mainstream of Modern Movement development. For what he proposes is that the frame, whatever value may later have been placed upon it by Europeans, was not for Chicagoans of any great aesthetic interest, but simply a business convenience, suitable for business, but not for public monuments or private houses. Hence the entirely different approach to architecture manifested in the Prairie Houses of Wright, and in the buildings for the Centennial exhibition. On the score of intention, at least, Jenney, Burnham and Sullivan may have to relinquish their positions among the pioneers of the Modern Movement.

290 **Terrace Houses in Hampstead: Architects, Stanley Amis and William and Gillian Howell.**

296 **Trees in the Street by H. F. Clark and Kenneth Browne** Much of the prevailing confusion about the proper use of trees in urban settings can be traced, as this article points out, to legacies from the nineteenth century—a legacy of forest trees in positions that are now inappropriate, accompanied, not by a legacy of skill in arboriculture, but by the Avenue Complex, a compulsive tendency to place trees in rows along the sides of streets. The illustrations which follow show some of the many ways in which trees can be used to obtain a desired effect in streets and along roads.

302 **L.C.C. by R. Furneaux Jordan** Though not quite the largest architectural design-office in the world, the London County Council's Architects' Department must be rated one of the most successful, in spite of the much-discussed damage that bureaucratic organization is supposed to wreak upon creative ability. However, the LCC's design department was formed—in the late nineteenth century—and transformed—after the second World War—by men of outstanding ability and devotion to the concept of an architectural service that had the common man, and not the private client, as its patron. Mr. Jordan traces the history and social philosophy of this concept of service, and its relationship to the idea of comprehensive planning on a metropolitan

scale. He discusses the advantages it enjoys from its integral connection with the planning and technical services of the LCC, and outlines the departmental and organizational procedures that enable this giant concern to make full use of the talents of reasonable men, reasonably organized, and of specialist research teams investigating special problems in a manner that would be impossible in a competitive commercial office. At a time when the tide of opinion seems to be running against the concept of planning, it is necessary and salutary to make a sane appraisal of the achievements of the department and of the responsibilities of its head, for no man's actions, except those of Cabinet ministers, affect the lives of so many citizens of the British Isles.

325 **Current Architecture**

Miscellany

329 **World**

331 **Centenary**

333 **Exhibitions**

334 **Books**

Skill

335 **Interiors: Restaurant in Gerrard Street, W.1: Architect, Leonard Manasseh.**

338 **Design Review**

341 **Techniques: Washing Machines and Boilers by Mary Ward.**

348 **The Industry**

350 **Contractors, etc.**

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FIVE SHILLINGS



 Opposite, an impression of La Reserve restaurant (see also pp. 335-338) in Gerrard Street, London, by the architect for the reconstruction, Leonard Manasseh. In contrast to the two restaurants illustrated last month (A.R. October 1956, pp. 265-270) both of which exploited the qualities of natural materials left in a natural state, this one aims specifically at a sense of luxury, achieved by velvets, plush and thick carpets, with carefully disposed and subdued lighting. Colours (seaweed, moss and bottle green, crimson, gold and grape-bloom) are used with restraint and the kind of sophistication that Mr. Manasseh displayed in his Executives' dining room for the Time and Life Building in Bond Street (A.R. March, 1953).

Colin Rowe

CHICAGO FRAME

CHICAGO'S PLACE IN THE MODERN MOVEMENT

The skeleton of the steel or concrete frame is almost certainly the most recurrent motif in contemporary architecture, and is among the most ubiquitous of what Dr. Giedion would describe as its *constituent elements*. Perhaps the role of the frame is most aptly summarized in the drawing by which Le Corbusier illustrated the structural system of his experimental Domino houses, but while its primary function is evident, apart from this practical value, the frame has obviously acquired a significance which is less recognized.

Apparently the neutral grid of space which is enclosed by the skeleton structure supplies us with some particularly cogent and convincing symbol, and—for this reason—the frame has established relationships, defined a discipline, and generated form. The frame has been the catalyst of an architecture, but one might notice that it has also *become* architecture, that contemporary architecture is almost inconceivable in its absence. One recalls innumerable buildings where the frame puts in an appearance even when not structurally necessary; one has seen buildings where the frame appears to be present when it is not and, since the frame seems to have acquired a value quite beyond itself, one is often prepared to accept these aberrations. Without stretching analogy too far, it would be fair to say that the frame has come to possess a value equivalent to that of the column for classical antiquity and the Renaissance. Like the column, the frame establishes throughout the building a common ratio to which all the parts are related; and like the vaulting bay in the Gothic cathedral it prescribes a system to which all parts are subordinate.

It is the universality of the frame and the ease with which it has apparently directed our plastic judgment which has led to the focusing of so much interest upon the Chicago commercial architecture of the 'Eighties and early 'Nineties. In Chicago seemingly our own interests were so directly anticipated that if the frame structure is the

essence of modern architecture then we can only assume a relationship between ourselves and Chicago comparable to that of the High Renaissance architects to Florence, or of the High Gothic architects to the Île-de-France, for although no doubt the steel frame did make occasional undisguised appearances elsewhere, it was in Chicago that its formal results were most rapidly elucidated.

For some ten years the architects of Chicago devoted themselves to the solution of typical problems of the frame, and before the end of this time they had achieved results which are still today unsurpassed for their elegance and economy. But admiring this great achievement, one is still disposed to ask whether they are indeed representatives of a 'modern' architecture. Certainly the process of their design was as rational and as direct as that of any contemporary building is supposed to be. Certainly these buildings are lacking in both rhetoric and sentimental excess, but about them there is a quality of rudimentary magnificence, a flavour at once more heroic and more brutal than is to be found in any building of the present day. These structures make no compromise with the observer; neither capricious nor urbane, they display an authenticity so complete that we are disposed to accept them as facts of nature, as geological manifestations rather than architecture. 'In Chicago,' says Louis Sullivan, 'the tall building would seem to have arisen spontaneously in response to favourable physical conditions. . . . The Future looked bright. The flag was in the breeze. . . .'¹ In Chicago we are led to believe that the slate was at last wiped clean, the break with 'the styles' made, and the route of future development defined.

The debacle which overwhelmed the Chicago architects of the 'Eighties is common knowledge. The World's Columbian Exhibition cut short their development; public taste no longer endorsed their decisions; and although for some few their principles remained luminous, it was not until comparatively recently that their figures re-emerged, sanctified, and established in the Pantheon of architectural progress. But the disaster was never quite so complete as our sense of myth requires that it should have been, and as we know, pockets of resistance survived which eclecticism could not obliterate, so that it was again in Chicago itself that a second and equally decisive contribution to present day architecture was made.

One of the most devoted apologists of the Chicago School, Montgomery Schuyler, writing of the city in the 'Nineties, noticed that its architectural expressions were twofold only—'places of business, 1, and places of residence.' The image of Chicago which remained in the mind he found to be 'the sum of innumerable impressions made up exclusively of the skyscraper of the city and the dwellings of the suburbs. Not a church enters into it,' he says. 'Scarcely a public building enters into it. . . . Chicago has no more a Nouvel Opera than it has a Notre Dame.'² But with the 'Nineties the spirit of experiment gradually receded from the centre of the city to the suburbs, and, as we know, it was in

suburban Oak Park that Frank Lloyd Wright conducted those researches into architectural form whose results seem pre-eminently superior to any other achievement of that day. The much publicised contributions of Van de Velde, of Horta, Olbrich, Hoffmann, Loos, Perret, Mackintosh, Voysey, can only appear as irresolute and undirected when compared with the astonishing finality of these early works of Wright's, which although less implacable than the office buildings of the Loop are every bit as conclusive. To informed observers of the time it was apparent that here a plastic statement of the very highest relevance was in process of delivery, and that here a definite answer had already been given to those questions which many of the most advanced buildings of the day seemed to exist merely to propose.

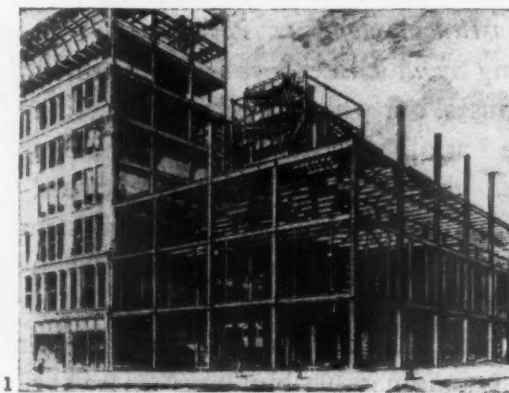
The international impact of this early phase of Wright's career is now a matter of history, and if the exact influence which the publication of his work exerted in Europe remains a matter of dispute, it can scarcely be denied that in such a building as the Gale House of 1909, 2, Wright had already defined principles of form which closely parallel those enunciated ten years later by Van

Doesburg, or by Rietveld, 4, in *De Stijl's* major architectural monument, his house of 1924 at Utrecht. In each case the vision of an architecture as a composition of sliding planes is predominant, and Wright's anticipation of this idea seems to have been as complete as Chicago's earlier anticipation of the formal role which the frame structure was later to play.

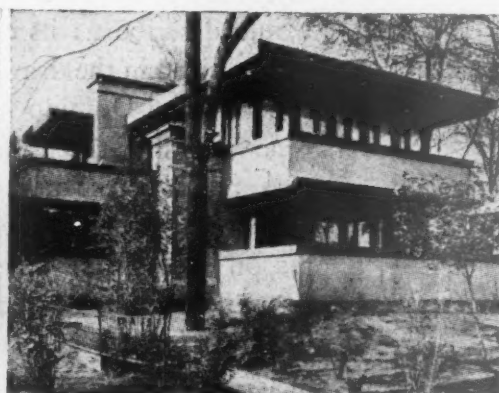
This priority of Chicago's contribution need not imply any dependence elsewhere upon it. Obviously both Van Doesburg and Rietveld could have claimed a legitimate descent from the innovations which Cubism had introduced; obviously too, Le Corbusier's pre-occupation with problems of the frame structure, 3, derives not from Chicago but from the reinforced concrete frame of Auguste Perret; but neither of these observations can obscure the assumption that Chicago did seem to experience a pre-vision of two of the major themes of twentieth century architecture—the frame structure and the composition of intersecting planes.

This apparent insight of Chicago's is now widely recognised, but its recognition has created certain acute critical problems. Wright's achievement was scarcely likely to pass into oblivion, but the renewed conscious-

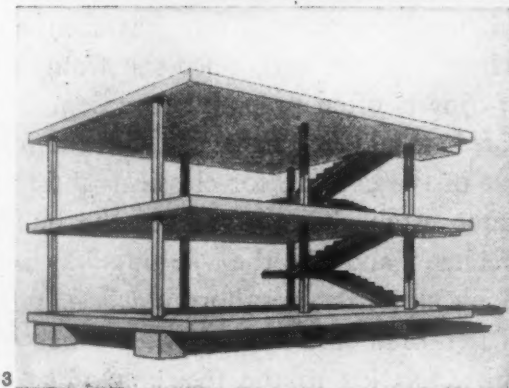
ness of Chicago's earlier contribution stimulated by the later architecture of Mies Van der Rohe, is responsible for a conspicuous embarrassment. We are apt to feel that Mies's campus of the Illinois Institute of Technology is the polished culmination of a rationalism identical with that displayed by Jenney in the Second Leiter Building; but equally we are obliged to believe that at least a partial explanation of the intuitive certainty which so early distinguished Wright's work was provided by his own personal relationship with the older masters of the Chicago School. We can understand that his own audaciousness was re-inforced by their daring, his own sense of order by theirs, his own precocity by those qualities which have led so many observers to see in the commercial buildings of Chicago the most complete adumbration of contemporary forms. But it is at this point that the judgment of the present day discovers its dilemma. We have been encouraged to feel that the architects of the office buildings in the Loop clarified a basic principle of twentieth century architecture, but for the structural skeleton which their achievement exposed, it can only be said that Mr. Wright (who might be considered



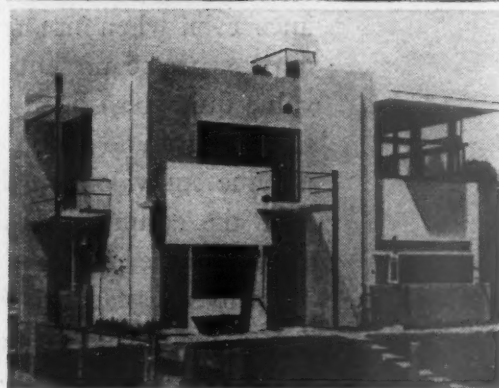
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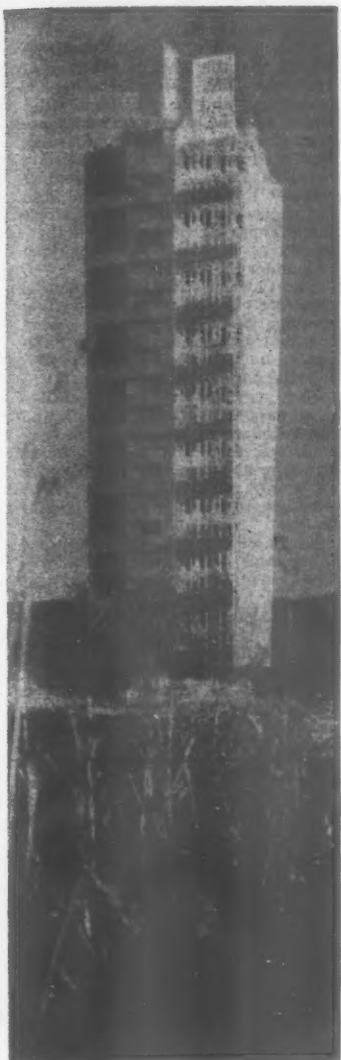
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Chicago's pre-vision of two of the major themes of twentieth-century architecture—the frame structure, 1, Fair Store, 1891, by William Le Baron Jenney, and the composition of intersecting planes, 2, Gale House, 1909, by Frank Lloyd Wright. 3, the Domino House, by Le

Corbusier, deriving not from Chicago but from the reinforced concrete frame of Auguste Perret, and 4, house at Utrecht, 1924, by Rietveld and Schröder, in direct line with the innovations of cubism, and also De Stijl's major architectural monument.

¹ *Autobiography of an Idea*, Louis Henri Sullivan. New York.

² *A Critique of the Works of Adler and Sullivan*, Montgomery Schuyler, *Architectural Record*, December 1895.



5, the St. Mark's Tower project of 1929, in which Wright first perfected a fusion of structure and space; the prototype of his later tall buildings.

their most illustrious pupil), seems to have shown a most marked distaste.

With the exception of the Larkin Building in Buffalo and the S. C. Johnson Company's Administration Building at Racine, Wright has of course built no large office buildings. But even in the Larkin Building the cathedral-like internal space suggested a certain aversion to those conclusions of the Chicago School whose relevance is so enthusiastically acclaimed today; while in the Johnson Administration Building an entirely different conception of structure is entertained. Admittedly a number of early skyscraper projects are for steel frame buildings; or show a concrete frame; but in all of these Sullivanian influence is to be detected, and in none of them are we aware of that inimitable world of Wrightian form which characterises the domestic designs of the same years. We can believe that in all these instances Mr. Wright was struggling with a problem which he found to be intractable and unsympathetic. But the National Life Insurance Company's skyscraper project of 1924 seems to clarify this problem and also seems to reveal very clearly the differences in outlook which identify

Wright's development as something apart from that of his predecessors in Chicago.

The classic Chicago office buildings, like the classic palaces of Renaissance Italy, were conceived as single volumes, or single façades. Like Italian palazzi they overwhelm the observer by their economy of motif and consistency of theme, while as architectural expression they present no more than an unmodified block, exhibiting a rationally integrated and well-proportioned structure. But Wright's building is distinguished by the observance of quite contrary principles, and displays a highly developed composition of transparent masses, while rather than the 'static' structural solution of the frame it employs the more 'dynamic' motif of the cantilever which had already been used in the Imperial Hotel.

According to Henry-Russell Hitchcock, 'Wright has likened the special construction used in the (Imperial) Hotel to the balance of a tray on a waiter's fingers,'² and the structural members both in that building and the 1924 project do seem to have been conceived in that way—as a series of nuclei generating around themselves intelligible volumes of space. This preference, already presumed by Wright's old preoccupation with the central chimney stack, must explain some of his reluctance to use a regular skeleton—a system which scarcely permits this interpretation of structure; but this indivisible fusion of structure and space is scarcely realised in either the Tokio building or the Chicago project, and it is not until the St. Mark's Tower scheme of 1929 that it first becomes explicit at a major scale, 5.

The spaces created by the St. Mark's Tower structure are now unmistakably Wrightian and the tower has been the prototype for all the tall buildings by Wright which have followed. Aggregations of St. Mark's Towers are the basis for the 1930 apartment house project and again for the Crystal Heights Hotel design of 1940, while the tower appears in condensed form as the laboratory building at Racine, before being finally transcribed as the office building at Bartlesville, Oklahoma.

Conceptually all these structures present the nucleus of a gigantic mushroom column supporting a series of trays which is systematically extensible by approaching column to column till the circumferences of their trays impinge or even overlap.

As an extension of the domestic theme the St. Mark's Tower is among Wright's most brilliant and ingenious achievements, and the virtuosity with which it is organised can only arouse the greatest admiration. Its vitality and coherence are undeniable, its plastic control little short of awe-inspiring—admitting the basic premises upon which its inspiration depends, the tower is a superbly logical development; but for very many observers both it and its derivatives can only stand as a series of enlarged question marks. Admiring it as an individual achievement, recognizing it as a most suggestive exception, these observers are still disposed to ask whether after all it is not a most elaborate evasion of a normal and standard structural fact. The frame, by so many modern architects, has been received almost as a heaven sent blessing. Why, one enquires, has it been so distinctly rejected by Mr. Wright?

² In the *Nature of Materials*, Henry-Russell Hitchcock.

Did he consider it to be too great a restriction of his creative freedom? Why has Chicago's greatest architect remained so unbeguiled by Chicago's first great architectural discovery?

The question is so pressing that one may be justified in proceeding with speculation, and a number of immediate answers obviously suggest themselves. But the answer that Wright's career has been largely in domestic architecture only very superficially considers the problem. The use of the steel or concrete frame in domestic architecture may not be necessary, but many conspicuous monuments of the modern movement survive to prove it not abnormal. The answer that America had already discovered an alternative structure in the balloon frame is more convincing, but not completely so. Economy in America recommended the balloon frame, but in Europe economy equally recommended a brick or masonry structure, and by the more significant innovators economy's recommendations were usually disregarded.

A partial answer has been suggested by Wright's highly developed and individual demand for 'organic' space, and here one of the most obvious differences between him and his predecessors in Chicago will be found. Louis Sullivan was by no means typical of the Chicago School in general, but a major unnoticed distinction between Wright and Sullivan, as also between Wright and the Chicago School, may be found to lie in their feelings for the plan.

For Wright the plan has always been a generator of form and already in the Blossom House of 1892 it is quite clear that a disciplined orchestration of spaces had become one of his primary interests. Almost any of his houses of the next thirty years will reveal how intensively this interest was sustained and will also reveal how complete has been his mastery of the major themes, the inflections, and spatial sequence of the plan. Wright's *partis* develop inevitably and without apparent effort; there are few lapses in his plans; few volumes where his basic rhythms are not experienced; and in this he is very definitely to be distinguished from Sullivan whose most ardent admirers have never claimed for him any highly developed interest in the formal possibilities of the plan. Sullivan's buildings are superb assertions of the primacy of structure, but for him the significance of their plans was a negative one. The plans of the Wainwright and Schiller Buildings are hardly those of a master, while such a plan as the National Farmer's Bank will scarcely bear critical analysis.

Sullivan was not primarily a planner. He was primarily an architect of commercial buildings, and the office block is most obviously without the need of any but minimum planning. The unobstructed, evenly lit floor, and the indefinite number of floors which the steel frame permitted, recommended it to the architects of Chicago as the answer to a practical dilemma; but by the nature of this context in which they employed it, they were necessarily inhibited in the exploration of its spatial possibilities.

The Chicago architects projected on to their façades the neutral cellular structure which they felt to be the reality of the frame behind; and if, as was the case with Sullivan's Wainwright Building in St. Louis and his Guaranty Building in Buffalo, it was considered aesthetically desir-

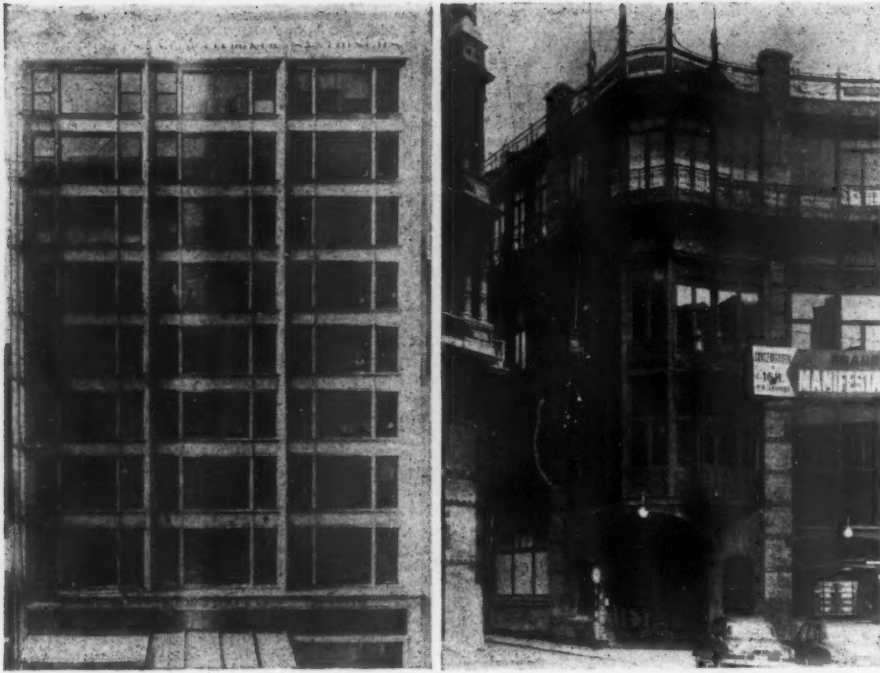
able that the frame should be modified, this process was rationalized in terms of the need for psychological expressiveness in the façade, rather than internal spatial excitement.

With little occasion to use the frame for any other programme than that of the office building, it is not surprising that the Chicago architects remained unaware of certain of its attributes, so that some explanation of Wright's unwillingness to employ it may possibly be found here. Unlike Sullivan, who had approached architecture primarily with the object of realizing an expressive structure, Wright was from the first abnormally sensitive to certain spatial demands. These (one may surmise) he was compelled to satisfy, and it was only later (one might believe) that his Sullivanian training re-asserted itself to demand a rationalization of this spatial achievement in terms of a generating structure. The monumental construction of the Hillside Home School suggests that a development of this kind was taking place around 1902, and in the Martin House by 1904, this process had already taken on an unmistakable definition; but by then the richness of his space compositions would scarcely permit their accommodation within any system so austere as that of the grid frame. They were already an independent creation.

But an answer along these lines, suggesting a cause for Wright's rejection of the frame in the nature of his formal will, can at best provide only a partial explanation of the problem, and a further reason must be offered which may perhaps lie in the frame itself and the significance with which it has been endowed.

Chicago's failure to arrive at any statement of the frame as a vehicle of spatial expression—when we think about it—seems curious. We are now completely accustomed to regard the skeleton structure as a spatial instrument of some power, since after all it is now some thirty years ago that a formula was evolved permitting the simultaneous appearance of both structural grid and considerable spatial complexity. But in order to arrive at an equation of the demands of space and structure Le Corbusier and Mies van der Rohe were led to postulate their functional independence, i.e., the independence of partitions from columns, so that unlike Wright's development which may be said to proceed from a conviction of an 'organic' unity of space and structure, the International Style may be seen to issue from an assumption of the separate existence of both according to distinct laws. In the International Style an autonomous structure perforates a freely abstracted space, acting as its punctuation rather than its defining form. There is thus in the International Style no fusion of space and structure, but each in the end remains an identifiable component, and architecture is conceived as a species of debate between them, a dialectical opposition, and the particular tension which emerges from this relationship is now widely accepted as among legitimate architectural pleasures.

That a solution in these terms was possible for European innovators of the twenties must derive, among other reasons, from a particular concept of the frame which they entertained. In Chicago it might be said that the frame was convincing as a fact but not as an idea, whereas in considering the European inno-



6, 7

6, the McGlurg Building, Chicago, of 1899-1900, by Holabird and Roche, and 7, the Maison du Peuple, Brussels, of 1897, by Victor Horta. Both show preoccupation with the steel frame, but the concepts are widely different: in the McGlurg Building the frame is an accepted fact, in the Maison du Peuple it is more a fighting idea.

vators of the twenties one cannot suppress the supposition that the frame to them was more often necessary as an architectural idea before it was reasonable as a structural fact.

In order to clarify these two general observations Holabird and Roche's McGlurg Building of 1899-1900, 6, might be paralleled with an almost contemporary European building of 1897, Horta's Maison du Peuple in Brussels, 7—both advanced buildings of their day. The contrast between the rather quiet elegance of the first and the frenetic restlessness of the second is immediately obvious: the McGlurg Building is a subtle but an uncomplicated statement, the Maison du Peuple is an oblique and a highly involved reference. In the McGlurg Building certain practical requirements have been accommodated; in the Maison du Peuple certain theoretical desiderata have been stated. In the first, the steel frame presents itself as the solution of a specific problem; while in the second, a cast iron pre-vision of the steel frame is exposed apparently as the manifesto of an architectural programme. Holabird and Roche's structure is primarily a building; Horta's a polemic.

There is little doubt that Horta's building cost the greater aesthetic effort, but there is almost complete certainty that Holabird and Roche's is more generally pleasing to the taste of the present day. In Horta's case one can guess at a hyper-awareness of the response which his building was likely to evoke. One can sense anticipation of extended controversy, of critical explanations, avant-garde delight, conservative horror. Horta assumes the participation of an audience—so that for these reasons his design exhibits a certain humanity which is not present in the McGlurg Building. There, rather than a subject for the discussion of a coterie, Holabird and Roche have provided a rational envelope for the activities of a speculator's tenants.

If the methods followed by Holabird and Roche at this time were in any way typical of those followed by the Chicago School in general, one can assume that they were not anxious that the building should involve them in any artistic notoriety—rather the reverse. In the words of the French novelist, Paul Bourget, whose appreciations of the Chicago School have been constantly quoted, the Chicago architects had 'frankly accepted the conditions imposed by the speculator,'⁴ in other words, had limited themselves to producing buildings which should be no more than the logical instruments of investment. And for these reasons, while the Maison du Peuple appears to be an idealistic fantasy on the theme of mechanization, the McGlurg Building may be considered a machine.

This distinction between mechanization as an idea and mechanization as a fact would seem to crystallize the basic differences between the two buildings, and it is a distinction which might be extended further.

I asked one of the successful architects of Chicago what would happen if the designer of a commercial building sacrificed the practical availability of one of its floors to the assumed exigencies of architecture as has often been done in New York,' writes Schuyler. 'His answer,' he continues, 'was suggestive, "Why the word would be passed around and he would never get another one to do. No, we never try tricks on our business men, they are too wide awake."⁵

The business men of Chicago then were not prepared to make sacrifices for the idea, did not then require the overt architectural symbolism, did not even require fantasies upon the themes of mechanization; but the Chicago architects (or some of them) were quite aware that a symbolic meaning has always been among the necessary attributes of architecture,

and if, as Schuyler infers, they were compelled to be utilitarian, they were conscious of the social significance of their utilitarianism. John Root, for instance, required that the modern office building should by its 'mass and proportion convey in some elemental sense an idea of the great, stable, conserving forces of modern civilization.'⁶ But even in this demand one might notice a further difference between Chicago and Brussels. In Belgium, Dr. Giedeon tells us, it had been discovered that architectural forms were impure, that the atmosphere was 'infected,' and in consequence that architectural 'progress' was there conceived as a kind of 'moral revolt,'⁷ but the Chicago architects had been scarcely allowed to subject forms to so detached a scrutiny. 'The great, stable, conserving forces of modern civilization' represented for Root a power which it was desirable to express, but one may doubt if Horta recognized any such imperative. He, one may suspect, had arrived at certain critical conclusions as to the nature of contemporary society and envisaged his work as an architectural manifestation of these conclusions.

In Belgium it is clear that the *art nouveau* was one of those revolutionary movements essentially dependent on an idea; but in Chicago the structural revolution was largely without such theoretical support.

'The Chicago activity in erecting high buildings (of solid masonry) finally attracted the attention of the local sales managers of Eastern rolling mills,' Sullivan tells us. It was they, he says, who conceived the idea of a skeleton which would carry the entire weight of the building, and from then on, he continues, the evolution of the steel frame 'was a matter of vision in salesmanship based upon engineering imagination and technique.' In this manner, as a product for sale, 'the idea of the steel

frame was tentatively presented to Chicago architects.'

'The passion to sell,' Sullivan asserts, 'is the impelling power of American life. Manufacturing is subsidiary and adventitious. But selling must be based on a semblance of service—the satisfaction of a need. The need was there, the capacity to satisfy was there, but contact was not there. Then came the flash of imagination which saw the single thing. The trick was turned and there swiftly came into being something new under the sun.'⁸

The Chicago structural revolution therefore was the result of a certain combination of open-mindedness and imaginative salesmanship. On Sullivan's admission the architects of Chicago did not demand the frame; it was rather presented to them; and this may explain both the rapid and dispassionate manner in which they contrived to rationalize the frame structure and also the way in which so many of them (we are told) were able to abandon this method for another. 'The architects of Chicago,' Sullivan adds, 'welcomed the steel frame and did something with it. The architects of the East were appalled by it and could make no contribution to it.' But from Schuyler we learn the opposite—that the architects of Chicago were not very different from architects elsewhere. 'They are,' he writes, 'different on compulsion. They have "frankly accepted the conditions imposed by the speculator" because they really are imposed and there is no getting away from them if one would win and keep the reputation of a "practical" architect.'

These two statements are confusing, but are perhaps not quite so contradictory as at first they appear. They describe a situation. They suggest a lack of conscious theoretical programme. They indicate a responsiveness to the new. They illustrate a willingness to defer to the client. And the clients, Schuyler continues, 'the men who project and finance the utilitarian buildings' are not 'the most private spirited (but) they are the most public spirited body of business men of any commercial city in the world.' They are, he says, 'the same men who are ready to incur expenditures for public purposes with a generosity and a public spirit that are elsewhere unparalleled.' 'They are willing to make the most generous sacrifices for their city to provide it with ornaments and trophies which shall make it more than a centre of pig sticking and grain handling. They are willing to play the part of Maccenas to the fine arts, only they insist that they will not play it during business hours.'

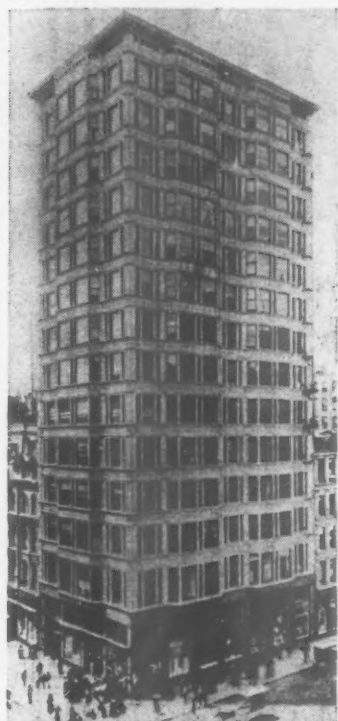
The candour of these contemporary observations goes a long way to dispose of a critical scheme to which nowadays we pay our respects. It disposes of the dichotomy between the virtuous Chicago of the Loop and the depraved Chicago of the Fair. Magnificently undisguised, the office buildings of the Loop owe something of their authenticity to their being no more than the rationalization of business requirements; although they are social documents they are scarcely cultural symbols. They were conceived as instruments, as the means to achievement, but for that achievement itself it is necessary to look elsewhere, both to the suburban residential development, and to 'the ornaments and trophies,' lavished

⁴ John Root, Harriet Monroe.

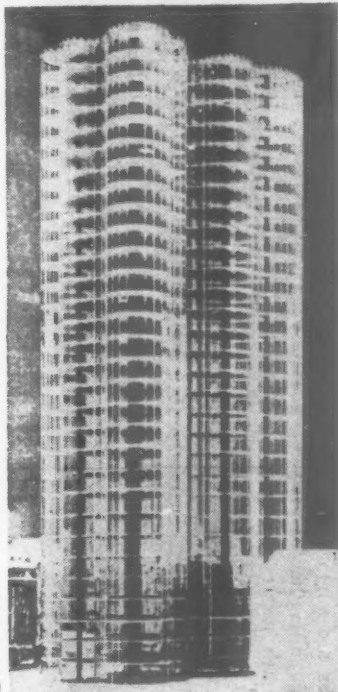
⁵ *Space, Time and Architecture*, Slegtried Giedeon, p. 291 (3rd Ed.).

⁶ Sullivan: *ibid.*

⁷ Schuyler: *ibid.*



8



9

8, the Reliance Building, Chicago, 1894, by Daniel Burnham and 9, a project of 1921 for a glass tower by Mies Van der Rohe. 8 answers practical contemporary requirements; 9 postulates an ideal answer to possible future ones.

upon the World's Columbian Exhibition. The buildings of the Loop, and the structures of the Fair, like opposite sides of a coin, come to appear as complementary phenomena. Because the commercial magnates of Chicago were not willing 'to play the part of Maecenas to the fine arts' during business hours, it was possible for the architects of Chicago to proceed with the most audacious innovations. It was indeed required that they should, and in doing so they offended no expressed social or artistic preference. No check was offered to their remorseless evolution of a basic structural logic. This rationalization could not have been effected in New York, nor in Europe. It was possible in Chicago because there business was without inhibition, but as the World's Columbian Exhibition unhappily proves, it was not for this reason irresponsible.

Thus Chicago's success and Chicago's failure were implicit in the same conditions. A primary architectural achievement was determined by a physical need, and by the lack of architectural programme a complete architectural revolution was made possible. But this lack of programme made it impossible in the end for the revolution to be stabilized or even adequately valued. The office buildings of the Loop were undoubtedly admired by contemporaries, but it is hard to represent them as either the answer to a generally expressed intellectual conviction. They were factual rather than idealistic; and for the taste of the time they were equipment rather than architecture.

This distinction might be seen as defining the differences between two buildings which Dr. Giedion compares—Daniel Burnham's Reliance Building of 1894, 8, and Mies Van der Rohe's project of 1921 for a glass tower, 9. Here beyond the obvious difference that one is real and the other imaginary, it may be observed that the Reliance Building is the concrete result of a particular problem, while the Glass Tower is the abstract solution of a general one; that while the Reliance Building arises in relation to an existing demand, the Glass Tower provides the answer to a possible future requirement. The one answers; the other anticipates. The Reliance Building rises above the streets of a commercial capital; the Glass Tower soars against a background of wooded hills and above an agglomeration of Gothic roofs. We can scarcely believe the Glass Tower to be a necessity in this toy city of an older Germany. It is rather, we know, a confession of faith, an elegant rhapsody upon a brave new world; the Reliance Building is devoid of such innuendo, a utilitarian shelter.

From these conceptual differences both building and project derive their weakness and their strength; but Burnham's complicity and Mies's protestation (which are equally respectable) impose upon each a different significance, and it may be seen that while the Reliance

Building is above all a most delicately adjusted instrument of the world of business, the Glass Tower, by intention, is a contribution to culture. The Reliance Building provides a direct answer to a technical and functional problem; but the Glass Tower infers the idea of mechanization rather than the fact.

'The American engineers,' writes Le Corbusier, 'overwhelm with their calculations our expiring architecture,' but they are not, he asserts, 'in pursuit of an architectural idea,' they are 'simply guided by the results of calculations.'¹⁰ But although this may have been so, and may have been as wholly admirable as Le Corbusier believed it to be, it is only too obvious that the skyscrapers of the Ville Radieuse were not the results of calculation. Rather they betray a mind preoccupied with the ideal order of things. They exude what Dr. Johnson described as 'the grandeur of generality'; they are rational abstractions upon the theme of the American skyscraper.

These European skyscrapers have therefore an intellectual rather than a practical significance; and just as Mies in the Glass Tower and Le Corbusier in the Ville Radieuse seem to abstract the skyscraper theme, so it might be suggested that the European innovators of the 'Twenties ascribed to the structural frame, an ideal, a general, and an abstract significance.

In America the skeleton structure had been conceived to be of utilitarian value, rationalized by the predominantly utilitarian tone of a Chicago business community; but in Europe it was given logical form only by the sustained volition of an architectural intelligentsia. And to these avowed protagonists of revolution the frame became both more and less than it had been for Chicago. It was soon envisaged to be a formal necessity—an answer not to the particular problem, office block, but to the universal problem, architecture.

Le Corbusier's drawing for the Domino House is precisely such a formulation of the frame's significance. A generalization of structure rather than a structure, it is perhaps the perfect illustration of the meaning of the frame for the International Style. For the International Style the structural functions of the frame are in fact only secondary, and primarily the frame is a guarantee of authenticity, an assurance against lapse into private licence, a discipline by means of which an invertebrate expressionism can be reduced to the appearance of reason.

Disposed to accept the frame as a symbol of order, the International Style has envisaged it as a structural system with which the architect is obliged to come to terms, and for these reasons from the first the exponents of the International Style were obliged to evolve an equation between the demands of space and the demands of the skeleton structure.

¹⁰ *Towards a New Architecture*, Le Corbusier.

But in Chicago the obligation to use it did not exist. For the International Style, the frame, imbued with an intellectual significance, becomes a universal of architecture, and for these reasons seems often assumed to be present even when it is not in fact to be found; but for Chicago where the frame possessed a most specific and practical function there was no reason to deduce for it a general and an ideal one; and for these reasons it was around the alternative programme of the residence conceived as a unique problem that idealist sentiment was able to effect a coherent expression.

It is by such inferences that Wright's continuous unwillingness to use the frame may possibly be explained. He was perhaps too close to it, too close to the Loop, and too undetached from Chicago to be able to see the city as the idea which it so nearly is. His career has largely been one of reaction against the city, of protest against the metropolitan order whose problems it has seemed the highest duty for the architect of the International Style to solve. For these architects, the organization of the city has been a constant preoccupation, and it is possible that the International Style discovered the frame's real significance to be that of an urban symbol, a most comprehensive illustration of established order in a technological society. It is possible. But it is also certain that for Wright such an accumulation of symbolism around the steel or concrete frame is without any desirable significance, and he has felt impelled to dissolve the order which the skeleton structure permits.

We can be grateful that this has been so, and we can believe too that it was necessary that Wright should have been led to create another Chicago, to crystallize the suburban image. But we can believe also that only in recent years has Wright's second Chicago become completely significant—as the foil to that third and Miesian city which is at present taking shape. Mies has lifted the old commercial Chicago of the 'Eighties from the empirical to the ideal, and has promulgated as a system something very close to what Chicago discovered by experiment. He has provided for the Loop a moral grandeur, he has built for Oak Park an adequate frame of reference, he has formulated its most worthy antithesis; and the significance of both is now heightened by the contrast, which seems to make of Chicago a type of foyer where, with unmodified drama, the irreconcilable opposites are juxtaposed. Architecture as private experience, and architecture as public order, architecture as radical dissent, and architecture as equally radical orthodoxy: Chicago seems to allow these anti-poles the most unqualified culmination. It would be futile to ask why, but enough to state that it has been so, that in Chicago the principal critical problems of twentieth century architecture will be found to be embodied.

There were four clients, who together with the architects formed a group of six families, each financing its own house. The site had originally contained a terrace of four Victorian houses, but the land cost £20,000 an acre, so a greater degree of sub-division was necessary to make the project economical. The final cost of site for a typical intermediate house was £530, the frontage being 12 ft. 9 ins. Extreme resistance was encountered from building societies who were approached for loans, based partly on the terrace formation, mostly on the frontage, and to a certain extent on the appearance. Eventually some more adventurous spirits offered loans, and the scheme could go ahead.

The site is 8 ft. below pavement level, facing west over Hampstead Heath, with a view of two of the Lower Ponds, and the causeway which separates them. This is densely planted with fine plane and willow trees.

The 12 ft. frontage can give either one room of the whole width, or two 6 ft. single bedrooms, or can be subdivided into 7 ft. 6 ins. for a garage and the remainder for a hall, or, as on the lowest floors, a 2 ft. 10 ins. passage, and the remainder for a bathroom and fuel store. The stair was planned so that it could be separated completely to give privacy to the rooms on either side, or opened up where required to give views right through the plan. The depth of the building was governed by town planning but was made as deep as could be permitted. The position of the staircase was arrived at by giving the maximum possible garage space, without taking too much from the living rooms on the other side. The garages are adequate for most English cars. The basic arrangement of the floors and stair suited all the families, but different people had different requirements in detail. The double-height room is different in every house (one house has the kitchen on the gallery instead of underneath it). The bye-laws required the stair-well to be a ventilated lobby, and although none of the owners had wanted the stairs to be left open, a few houses have glass screens beside the stairs, which can be curtailed to allow openness or privacy. The houses are mirrored and the thickening at the back of the half-landing houses two boiler flues with two pipe ducts for each house.

The lower floor is designed so that it can be occupied by a friend or relation until the families have reached sufficient size to need it, and it has its own entrance, bathroom and w.c. It can later become a playroom on garden level, and the lower bathroom will then become cloakroom and children's shower room. The ceiling heights throughout are 7 ft. 6 ins. As far as is known, this is the first time a waiver permitting this in living rooms has been given by the LCC.

The party walls are of 9 in. calculated brickwork (a

12-foot frontage terrace houses in Hampstead

Our exemplar for the use of the double height room was, of course, Marseilles. We had visited the Unité in a semi-finished state before designing these houses (late '62), and when the subdivision of the site landed us with the same frontage, to fractions of an inch, we found we had a wonderful reference point for the choice of room-depths, and indeed of dimensions in general. We were also experimenting with the Modulor at this time, and used it in these houses, so that there are dimensions in some cases identical with those at Marseilles, and in all cases directly related to them. We found the Modulor an extremely useful tool for subdividing a standard bay-width either symmetrically (road side, upper floors) or asymmetrically (garden side and staircase). This of course applies to any pair of Fibonacci series. The double height at Marseilles is 8 ft. 10 in. in the clear, and the whole 12 ft. width. The rooms, at the centre floor of the three-floor unit, i.e., at the level of the two kitchens and the *rue intérieure*, are 27 ft. 6 in. deep.* The living-room/bedroom tucked underneath the gallery in the lower unit is 19 ft. 5 in. deep, and the gallery bedroom is 13 ft. 1 in.

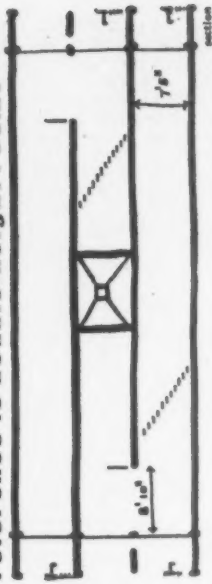
In the Strasbourg competition the depth of the block was considerably reduced, so that the room depths at the kitchen level were 20 ft. 9 in. The double height does not go right across as at Marseilles, but is in the form of a tunnel, tapering back to the staircase opening (which is 2 ft. 10 in. wide). There is a tie-beam or landing where the tunnel and stairwell meet, and the clear dimension of the tunnel is 8 ft. 10 in. in the upper maisonette and 7 ft. 5 in. in the lower. The bedrooms are 14 ft. 3½ in. deep, but this was achieved by narrowing the *rue intérieure* from the 9 ft. 8½ in. of Marseilles to 7 ft. 5 in.

At Nantes the block depth is the same, but the *rue intérieure* has gone back to 9 ft. 8½ in. The effect of this is that the bedrooms become 13 ft. 1 in. deep (the same as the smaller one at Marseilles), and the double height reduces to 7 ft. 5 in. in the upper maisonette, and 6 ft. in the lower.

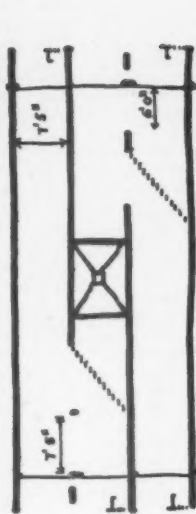
We started by thinking that 7 ft. 5 in. was the minimum useful void, and that it formed the appropriate relationship with the 19 ft. 5 in. depth of the dining-kitchens. However, lack of depth tempted a consideration of a smaller void, and only one house retained the 7 ft. 5 in. size, the others reducing to 6 ft. This certainly pays off at the upper level—the extra 1 ft. 5 in. being a significant addition to a 12 ft. living room—but of course the larger void has its compensations when seen from the lower level. One house has no double height, one has the dining-kitchen on the gallery instead of underneath it, and one house has a void only 9 ft. 2 in. wide instead of the whole 12 ft. width, to form a narrow cat-walk out on to the balcony.

* Some of these dimensions are approximate. The plans and sections in the book are often not reproduced exactly the same size, they are sometimes distorted in the block-making, and there is seldom a written dimension and never a scale. When a dimension scales close to a Modulor dimension, we have assumed that this is correct, but in some cases they are not directly on the scale, and do not seem to be simple additions. It is also unclear at times whether dimensioning has been done from finished surfaces or from centre-lines (of partitions, etc.).

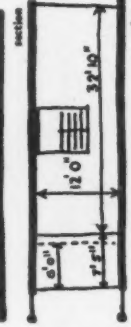
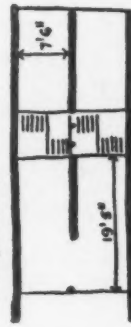
comment by the architects with special reference to double-height rooms



marseilles



nantes-rozé



The party walls are of 9 in. calculated brickwork (a



12-ft. frontage

TERRACE HOUSES IN HAMPSTEAD

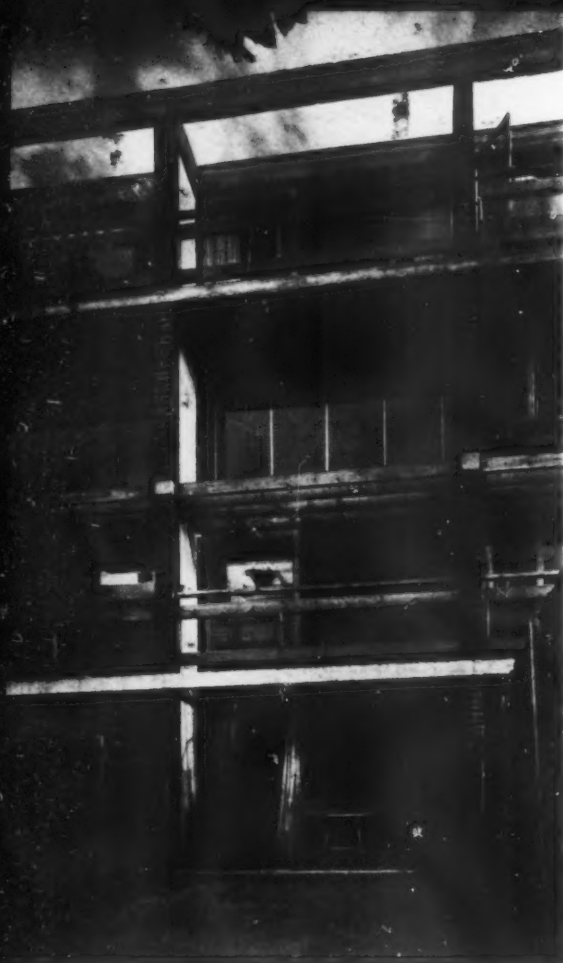
ARCHITECTS

STANLEY AMIS AND WILLIAM AND GILLIAN HOWELL



2. No. 82 seen from the garden, which is 8 ft. below pavement level on the street side. The party walls are 9-in. brickwork from top to bottom, and ceiling heights on all floors are 7 ft. 6 in.; both these features required special permission from the LCC. The timber framing is

varnished softwood, and exposed concrete is left unpainted and rough from shuttering. 3. the west-facing street front. Beside the front doors are 7 ft. 6 in. wide garages. The separate entrances to the lower ground floors are approached by the areas, behind the railings.



2



No. 80 the sitting-room on the ground floor, with the double-height void linking it with the lower ground floor in the right foreground.



No. 84 the living room on the ground floor and sitting room on the first floor, seen from the stair well, looking towards the back of the house, with a double-height void beyond the sitting-room fireplace. For the similar arrangement in No. 82 see 1. previous page.

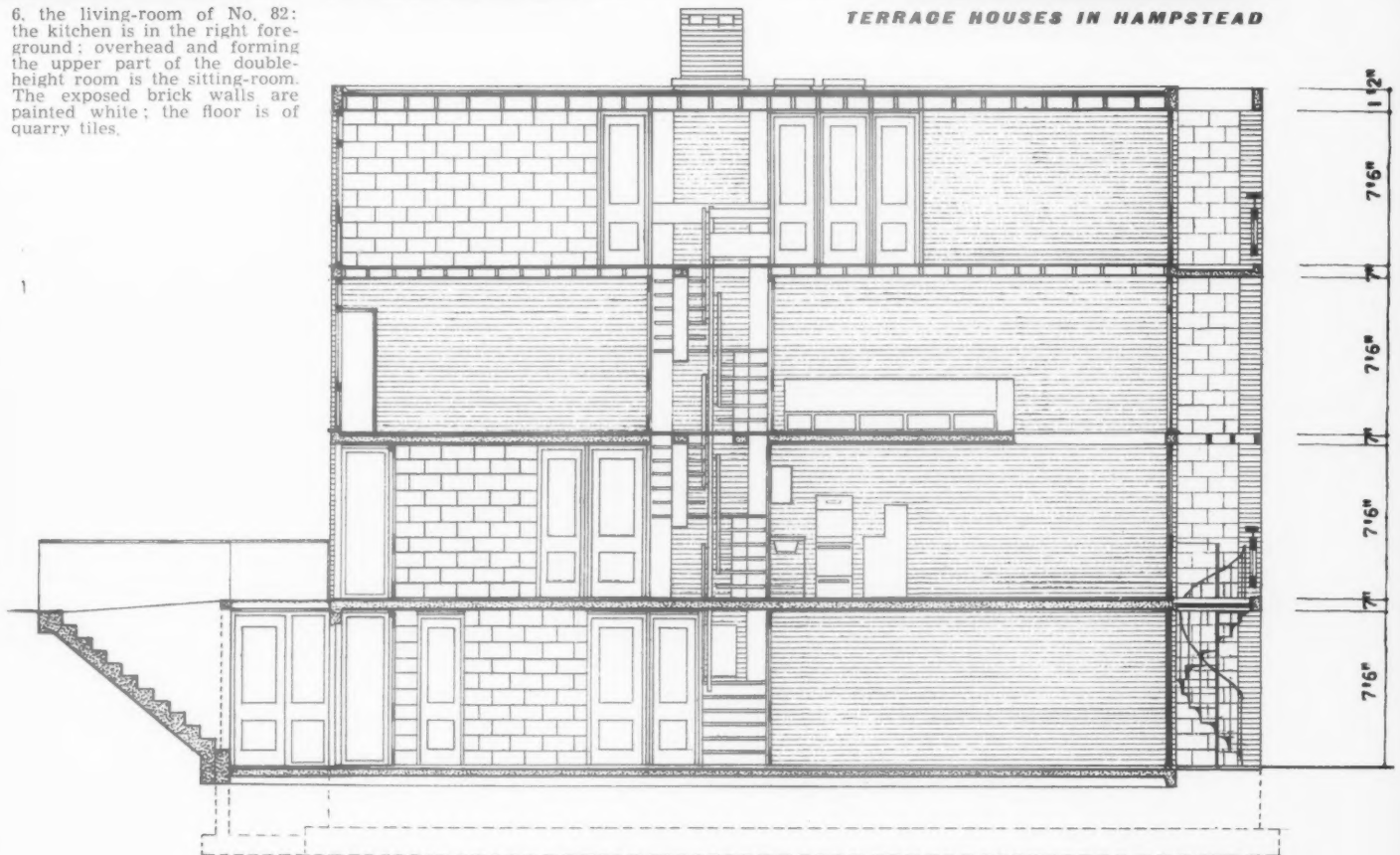


3



6. the living-room of No. 82: the kitchen is in the right foreground; overhead and forming the upper part of the double-height room is the sitting-room. The exposed brick walls are painted white; the floor is of quarry tiles.

TERRACE HOUSES IN HAMPSTEAD



section through landing of No. 82 (scale: 1/8 in. = 1 ft.)

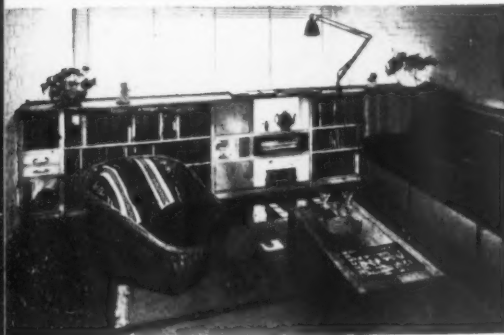
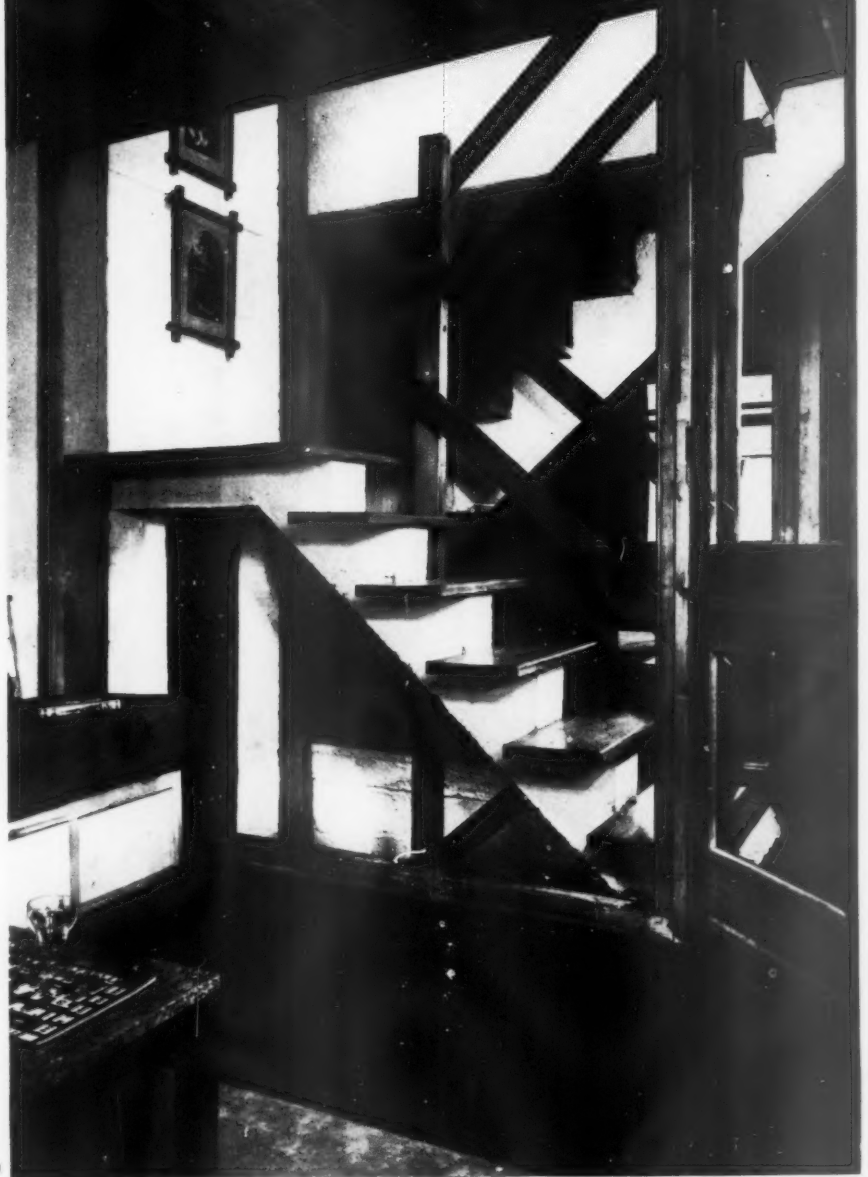


7

7. the double-height section of the living-room of No. 82: from the balcony a spiral stair leads down to the garden. 8. the sitting-room. 9. looking from the sitting-room through the glazed screen to the stairs, which are of reinforced concrete; the cranked beams, which are mirrored in each pair of houses, provide cross-bracing through the length of the terrace. 10. looking from the sitting-room on to the living-room and balcony seen in 7.

TERRACE HOUSES IN HAMPSTEAD

9



8

10

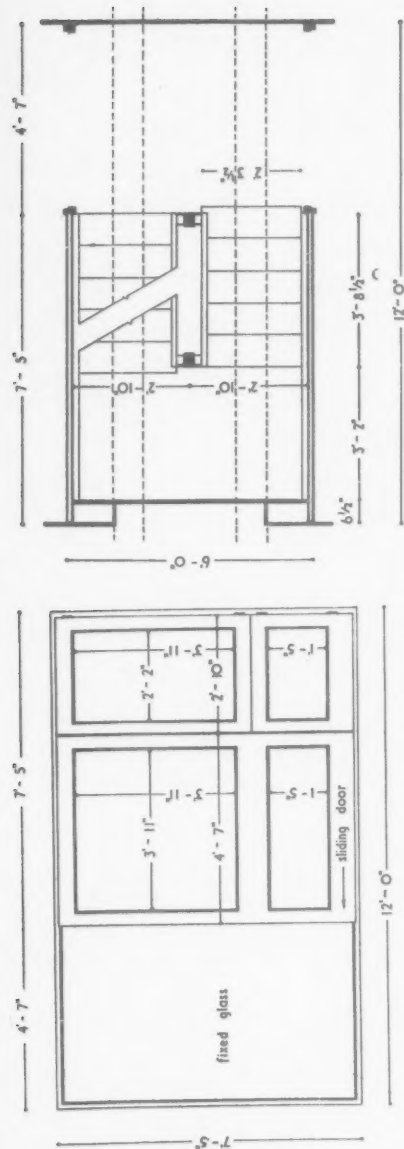




waiver was granted to make this possible; normally they would have had to thicken as they went down, since they are party walls between houses, and not dividing walls between flats). These walls are supported on mass concrete foundations. The end walls have an additional 4½ in. skin built on with a 2 in. cavity. The floors are in situ pot; the staircase cranked beams give additional stability to the party walls. The roof and second floor are of timber. The in-fill panels are of softwood, with a glass-faced under-window panel of one hour fire resistance where there are no balconies to act as fire-breaks. The internal partitions are of fairfaced 2-in. clinker blocks. The 9 in. walls were even-faced to give the best possible surface on either side, and flettons are sufficiently true to give a very satisfactory result. The bricks, blocks, etc. are painted with two coats of white emulsion paint, and the wood is varnished externally and oiled internally. There are variations in finishes (one house, for instance, has 2 in. solid plaster partitions). The floors are quarry-tiles, wood block or lino on concrete, or boarding on the joisted floors. Nibs to cross walls are of engineering bricks; end walls are natural colour flint-limes. Exposed concrete is unpainted, and left rough from the shuttering. The end staircase is oiled teak, and the metalwork is black.

Each house has its own anthracite boiler. The idea of a shared one was considered, but the building societies were insistent that each house should be absolutely self-contained, to avoid complications in the event of resale. Heating is by means of pumped low-temperature hot-water panels in the main living rooms, and a large convector at the bottom of the stairs. The single-stack systems discharge into a private drain running along under the area, which has only one connection to the sewer (very deep) and only three manholes. This was a major saving, resulting from building together. The two rainwater pipes connect with this drain, the local drainage being a combined system. These pipes are technically quite redundant—all that was required was a trapped gully to receive rainwater at the head of each stack, to allow the rainwater to join the soil system immediately, and help keep the stacks fresh. The only reason against doing this was the bye-law; and the drainage bye-laws are administered by the Local Authority, who have no power of waiver (another example of a technically less efficient system of considerably greater cost made necessary by out of date regulations).

In a typical intermediate house the usable floor area including garage, store and balconies is 2,020 sq. ft. The cost was £4,200, of which about £200 was due to abnormal foundations (the site consists mainly of dredgings from the ponds). The price including land, fees, etc., was £5,300.



Above left, window units on the west side of the house, facing the road. This arrangement achieves 7 ft. 5 in. of clear opening, the 4 ft. 7 in. of clear glass being covered by the 4 ft. 7 in. sliding unit. The right-hand unit is an outward-opening door, split between the two panes of glass in the manner of a stable door. Right, the staircase, showing the detailed break-down of dimensions.

plans of the six houses (No. 80 on the left, running to No. 90 on the right)



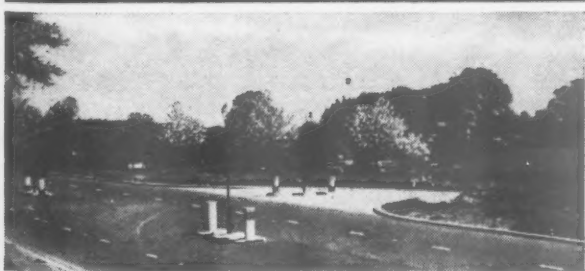
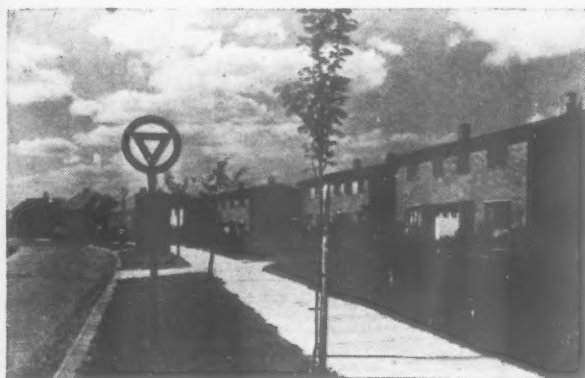
There is no subject which calls forth such extremes of behaviour, such passions, prejudices and indifference in the Englishman as trees. To the French, trees are objects of economic advantage, and only an Englishman could have written "... all the trees of the wood... should surely be more beautiful than Gothic tracery, more than Greek vase imagery, more than the daintiest embroiderer of the East could embroider or the artfullest painter of the West could limn." It is only in England that societies with names like "Men of the Trees" could be conceived or supported.

The subject of tree-planting in towns is muddled and bedevilled because those who plant them are often uncertain what they are there for, and because nearly every local authority has inherited roadside trees originally planted to serve some other purpose. Large forest trees that were once the pride of Victorian villa gardens now find themselves in the front gardens of spec.-built estates on by-passes, where they cut off sunlight from the houses, and where their leaf-fall blocks gutters and renders roads slippery. To reduce the demands they make on labour, works departments lop them or fell them, whereupon local 'tree lovers' invade the correspondence columns of the papers.

Although we are a nation of gardeners and tree planters, most of us know more about perennial and bedding plants than about forest trees, whose habits, height, girth and longevity are apt to come as a surprise to those who later see, for instance, road surfaces buckling under the pressure of their roots. This ignorance can be understood if it is remembered that arboriculture was once almost wholly in the hands of the landed gentry, armed with copies of Loudon's *Arboretum Britannicum*, who planted for profit or shelter. Their knowledge has not descended to the present occupiers of their lands—though their passion for avenues paradoxically has done so, and the Victorians' snobbish preference for living in avenues, rather than roads or streets, survives as a conviction among Local Authority committeemen that roads ought to be lined with trees, just as they ought to have grass verges.

It would be refreshing if we could free ourselves of the avenue complex, and plant according to the three real functions of trees in towns—for clear aesthetic purposes, for utilitarian functions, and for climatic control. To climatic control trees can contribute purification of the air, and enhanced fertility to the soil, protection from frost and shelter from the wind. Their utilitarian functions, overlapping somewhat with the aesthetic ones, include visual screening and sound baffling. To these functions might be added the not unimportant factor that they might also form a useful source of revenue as an economic crop, though only one New Town Corporation has so far seen the advantage of such a policy, the basis of forestry practice for centuries.

Their aesthetic function in built-up areas is surely to link the blocks of houses with the existing landscape, and they can serve to enhance the architectural qualities of any given composition by acting as divisions in space, by defining space, by giving vertical or diagonal accents, movement and light and shade, by breaking monotonous seas of roofscape, and providing elements of scale. All these functions, as well as those of climate control and utility, could best be served, I think, by planting woodlands, rather than street trees, and the economic gain of a planned cropping policy, which might provide new estates with trees as an integral part of the design for no extra cost, would also be best realized in this way. Where trees are to be introduced into existing built-up areas the problem is different only in degree, and new tree planting should be limited to bold groups in existing open spaces. And everywhere the less obvious is the spade of the planter the better.



In England, tree planting in the street has become synonymous with planting in avenues—avenue complex—and it has become an automatic reflex when planning streets to draw in globular trees ranged equally down both sides like soldiers lining the route.

The avenue, originating in France as a grand approach to the palace or great house, became a 'must' in nineteenth-century suburbia—to live in an Avenue had snob value never acquired by Roads or Streets—and local councillors still think like this, 1. They also reason that trees,

Avenue Complex

being natural, are beautiful whilst buildings, being artificial, are dull, so that if you line your streets with trees they become beautiful too. An Italian piazza, treeless and perfect, shows the limitations of this viewpoint. Anyway, the avenue is an idea that has stuck and, being adopted automatically, inhibits the development of other ways of using trees.

From the practical viewpoint alone the conflict of tree roots with the maze of underpavement services, drain pipes, conduits and cables, is a strong drawback to linear planting in city streets, 2.

Since we are a nation of back gardeners it is not unnatural that gardens and not forests have become the basis of our treeplanting. However, the reasoning that if a tree is beautiful then a flowering tree is more beautiful—though sometimes valid in the back garden, the public garden or high suburbia—has sickening results when applied to the arterial road, 3. This is garden complex, a national complaint. Gardens burst into the street and soak away down the

Garden Complex

arterial roads until even the 'wild' landscape is prettified, 4, creating suburbia where none should be.

There is a need to reconsider the visual purpose of trees in streets—what can they do? How can they be a useful tool in the townscape's hand? The following pages show some of the ways.

For instance



with

without



8



6

TREES CAN BE USED to link

individual buildings or groups of buildings together and perform the valuable task of unification at awkward junctions. At Harlow, 5, massed trees are well used to link a point block and a row of houses, a junction which otherwise might have been too abrupt. This effect is exaggerated in 6 to make the point clear.

with

without



7



8

to limit vision

by revealing only a part of the street at a time and so giving an added value to that part by restricting the field of view. By this means, as at Cheltenham, 7, attention can be concentrated on a particular part of a façade—whereas without the tree masking, the eye could wander unchecked, 8.

with



without



9

10

to define space

by trunks and spread of branches as do the columns and vaulting of a Gothic cathedral. Amongst other ways, they may form an arched tunnel, 9, a positive road space which holds the eye and may mask such a wide open subtopian squalor, 10. But tree lining should not be universally adopted, even outside the town, for many landscapes such as the moors depend for their attraction on the lack of trees.

with



without



11

12

to break monotony

caused by the repetition of similar houses or an endless sea of roofs. To do this it is important that trees are planted in clumps or groups, 11, to contrast with the equally spaced dot-dot-dot of the buildings, 12, not in rows to conform with it.

*with**without*

13

as architecture

by being sculpted to geometrical forms and so placed as to carry on the line of the buildings in space, enclosing space and yet allowing free movement underneath, 13. By this means a feeling of formality and largeness of scale can be given to a scene. This vanishes if the trees are removed and small scale, irrelevant detail is revealed, 14.



14

*with**without*

15

as foil

by adding the qualities of movement and seasonal change to static architecture, otherwise altered only by the light. At Westminster, 15, the tracery of bare plane tree branches on a winter's day gives essential contrast to the buildings, which without them appear bleak, 16. The plane tree, a true town lover, is particularly effective in this expression of movement owing to the dramatic gestures of its branches.



16

with

without



17

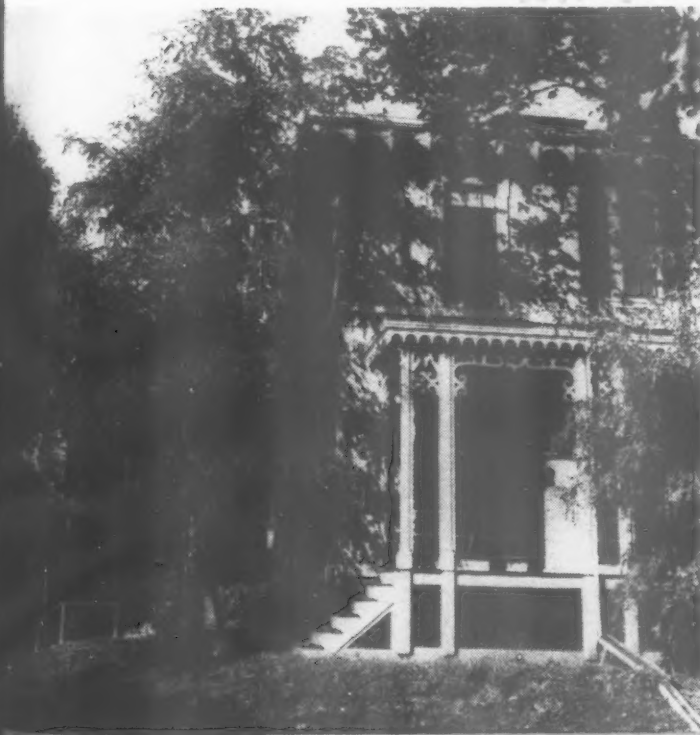
as object

in an otherwise treeless street scene as at Corfe, 17, where natural form of the tree contrasts with its artificial surroundings like a single house in a wooded scene. The single tree, rounded in shape, forms an eye stop and invites one to linger. A good place to meet anyone, unlike the pylon, 18, which is the kind of object often found in such a position.

18

with

without

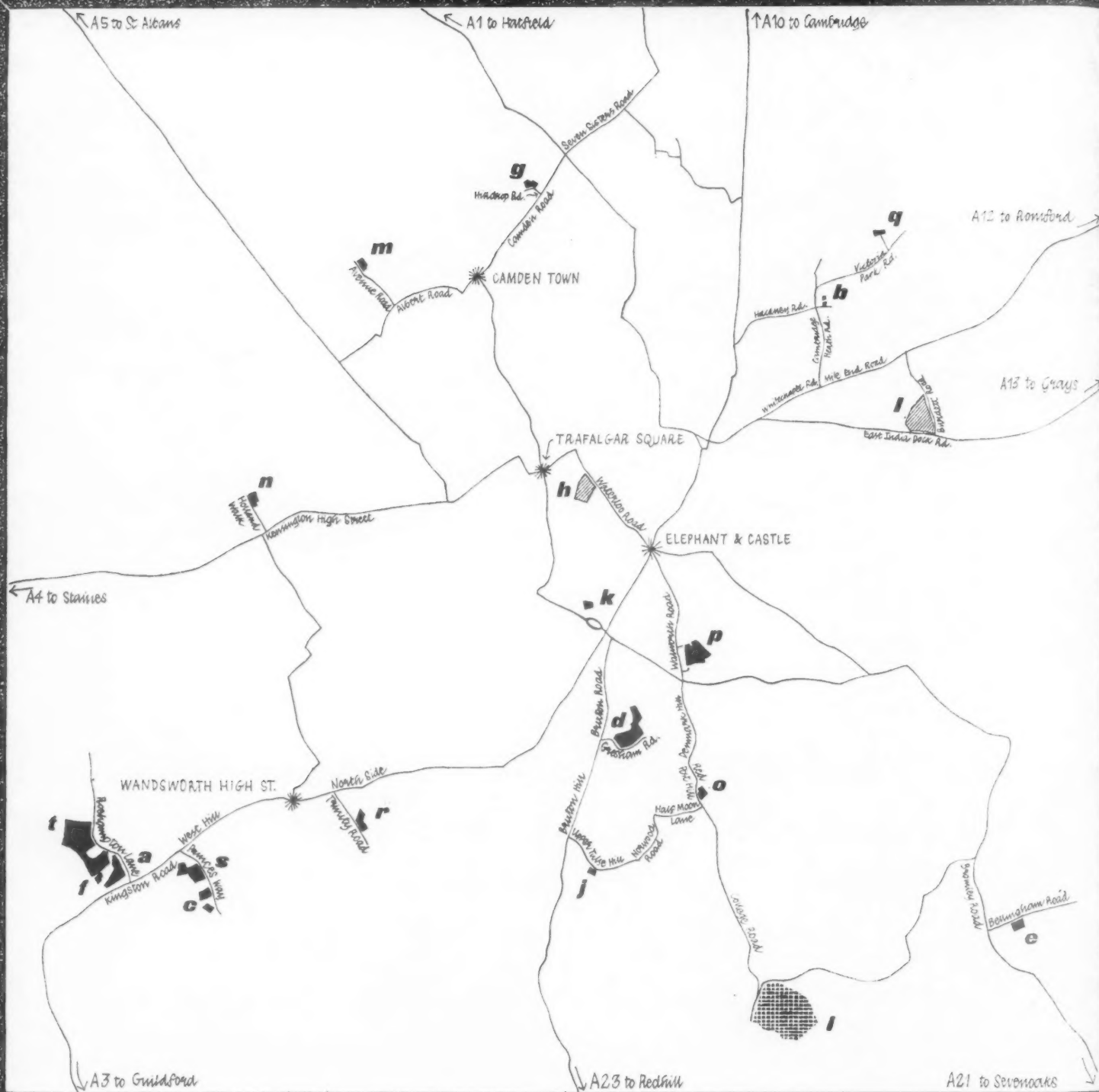


19

to add light and shade

like a changing wallpaper to the façade of buildings, 19. The quality of light and shade is particularly lacking in the blank characterless face of the average housing estate, 20. Here trees become essential to provide both interest and concealment.

20



The purpose of the map above is to locate the most important recent work of the LCC Architects' Department. Housing estates and schools are solid black; areas of comprehensive planning are shown by diagonal hatching, and the Crystal Palace development by cross-hatching. Four convenient starting-points for perambulations around groups of sites are starred (e.g., Trafalgar Square, Camden Town). Roads leading to each site are named. **key** a, Alton Estate, Portsmouth Road, Roehampton, S.W.15 (6-13, pages 307-309). b, Wellington Estate, Bishops Way, Bethnal Green, E.2 (14, page 310). c, Albert Drive Estate, Wimbledon, S.W.19 (16, 17, page 313). d, Loughborough Road Estate, Brixton, S.W.9 (18, 19, 20, pages 314-315). e, Prendergast School, Bellingham Road, Catford, S.E.6. (23, 24, page 316). f, Heathmere School, Alton Road, Roehampton, S.W.15 (26, page 319). g, Holloway Comprehensive School, Hilldrop Road, N.7 (27-29, pages 319-320). h, South Bank development, including Royal Festival Hall, South Bank, S.E.1 (30, page 321). i, Crystal Palace development, Sydenham, S.E.25 (41, page 324). j, Old People's Home, Tulse Hill, S.W.2 (40, page 324). k, School Equipment Centre, Vauxhall Street, near Kennington Oval, S.E.11 (39, page 324). l, St. Anne's Stepney development, Limehouse, E.1 (25, page 318). m, Avenue Road Delicate School, Primrose Hill, N.W.8 (38, page 323). n, Holland Park Comprehensive School, Kensington, W.8 (36, page 323). o, Alleyn's School, Red Post Hill, Dulwich, S.E.24 (37, page 323). p, Picton Street Estate, Walworth Road, Camberwell, S.E.5 (34, page 322). q, Bentham Road Estate, Hackney Wick, E.9 (33, page 322). r, Fitzhugh Estate, Trinity Road, Wandsworth Common, S.W.18 (15, page 310). s, Ackroydon Estate, Princes Way, Wimbledon, S.W.19 (32, page 322). t, Roehampton Estate, Roehampton Lane, Wandsworth, S.W.15 (35, page 322).

L . C . C .

NEW STANDARDS IN OFFICIAL ARCHITECTURE

As a preface to any note upon the work of the LCC it now seems necessary—though it would not have done even five years ago—to state the principles underlying a public authority's assumption of an architect's functions. Inigo Jones, Wren and Vanbrugh were salaried officials of the State; yet there is among some architects today a *crise des nerves* about their status as 'private architects.' Such gentlemen actually equate their status with their art, forgetting that the 'private architect' is virtually a product of the last two centuries. If he had never existed the great things would still be in the history books.

Architects, however, have an odd sense of history. They see the past distorted in glorious monuments. For these they feel a vicarious responsibility. In fact those monuments are no more than relics of tiny civilized elements resting upon a vast substratum of poverty and sweat, maintained by the lash or fear of hell. Thanks to two centuries of radical humanism and a consequent series of technical and social revolutions the end of that is now at least foreseeable. The Common Man may yet enter upon his inheritance, but that also may take two centuries since it involves the true assumption by the State of that responsibility for health, education, sustenance and shelter that charity and piety have never adequately provided. And that, in turn, involves the fact that the architect's employer is no longer his client, as well as the further very difficult problem of how the architect and his employer jointly, i.e. the public authority, can jointly serve the client, i.e. the community; and that again involves the central problem of our era—the rights of the Person within the State, and the validity of the Official as an artist.

The encroachment of the State upon the Person is eternal and continuous—without it there would be no State—but is also variable. It has from time to time assumed such forms as slavery, conscription, censorship and seizure of property either without or with compensation. Planning in England now involves the last—euphemistically 'com-

pulsory purchase.' Good planning sacrifices the person humanely and rarely, and only for the sake of the community of which he is also a part, not as formerly for the aggrandisement of a family.¹ All planning is necessarily an assault upon liberty; good planning is the assault upon a small liberty for the sake of a larger. The problem is to combine the message of John Stuart Mill with that of Karl Marx—a task suited only to a people whose experience is wide and long. In bringing order to the world's largest, most inchoate conurbation, it is the task of the London County Council.

Some years ago Frank Lloyd Wright visited County Hall. Here, he was told, was the largest housing authority in the world. He was not impressed, he was appalled. In introducing the LCC Development Plan in 1951, the Chairman of the Town Planning Committee said that 'architects, technicians and builders have not had such an opportunity to exercise their skill . . . since the beginning of the nineteenth century.' Two views that can never be reconciled? Each presupposes a different function for the artist and even for man himself—the realization of self as against mutual aid. The Christian would add that the second is the only road to the first.

Lloyd Wright—traditionalist, individualist—can dream of a brave new world only with himself as Pantocrator. A brave new London can be born in fact, and not as a dream, only through an organization—technical and administrative—beyond the understanding of the anti-planner who hates what he cannot understand and has indeed never even offered his own solution for the London morass.² The dilemma of the LCC is that it deals with the lives of very ordinary men and women to whom it can never fully explain itself, least of all to the people for whom it is designed. Hence for Fleet Street, exploiting today's grumble, planning is fair game: a fictitious bureaucratic present set against an equally fictitious 'good old days,' never against the grim reality of the eighteenth- and nineteenth-century landlord. The tide of opinion is flowing against the planner. Respectable columnists advocate a new *laissez-faire*, a new absolutism of private property that would prevent the simplest street widening. How do these anti-planners—full of self-pity—think that the railways were made, or the docks or even the Augustan squares they love. Those who fume in traffic jams scream first when the street is widened; those who admire the lawns that border American 'parkways' scream first when the tenant is deprived of his front garden to make a lawn. They want everything both ways. Ten years ago the planner was a messiah leading post-war Britain into the promised land. Today he is the bogymen of Criche! Down. Neither view is valid since both are only sublimations of a mood, but at least the first was idealistic as well as necessary, while the second is as ignorant as it is anarchic. The first mood brought into being the Welfare State

. . . in a sense, an ethical sense, Gladstone's Christian's State.³ The 1956 mood could ruin everything.

To note that anti-planning is the mood of the moment is a reminder that the London County Council, though a powerful body, is an elected body. The County of London Development Plan is a statutory document, but also—since it is only a brief—it could only too easily be frozen into a dead letter. It is the daily job of hundreds to keep it spinning. These architects and planners are competent technicians, but not necessarily dedicated men. They work for rather inadequate pay. They have now—more than ten years ago—a market value. If the job is hamstrung they can easily go elsewhere. Recruitment is lagging. The best post-graduate architects, in the starry-eyed post-war years, turned to such enlightened authorities as Hertfordshire and the LCC, where architecture had a social as well as a technical context. Now they think in terms of Volta River, Kuwait or Malaya rather than the even darker jungles of Stepney or Lambeth . . . or else in terms of big City offices where the context is neither social nor architectural.

This is, therefore, a suitable moment to point to the LCC as being in many ways the most successful architectural office in the world. While the LCC has been generous in its use of private architects and wise in choosing them, the mass of its work—including the private architect's brief—could only have been done under the umbrella of the social, technical and administrative services of London's government . . . thus freeing its younger architectural staff solely for architecture. There are two outstanding facts about the LCC: one, a vast organization produces some very good architecture—'good' in the social, technical and economic sense, as well as the aesthetic; and two, the new architecture is very carefully related, not only physically to the Development Plan, but to the social objectives of enlightened and humane government. If the LCC is a success then it must be emphasized that the success is total only because these 'client' departments at County Hall (Housing, Education, etc.) are, equally with the actual building departments, geared to the Plan. That is the main reply to the main attack on planning. The attack assumes that planning is 'soulless'—i.e., ugly to the eye and inhuman in action. It is this that is most easily refuted by a study of LCC work. Whatever may be wrong in central government or in other local

¹ Aggrandisement and enrichment were, in the past, related but not synonymous; high density estates (slums) paid for low density (squares and country houses), but with both in single ownership. This anarchic robbing Peter to pay Paul, this premium upon high density, can be corrected only by public control.

² To be fair Lloyd Wright did offer a solution: 'the only solution—an atomic bomb.'

³ Our brash neo-Christianity, however, is so at odds with this Ethical State that—says a leader in *The Times Literary Supplement* (10.2.56)—to deny, say, the doctrine of original sin is to be suspected of wanting to nationalize the sugar industry.

authorities, the LCC does show that the basic conception of combined social and physical planning really can work in terms both of humanity and art. This is as well since clearly—apart altogether from refuting a mischievous opposition—an unplanned London would perish, and in perishing would drag down the Anglo-Saxon peoples in its ruins.

That flash point—that the mere form of a city, like the mere size of Versailles, might produce a bloody revolution—was almost reached in 1848. That the danger was staved off in the years that followed was due—the anti-planners might reflect—to a long story of philanthropy and legislation in which such names as Peabody, Octavia Hill, Charles Booth, Rowton, Shaftesbury, Barnardo, shine like jewels. They held the dark fort until the midwifery of the true municipal socialists could bring to birth, after difficult labour, a single government for all London. Even then two generations had to pass before housing—like education, poverty and sewage—became a statutory responsibility. The LCC in its early days had a mandate to build; it was under no legal obligation to do so. In its birth it was nevertheless fortunate—born after two generations of liberalism, its traditions might not be venerable but were at least those of service and action rather than turtle soup.

In 1888, intrigue and corruption having proved the old Metropolitan Board of Works unfit for its job, the new London County Council took over.⁴ The London School Board kept its independence for a few more years, but after 1888 London did at least cease to be a morass of vestries, parishes and pavement boards. The squalor, poverty, disease and vice that had flourished in the compost of both the Industrial and Palladian eras was the challenge; the new municipal socialism was the response. Almost within the lifetime of the founding fathers, within the lifetime of Beatrice Webb and Bernard Shaw, the Abercrombie-Forshaw Plan was complete and the principles laid down for the present Development Plan. 'Gas and water socialism' was a current gibe, but in fact—as any architect knows—there is nothing comparable in the history of cities.

It was inevitable, but also fortunate, that the building work of the new LCC under the 'Housing of the Working Classes Act' should come within the Morris-Webb aura rather than—as it might have done—within the grim traditions of Guardians and Charity Trust building. The problem, however, was not simple. Little was known either about the organization of a very large staff, or about the planning of an extensive programme of work. W. E. Riley, though not in the orthodox sense an architect, had had a fairly big staff under him at the Admiralty and he had the sense to give clever young architects reasonable initiative, thus giving them pride in their job. This did not persist as an LCC tradition; it has had to be revived by Mr. Robert Matthew and Dr. Leslie Martin. Riley tackled with vigour the first large slum clearance scheme⁵ on the Boundary Road Estate, Shoreditch. This was necessarily a high density

⁴ For this period I am indebted to D. Gregory Jones's AA Prize Essay on 'Some Early Works of the LCC.' (*AA Journal*, November, 1954).

⁵ Was this the first humanitarian slum clearance scheme in history, as distinct from clearance of derelict property for economic or civic improvement—i.e., the first scheme to re-house rather than evict?

scheme since everyone on the site had to be re-housed within its boundaries, but the planning was skilful and the taller buildings, though only five storeys, were almost what we would call 'point blocks,' with only two flats on each floor. Architecturally the whole scheme, in spite of the freedom given to the individual designers of the blocks, has great cohesion because of the regard they all had for the Webb-Lethaby vernacular—high gables, quoins, chimney stacks and sash windows, plus a smattering of less relevant Norman Shaw details.

The better-known Millbank Estate (behind the Tate Gallery), 1, designed by R. Minton Taylor in 1899, is much purer and gets rid of much of the eclectic detail. Norman Shaw, with his 'snob' practice, was not in any case an abiding influence in the Department; whereas Lethaby, with his social ideals, is known to have had great authority there. The whole estate deserves greater recognition as a monument of its time. Even then the Council was puzzled about the correct relationship of public authority to contractor. Tenders had proved exorbitant—did builders think this new ratepayer's purse was bottomless?—and for certain of the Millbank blocks the Council had to enter the building trade themselves. They have been experimenting ever since; public tendering is still unsatisfactory and the latest and most successful experiment (1956) is with a nominated contractor.

From 1890 to 1906 the LCC was continuously rebuilding bits and pieces of its frightful and macabre Dickensian inheritance. Among these was the Webber Row Estate in the Waterloo Road, 2, with its carefully considered skyline of steep gables, but with no self-conscious escape from the urban nature of the site. Before rebuilding the mortality rate on this site for children under five was 148 per 1,000! The LCC built its first cottage estates at Totterdown, 4, in 1903, and at Old Oak, Hammersmith, in 1912.



1, Millbank Estate, behind the Tate Gallery, designed in 1899 by R. Minton Taylor.



2, Webber Row Estate, Waterloo Road, S.E.1, 1906.

These are just sound garden city stuff, but they have some significance. First, the date might make the ghost of Ebenezer Howard look to his pioneering laurels; and second, these estates re-housed people on new sites instead of on slum-cleared ground—the first move towards *planning* London as distinct from *ad hoc* rebuilding. Note, too, that the central area estates when contrasted with the cottage estates show an appreciation of urban and rural character respectively that some local authorities lack fifty years later.

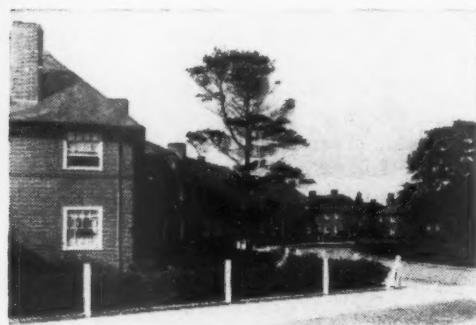
Within twenty years of the founding of the LCC the Architects' Department was faced with a complex programme. The Central School of Art in Southampton Row (1908) was only one item. Even more interesting is the Euston Road Fire Station (1902), 5. Mr. Gregory Jones tells us that this fascinating building—owing something to Glasgow Art School—was not (according to Owen Fleming) designed by Owen Fleming to whom it is usually attributed. It was an example of the kind of architecture which should, according to our 1956 anti-planners, be soulless . . . it is bureaucratic, it is designed in a 'department' and it is anonymous. Mr. H. B. Creswell for instance⁶ writes that buildings from a public office are not designed at all but 'hatched' by a conglomeration of technicians, a process to be compared with the chaos that would have resulted had, say, Shaw, Street, Lutyens and Colcutt gone into partnership—a false analogy based on a false premise. Such men were brilliant individualists in an age of stylistic anarchy. The LCC Architects' Department itself symbolizes the close of this anarchical era; in its earlier works there is a consistency of style and outlook arising, not from a boss imposing himself, but from a social and architectural ideal—the Morris-Lethaby-Webb ideal that a Shaw or a Lutyens could never more than half understand—but which *was* shared at that time

⁶ H. B. Creswell: *Architect and Building News* (16.2.56). A statement based on experience at the Ministry of Works sixty years ago.

by all the designers in the Department.⁷

This LCC honeymoon ended with the First World War. The pioneers were dispersed. We can pass quickly over the intervening years, the years between the wars. It was a period when considerable slum clearance was carried out and massive blocks of housing were built, compared with which Millbank or Webber Row were small indeed. Such schemes, however, were still only *ad hoc* rebuilding—mainly on sites where the valuer could drive the best bargain—for there was still no plan for London, no plan to

⁷ One sees now, though it may have been difficult for Professor Pevsner to do so twenty years ago, that the LCC Architects' Department—not only because of the architecture itself but because that architecture was departmentally designed—might well have been placed upon the roll of 'Pioneers of the Modern Movement.'



3



4

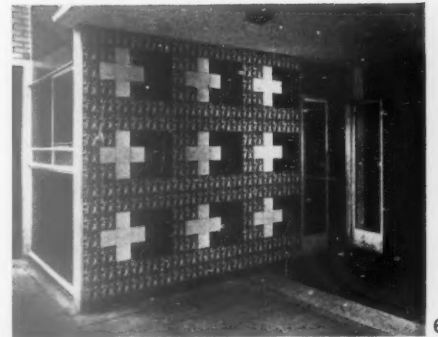
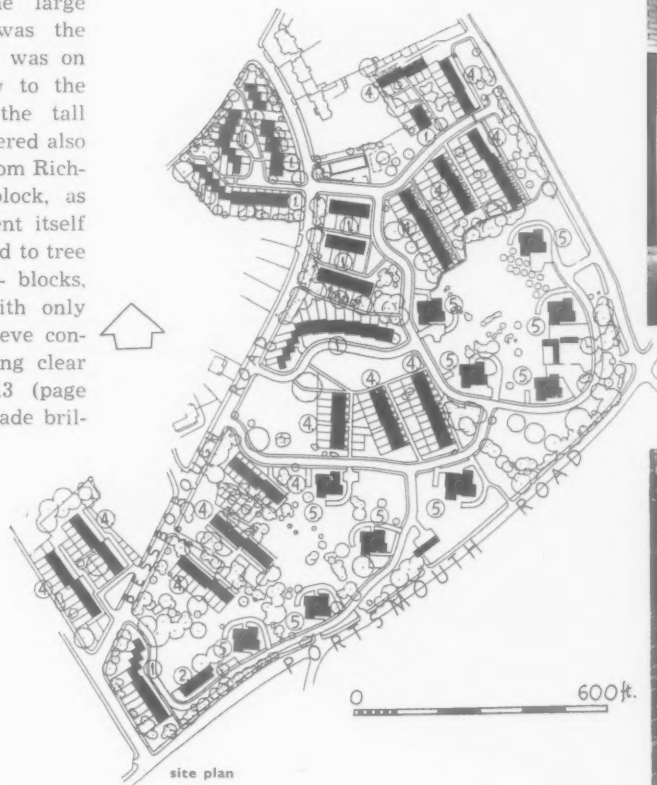


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3, Roehampton Estate, 1924: the Pleasaunce, which is about half a mile north-east of the Alton Estate. 4, the first of the LCC's cottage estates, at Totterdown, Tooting, 1903. 5, the Euston Road Fire Station, 1902.

Alton Estate, Roehampton, S.W.15

An example of mixed development* on a site that was formerly the gardens of Victorian mansions. The large number of mature trees was the key to the layout. The site was on high ground, falling steeply to the south, which meant that the tall point-blocks had to be considered also as a panoramic group seen from Richmond Park, 8. The point-block, as opposed to the slab-block, lent itself to siting on steep contours and to tree preservation. These point-blocks, eleven storeys high, but with only four flats on each floor, achieve considerable elegance by standing clear of surrounding buildings, 13 (page 309). The entrances, 6, are made brilliant with staccato designs in black, white and stippled tiles. 7, an ingenious use of hollow-centred concrete tiles outside the flats, giving a hard surface but letting grass grow through. The lower buildings form maisonettes, 10 (page 308), terraces and single dwellings. The steep contours, again, give inter-



744 dwellings (including 424 flats in tall blocks, 224 maisonettes and 75 terrace houses). Area of site: 28 acres. Density: about 29 dwellings per acre.





esting effects as the houses step down the hill, 12. Other groups exploit colour—successive houses being painted all over in emulsion paint, 9, a whole terrace working through a range of greens. The contrast between the open park-land around the point-blocks, 11, and the intimacy of the small streets for the houses is one of the best features of the scheme.



Alton Estate, S.W.15





14

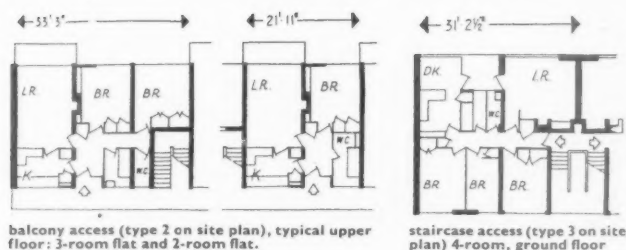
Fitzhugh Estate, Wandsworth, S.W.18

The estate abuts on Wandsworth Common, and permission was only given for the development on condition a sense of space in keeping with the Common was preserved. Hence the five tall blocks*, which comprise the total housing, sited so as to avoid massing, 15, and also any major disturbance of existing trees.

*214 flats. Area of site: about ten acres.



15



Wellington Estate, Bethnal Green, E.2

This estate is thoroughly urban, lacking the park-like character of the Roehampton estates, and having a much higher density*. It depends, therefore, more upon abstract and formal architectural qualities for its effect — in actual fact upon the arrangement of windows and panels between the cross-walls and upon the rhythms of the balconies. Simplification of structure is brought about by regular spacing and repetition of structural units, 14. Two of the four blocks have balcony access; the other two have staircase access. The exter-

nal walls are non-load-bearing and consist mainly of timber framing with glass-faced under-window panels.

*72 dwellings, in four blocks. Area of site: 2 1/2 acres. Density: 38 dwellings per acre.



which they could be geared. Architecturally they lacked the conviction of the pre-1914 work, they are no more than the tired, mechanical neo-Georgian of the time, 16, simplified versions of the 'luxury' flats then being spawned over the West End.⁸ Better working-class house was being done elsewhere. The sad aspect of this era is that while the architects concerned were competent—in the accepted sense—it is clear that either they were imposing their jejune ideas upon their staff, or that the staff lacked the idealism that had fired their predecessors. Either situation follows the other—the wrong boss attracts the wrong staff.

As the Second World War ended there arose a new spirit that was of deep significance to the form of the city. It was the spirit of socialism, welfare and reconstruction. No one quite dared to use the old slogan—'homes fit for heroes'—but Planning was in the air, not only in the air but on the Statute Book. The Forshaw-Abercrombie Plan (1943), if only an *esquisse*, had laid down principles for the whole County.⁹ It was a tangible brief to which both the more specific post-war Development Plan and all future building work could be geared. This, as the second fruitful era of the Department's history began, was the significant change. Now it was all London—not this slum or that—that was the canvas on which the staff could work. It was under this stimulus and under a new sort of chief architect—Robert Matthew—that the Department recruited its post-war staff. They were starry-eyed days and some disillusionment, as well as achievement, lay ahead. There was also a bad 'hang-over' in the Housing Division until—due to much external criticism—the Valuer was in 1950 deprived of his architectural functions, and Whitfield Lewis appointed as head of the Division. Even so, it seems more necessary today than fifty years ago to explain the work of the LCC. It was then taken for granted that if slum clearance

⁸ Multi-storey flats are, in any case, the very last building type to which Georgian façade motifs can be applied. The essence of the Georgian façade is *differentiation* in the value or heights of storeys—modest ground-floor, piano nobile and so to the attics. In flats, on the contrary, every storey is of equal value and height since each has an identical function. Neo-Georgian high buildings, therefore, are not an error of taste but of comprehension. Hence, the period from 1920 to 1940—from the introduction of the steel frame to the recent realization of its aesthetic implications—was in LCC housing, as in 'luxury' flats, the reign of monotony.

⁹ London was not unusual in aspiration, only in realization. Dozens of other plans—'Exeter Phoenix,' etc.—have all gone with the wind.



16, South Lambeth Estate, a pre-1939 scheme completed after the war: Corfe House—typical of the mechanical neo-Georgian style produced after 1918, in imitation of the 'luxury' West End blocks of the same date.

work was not done by municipally-employed architects, it would not be done at all. The Norman Shaws and the Lutyens would not have accepted such commissions, and so a special staff was needed. Today a different explanation is needed: an explanation as to how, at County Hall, a man's ability is used, and fully used, inside an organization so large as to intimidate or depress many, while infuriating others.¹⁰

First, then, it is necessary to recall that private architects' technical and economic responsibilities are now such as to prevent them being entrusted with large schemes until they are middle-aged—experience and caution mattering more to their sort of client than brilliance or even reasonable skill. It is the Commercial State, not the Welfare State, that thinks an architect's *architectural* capacity the least part of him.¹¹

Today, however, more jobs are big jobs. The younger and more imaginative designer must—for the sake of architecture—be given the protection of the right sort of large office, where administration is cared for by administrators and design by designers. This large office, in our dual society, can be, as in the commercial sector, the large commercial office or, as in the welfare sector, the large public office. In the former the boss will, for *réclame*, wish to appear as the author, as the architect he so seldom is. He may also reduce to an economic minimum the 'umbrella' of technical and administrative services under which the designer works, and may therefore discourage æsthetic adventurism involving technical effort. He is unable, also, to use one client's job as a pioneering job, or pilot scheme, for the benefit of another client. In the large public office, however, such technical services can serve a large building output, and the principal architect, while not necessarily a very good architect, has no reason to avoid original or even adventurous solutions, provided always they are solutions. He has little interest in personal fame.¹²

The small private architect may always exist for the small job; for the big modern development programme—e.g., not a school but a county full of schools—good architecture is on balance more likely to come out of the big public office—or the sort of office it chooses to brief in its farming out—than the big commercial office, because it is within the public authority that the designer can be freed to design. Admittedly there are very few good public offices—say half-a-dozen—but then there are very few good architects—say a hundred; but we are not discussing the state of architecture, we are discussing in general how such ability as there is can be used, and why in particular the largest public office of all is one where

¹⁰ Some of the intimidation and depression created by the LCC in sensitive organisms must be directly attributed to that archetype of private architect, the late Ralph Knott.

¹¹ The average age of architects whose work was shown at The Arts Council Exhibition—'Ten Years of British Architecture' was 44. The inclusion of more big office blocks and large industrial works would have 'rocketed' this figure, but few such works were, on architectural grounds, exhibited. The reckoning in of the more creative younger staff at, say, Hertfordshire or the LCC—much of whose work was shown—instead of their chiefs, would have lowered the figure to about the point where history shows man's creative powers to be at their height.

¹² Technical development groups (e.g., as at City of Coventry, Hertfordshire CC and the LCC) are a sign manual of the advanced authority.

designers are allowed to design. It is a notable fact and a notable achievement.

A further advantage of the large public office is that the old client-architect relationship—which seldom worked well if only because the architect was seldom properly instructed—no longer exists. The architectural or building departments of the authority and the 'client' departments (i.e., Housing Officer, Education Officer, etc.) do not stand to each other as patron and servant; they are colleagues. Consequently, the Education Officer's case for, say, a school on Site X, the Planning Officer's case (on Abercrombie principles) for allocating Site X for educational use, the School Architect's approval of Site X for its purpose, and the Housing Officer's original decision—within the framework of the Development Plan—to allocate population to the area around Site X, do become—*given reasonable men reasonably organized*¹³—a single case crystallized inside a single organization with a common pool of information and a common objective.¹⁴ This monolithic case, being also geared to an investment programme that is, in turn, geared back—as it were—to the needs of the 'client' departments, is accepted by the Council for what it is—the joint advice of appointed experts. There can be no client-architect wrangling. The process is not fast, it is smooth. The building is not 'hatched' by a committee process; the committee process is concerned very little with the building as such; it is concerned to ensure the designer a concise and untrammelled brief. The case may at its worst be faulty, which is possible under any system. At its best it is a conspiracy among experts to produce the right building in the right place at the right time.¹⁵

It is outside our theme to discuss the 'client' departments of the LCC, but any picture of the building and planning divisions must have in the background, among other things, the Education and Housing Officers, the 'clients' who know their needs both within London as it is and within London as forecast by the Development Plan. In the further background is the Valuer¹⁶ acquiring sites with a precise factual knowledge of the past, present and potential future of each acre of the County. The Housing Architect, for example, will thus ultimately receive a brief leaving to him those matters that are his concern—i.e., the architecture of housing—but a brief bearing some guarantee that he is, in the eye of Housing Officer, Planning Officer and Valuer, being asked to design the right number of dwellings in the right place. He is also working to a brief to which he himself has contributed at an earlier stage by examining the site's housing potential.¹⁷

¹³ A reasonable organization is assumed; there are local authorities where County Architect and Education Officer have never met!

¹⁴ In the job farmed out to a private office the argument still applies since only at the end of the process does the brief reach the designer.

¹⁵ Admittedly a highly complex process: the individualist who squirms under it must either go into exile, plot a revolution, or propound an alternative method of governing fifty million people within the ethic of Christianity and Humanism—the dual philosophy upon which our society likes to think it is based.

¹⁶ The LCC Valuer, once he was deprived in 1950 of his architectural functions, became a key figure without whom the Development Plan and the consequent allocation of sites to the designing staff would be paralysed. He is now an integral part of a logical process.

¹⁷ One may legitimately compare this process—said to frustrate the designer's soul—with, say, Vanbrugh's experience with the Marlboroughs or Lutyens's with the British Raj.

The Architect's Department of the LCC is responsible for the development of London in accordance with its own statutory plan, and for all the building work directly undertaken by the Council. It is also responsible for the maintenance of its own buildings, for the drafting and administering of the Building Regulations—including means of escape and fire precautions; for the administration of the London Building Act and consequently for the appointment of District Surveyors¹⁸; for civil defence structures, for street naming and for the care of such historic monuments and parks as do not come under the Crown. It is, therefore, responsible for the approval in terms of planning, structure, safety and, to a lesser extent, aesthetics, of all applications to build within the County. We are concerned here only with the Department's own work but it is to be noted that that work gains in flexibility by its closeness to the Regulations and Building Act officials; a structural experiment can correlate itself to the necessary waivers and revisions of the Act at sketch stage.

Not all public authority in London is by the LCC however. (This paragraph may be skipped by the experienced Londoner.) The administrative area of the County excludes at its heart—save for planning approvals—the built-up but almost uninhabited financial quarter of the City. The County is also rather smaller than the vague 'London area,' and much smaller than the area affected by many of its services. The metropolitan police area and the London Transport area again have their own boundaries. The area of the County of London is 117 square miles, its population is about 3,300,000; that of the Thames Basin or London commuting area is probably nearer 10,000,000. Within the County itself are the much older London boroughs.¹⁹ These boroughs are anomalous products of history, left out of account in the great reorganization of 1888; in practice often justifying their existence even architecturally. Only the real Londoner knows instinctively which are borough services (e.g., street cleaning, lighting, public libraries and rate collecting), which are County services (e.g., education, ambulances, fire brigades and sewage disposal), which are autonomous services (e.g., police, transport, gas, water, electricity and the Port) and which are central government services (e.g., principal museums, galleries and royal parks). Housing, however, is carried out by both the boroughs and the County.²⁰ Westminster, Finsbury, St. Pancras and Paddington are boroughs that have recently built large housing projects of some architectural importance. This does not mean that LCC housing cannot and will not be built in the same area. How the LCC and the boroughs settle housing policy between them is, in spite of the machinery of joint meetings, something of a mystery. Urgent need, the chance acquisition of good sites and a borough council's attitude to its

¹⁸ The District Surveyors formerly lived on fees payable to them by building owners for approval of work done—a most dubious and almost corrupt system stinking of the eighteenth century. They are now directly employed by the LCC.

¹⁹ An interesting, if slightly out-of-date picture of the London maze is to be found in Robert Sinclair's *Metropolitan Man* (1937).

²⁰ There are sometimes book-keeping adjustments between the boroughs and the LCC, but a rough guide to their relative importance is that they divide the London rate on a fifty-fifty basis.

Albert Drive, Wimbledon, S.W.19

Albert Drive,* while one of the Wimbledon and Roehampton group of estates, is different in conception. Like the other estates it enjoys the advantages of mature trees, but it uses its site not as parkland but as a series of linked quadrangles with the old trees grouped in the centre of each, 18.

There are no point-blocks here—there would have been no room for them—but rather an arrangement of formalistically designed terrace housing and maisonettes. The 'cottage' atmosphere is also avoided and here it is whole terrace blocks, rather than single dwellings, that are stepped up the contours. The construction is of the cross-walled type with panel and window infilling, 17.

*343 dwellings. Area of site: 13.86 acres. Density: 24.75 dwellings per acre.

site plan



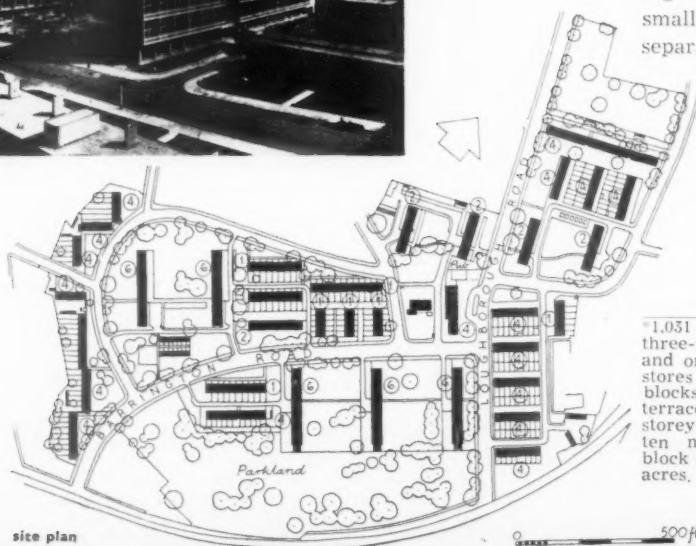


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Loughborough Estate, Brixton, S.W.9



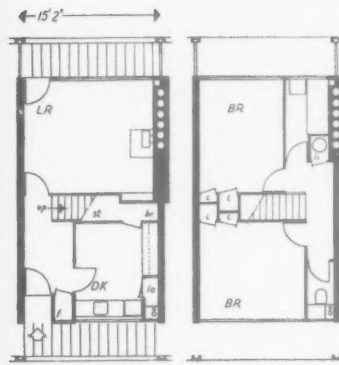
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site plan

This is an urban rather than a suburban estate, with a fairly high density.* There were, however, a number of old trees on the site and the preservation of these has made it possible for the higher blocks to look south over a small piece of parkland, 19, which separates the housing from the railway viaduct. A school extension, old people's home and shopping centre (of seven shops with maisonettes over) and laundries are part of the plan. While there is some terrace housing and some one-room flats, 20, the interesting point about the scheme is that it

*1,031 dwellings (nine 11-storey blocks of three-room maisonettes, and three-, two- and one-room flats, laundries and tenants' stores; one six-storey and 15 four-storey blocks of four-room maisonettes; eight terraces of two-storey houses; one three-storey block with seven shops below and ten maisonettes above; one two-storey block of one-room flats. Area of site: 30.86 acres. Density: 38.2 dwellings per acre.



typical maisonette in 11-storey block:
left, lower floor; right, upper floor.

Loughborough Estate

consists largely of maisonettes. The cross-walls in the higher blocks are brought forward to frame in the balconies — forming a slightly aggressive over-all pattern, 21.

Tor Gardens, Kensington, W.8



The estate is divided into two sites, 22, the L-shaped block, adjoining other properties, which is partly four-storeyed, with maisonettes, having private gardens, and partly three-storey with balcony-access flats.



23, the other block is on an island site, is three-storeyed, and contains only staircase-access flats. A large area on the south side (shown above) is grassed and planted and used as a children's playground; it is also intended to serve as a green link between Holland Park and Kensington Gardens.



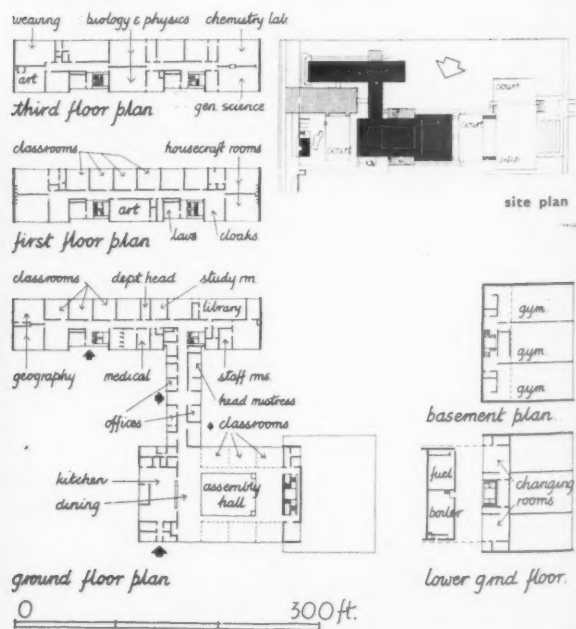
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25

Catford County School, Lewisham, S.E.6

This is, so far, one of the more interesting LCC schools* designed in the Architects Department—as opposed to those farmed out. It is simple in plan—two main blocks only—and the plan is noteworthy for the way it exploits the steep site. The light construction—a 3 ft. 4 in. modular steel frame with precast concrete cladding and curtain wall glazing—is also reflected in the whole character of the design, 25, as well as in its detail. The flexible design of the assembly hall, 24, for multi-purpose use, is ingenious, and the use of external colour excellent.

*For 1,190 girls.



social problems (i.e., politics) all play their part. An apathetic borough may cause the LCC to move in; desperate housing needs may cause the borough and the LCC to build within half-a-mile of each other.²¹ This does not matter in theory, nor in practice except when borough architecture is too far below LCC standard . . . it sometimes is and sometimes isn't. The boroughs, however, are not exempt from LCC planning consent; they are not themselves planning authorities, only corporate but private building owners submitting schemes, like anyone else, to the LCC. In actual fact borough schemes are normally discussed and agreed at County Hall long before formal consent is asked for.

Subject to this reminder that the boroughs tend to confuse the picture, the Architects' Department of the LCC is virtually responsible for all public building in the County of London (except the building done for the Crown by the Ministry of Works), and for planning approval of all building, public and private.²²

The LCC Architectural Department has today a staff of about 3,000, technical and administrative. After the inter-war doldrums the Department returned to something like the brilliance of its pioneering years, but in a very different context—the context of the Welfare State. The scale was infinitely greater, the problems more complicated and statutory obligations and powers more far-reaching; but once again, after forty years, there was an ideology, an architectural target. In such a vast organization—involving much delegation—there is a lot that is no more than mediocre, but there is also that considerable body of work that ranks so high in the architecture and planning of our time. For the present status of the Department two

²¹ Typical of the London scene is Drake & Lasdun's Bishop's Bridge Road housing scheme in Paddington, with the Hallfield School planned as an integral part of the whole. The Borough of Paddington commissioned the housing; the LCC commissioned the same architects to build the school in the gardens of the flats. M. Le Corbusier found a less satisfactory liaison between the French Republic and the municipality of Marseilles.

²² The boroughs have in practice delegated all their powers to the LCC, except control of advertising.

the planning division (apart from its statutory functions under the London Building Act and the Building Regulations) deals with the planning aspect of all LCC, borough and private development under the Town and Country Planning Act, 1947. It also administers the County of London Development Plan, both by positive implementation and by assuring that private schemes are geared to it before they receive approval. Under the Senior Planning Officer, L. W. Lane, the Division has a staff of about 200 architects. Until this year, and since 1948, the Development Plan has been administered by four groups: 1. Information and Research; 2. Development Plan Group; 3. Application Group; and 4. Reconstruction Group. As the Plan has moved into action, however, Research has become more realistically linked with policy and its application, while Reconstruction (i.e., reconstruction of derelict areas by the LCC itself) has become more and more important. This year, therefore, there has been fusion into a single Policy Group,

while the application of policy is directly administered by the planners—the subdivision being only regional: two areas, NW and NE, to the north of the River, and one area, S, to the south of the River.

In the middle of the war—perhaps mainly as a gesture of faith—the 1943 Forshaw-Abercrombie Plan was produced. This, elaborate and radical though it was, could be only a sketch. Its acceptance by the Council in 1945, however, meant that certain axioms were established: 1. London's lack of open space and recommended standards; 2. The need for a drastic system of ring roads and an ironing out of traffic congestion; 3. Classification of housing as: (a) low density, (b) obsolete, and (c) correctly sited on a community or neighbourhood basis . . . the key to urban development; 4. The need to deal with faulty mixed industry and housing. With a view to implementing these principles the Town Planning Committee of 1945 also made specific recommendations concerning, for instance: 1. The establishment of main density zones of decreasing

successive Council Architects, Robert Matthew and Leslie Martin (who succeeded Matthew after coming in as his deputy) must share the responsibility, together with the heads of their Divisions. Last year R. E. West was appointed deputy architect, and now Hubert Bennett—formerly County Architect of the West Riding—is to succeed Leslie Martin, who takes the new Chair of Architecture at Cambridge. In all this it is Matthew and Martin who stand out as the men who could set their sights high, remain calm, attract staff and—while never themselves abdicating as designers—could give their staff an organization within which they could justify themselves.

In particular, Leslie Martin's refusal to abdicate as a designer has not prevented him from allowing more than one school of aesthetic thought to reveal itself in executed work; but this liberalism apart he has himself designed. In the room adjoining his own at County Hall there has nearly always been a small post-graduate group working with him on what might be called a 'prestige job.' The Festival Hall, though large enough to overflow into other rooms, was designed in this way. The proposed extension to the Festival Hall, certain aspects of the South Bank plan, and the Sports Centre and other buildings on the Crystal Palace site all bear Martin's personal stamp as designer.

The whole organization is based, *not* on the 'pyramid' with a master designer at the top, but on a series of almost autonomous teams. The basic unit is usually about twelve men under a Grade One architect for each job, a 'job' being, say, one Comprehensive School and two Primaries, or one medium housing estate. The structure of the Department is functional, not regional. On this basis—apart from some of the lesser or purely statutory functions of the Department, and apart from those Divisions (e.g., Quantities) that serve the architect—the main Divisions, under the Chief Architect, are: 1. Planning; 2. Housing; 3. Schools; 4. General; 5. Maintenance; and 6. Technical Development. A comment must be made about each.

intensity outwards from the centre; 2. Standards of open space at 4 acres per 1,000 persons, and better distribution thereof; 3. Certain urgent road works; 4. Mixed low and high housing, subject to overall density control; 5. Decentralization of industry; 6. Establishment of Reconstruction areas. A glance at the Development Plan ten years later shows how closely it has been guided by these recommendations, and how, therefore, it is a true growth from the Abercrombie seed.

The Development Plan²³ was also of course a statutory requirement under the 1947 Act and, dealing as it did with thousands of single properties (some 7,000 objections and representations were received and dealt with in public enquiry), was a vast administrative task inside County Hall. A complex series of documents, it was duly submitted to the Minister in December, 1951, and, after over four years, was approved by him with modifications. These modifications, while

²³ 'Administrative County of London Development Plan 1951. Analysis.' (L.C.C. £1.10.0.)

mainly slight or reasonable, were not entirely so. The Minister suggested that the LCC was failing to implement its own policy by inadequate reduction of the industrial acreage and, to ensure that industry should not re-occupy certain areas now industrial, re-zoned these as residential. This may—disastrously—force housing on to bad sites as, for instance, land alongside railway yards. This seems to be not unconnected with the Minister's dislike of the LCC's use of leafy, open but obsolete sites (e.g., gardens of Victorian mansions at Putney or Roehampton) for new low density housing; he excludes such areas as Hampstead, St. John's Wood, Dulwich, etc., from such use. Another Ministerial modification was the demand for a new approach to the problem of the St. Paul's precinct; it was to meet this demand that the present Holford scheme was produced.

Generally, while the Development Plan implements the Abercrombie principles, it is clear that the most intractable problems involved are the reduction of industry within the County and the general control of population movement. The industrial issue in particular is too deeply sunk in a welter of statistics to be discussed here. The Plan did, of course, even before submission to the Minister, drastically reduce the industrial acreage; the issue is rather one of degree, of location, of the new zoning of land from which industry is to be ejected, of the allocation of funds for site purchase and the use of compulsory powers. Apart from such details, however, the Development Plan reduced industrial acreage by 290, while the Minister increased this 'target' figure to 400—an aspiration rather than an estimate. Moreover, as the LCC have pointed out, while they can deal with their domestic problems, the location of industry is a national problem.

As to general population control, it is not always realized that the present population of the County (3,300,000) is 'correct.' It is the distribution within the County and the housing itself that are bad. The present policy, designed to preserve the amenities of lower density suburbs, is to 'leap-frog' the population of the central areas to new housing outside the County. Hence the 'out-county' estates and the 'overspill.' For some reason the out-county estates have not been among the LCC's happier architectural achievements, nor does the overspill, in the present context, raise matters of architectural interest to London. The Development Plan estimated an overspill of about 300,000 and agreements have been concluded with Swindon, Bletchley and Daventry, while the Minister has agreed that a number of other towns south-east of a line from The Solent to The Wash should also be 'expanded towns' for former Londoners. Only thus is there a chance that London's remaining central area population might be ultimately rehoused in either Reconstruction Areas or rehabilitated housing. There are, however, limiting factors: one, the potential of the expanded town to provide employment, and two, the desire of Londoners to make the move . . . so far about 30,000 families or 110,000 people, divided between the

expanded towns and the New Towns. This is considered by the LCC to be a good beginning. Is this policy of decentralization defeatist? It is highly controversial and is dependent not only upon such obvious factors as a straight choice between high building in the centre or low building farther out, but rather upon such things as the problems of commuting and the 'exportability' or otherwise of certain central area jobs. There is room for more housing in London, even central London—as well as for open spaces—but the Minister's sterilization of certain areas has created an artificial site shortage. The whole matter has recently (July, 1956) been dealt with in *The Times* by Ruth Glass, and in the ensuing correspondence under the title 'London on the Move.' The whole thing bristles with architectural significance, but clearly decentralization is not the whole answer.

So far, however, the architectural opportunities inherent in the Development Plan have been mainly in new housing (often in low density outer suburbs), in the Reconstruction Areas (mainly in high density central districts), and in the possibilities opened up by the replanning of nodal traffic points on the ring roads.

London has one advantage over cities of comparable size elsewhere in the world. Its growth through the centuries has made it a conglomeration of smaller cities and many villages. This, while superficially confusing, has given variety and life to the otherwise amorphous mass and has, moreover, given it some sort of neighbourhood structure with vestiges of local community life. This was seized on by Abercrombie as a key to urban development and the LCC has, in the Plan, not only retained but extended this pattern. It has, for example, made it the basis of its Reconstruction Areas and larger housing projects.

A 'Reconstruction Area' is an area so derelict that the LCC have set it aside for complete reconstruction under their own control. 'Control' implies more than normal statutory planning approval; it implies at the very least a three-dimensional master plan; at its fullest complete

rebuilding by the LCC's own architects. It involves the purchase of sufficient sites for this purpose.

One of the largest of such areas is the 1,945 acres of Stepney, Poplar and North Poplar with eleven neighbourhoods, each with 5,500 to 11,000 people. Lansbury—the 'live architecture' exhibit of the 1951 Festival of Britain—was one of these eleven neighbourhoods, and was an instance where the LCC, within the framework of their own plan, allowed the farming out of housing, schools, churches, pub, etc., to a number of good architects.²⁴ A further neighbourhood unit of 42 acres, St. Anne's, 26, in the same Poplar-Stepney Reconstruction Area, is now being developed and shows the application of LCC principles. Two factories at the heart of the area have been moved and industry generally placed along the bounding canal; 2½ acres of open space have been added to link with the existing and nearby playing fields; a shopping centre is established and two primary schools (C of E and RC). Housing units of various types are in the form of houses and in flats of from 3 to 8 storeys. A further neighbourhood of the Area—Neighbourhood Unit 7, Tidey Street—is now planned. There were serious problems. Here it was not possible to move certain industries—principally a large gas works. Most of the housing, therefore, has been planned to look outwards away from the gas works across new open spaces, and has been kept low. This in turn has meant some concentration of other housing within the neighbourhood to preserve the overall density of 136. Consequently the LCC's highest domestic block so far, a 19-storey point-block, is to be built. This is an extreme example of mixed development, derived, however, from planning requirements and not from any doctrinaire theory.

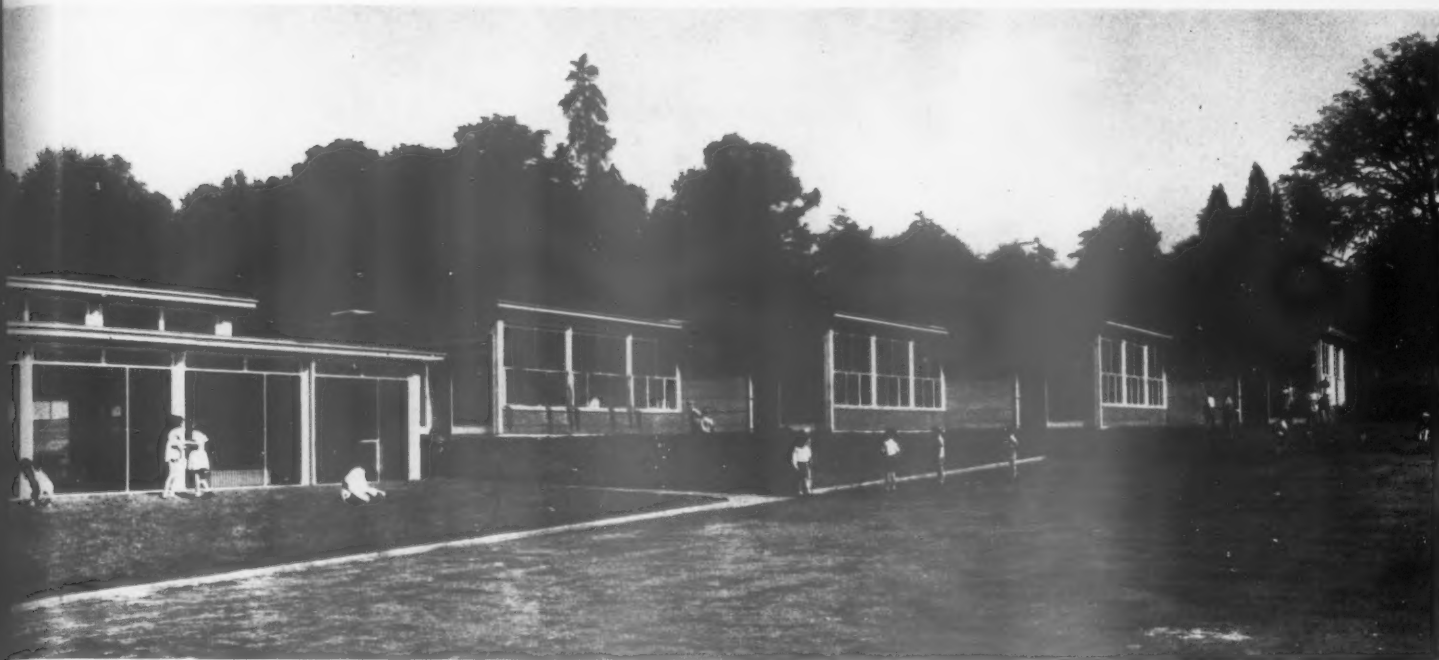
All Reconstruction Areas are not necessarily residential. If, for instance, the Minister approves the LCC scheme for the Barbican area of the City, 32, it will be virtually another Reconstruction Area,

²⁴ Variety at Lansbury may have been achieved at the price of architectural consistency. On some of the LCC's own housing estates (e.g. Roehampton) the architecture may be open to criticism but the estate itself, created wholly within the Housing Division, undoubtedly has unity.



26, St. Anne's Neighbourhood, Stepney: the first stage began in 1955. Most of the buildings will be low but there will be two 8-storey blocks (one is shown above) and one 15-storey point block.

Heathmere Primary School, Roehampton, S.W.15



This is a school* of light construction on a site with varied contours, 27. The infants' classrooms are on the level part of the site and well surrounded by trees. The junior wing is a two-storey block and is more

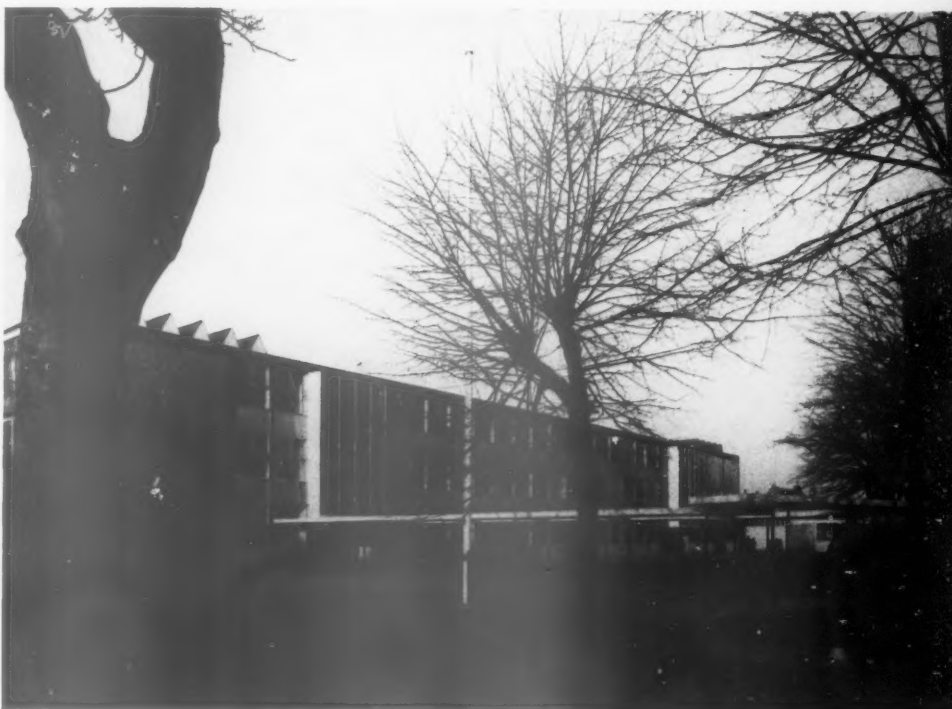
*720 children: 400 junior mixed; 320 infants' mixed.

closely related to the slopes. Each teaching wing has its own assembly hall; the infants' hall having Stephen Bone's mural "Battle for Land". There is a common dining-hall serving 600 meals daily. The external colour is exceptionally good.

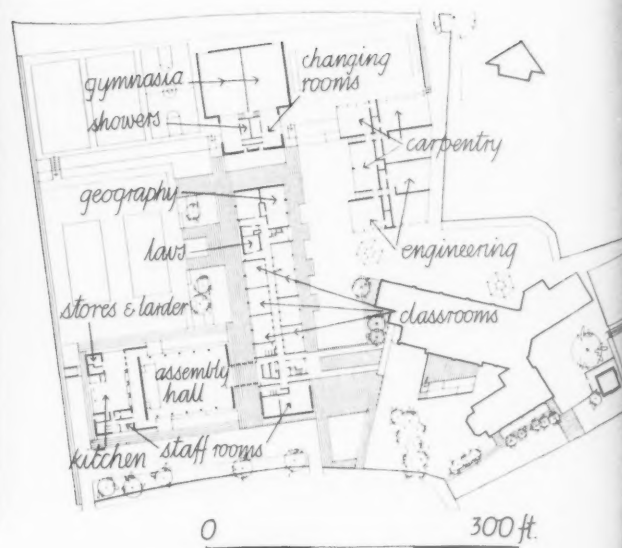
27

Holloway County Secondary School, N.7

The design of the 'comprehensive' school—i.e. the large secondary school—has set a new problem within the age-old one of achieving diversity within unity. Holloway, which is for 1,340 boys, is in this respect an achievement. It has probably gained rather than lost owing to the economic and site necessity for compact planning, 28. There is a fall in the site of about 15 ft. and advantage has been taken of this in placing the boiler-house at the lower edge of the site under the workshop. The main structural material is reinforced concrete on account of a temporary steel shortage. The roof of the assembly hall, 29, is a 'Diagrid' with precast concrete units set parallel to the diagonals of the roof shape and threaded with steel bars. In the main teaching block the large infill panels (top left of 30) are light-grey stonite designed to match the concrete panels below the ground-floor windows. For the panels under the first- and second-



28



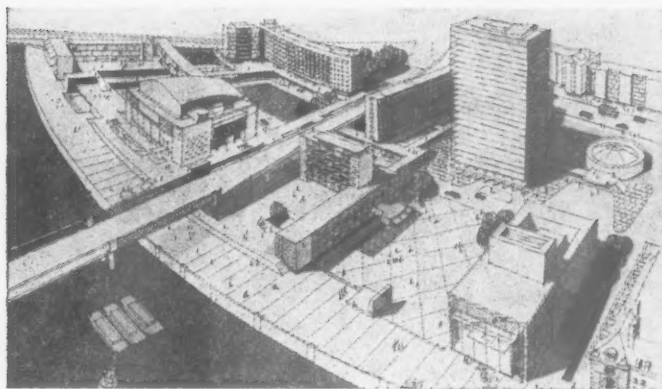
ground floor plan.

29

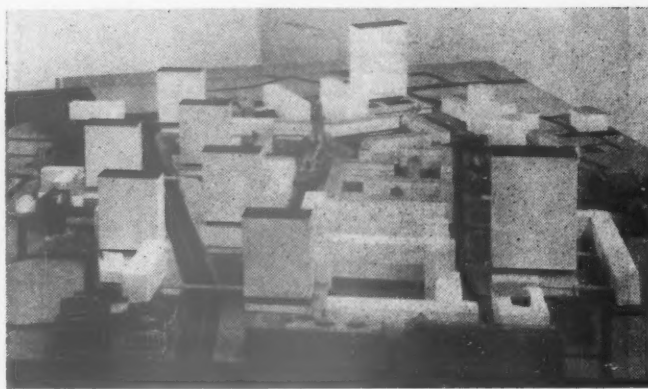
floor windows, coloured plyglass was originally intended, as at Catford, but was dropped as the architects feared it would appear too like a factory. Instead plywood was used, faced with zebrano, the most exotic grained wood that could be obtained.

30





81, proposed layout of the South Bank of the Thames, showing the system of pedestrian terraces and piazzas.



82, model of the scheme proposed jointly by the LCC and the City Corporation for the Barbican area in the City.

though almost wholly commercial. The South Bank scheme, 81, the start of which is imminent, is also such an area, but one which illustrates yet another approach to the problem of control. This was clearly an area which the LCC could not surrender to anarchic rebuilding. An elegant and practical master-plan was therefore devised incorporating the Festival Hall, National Theatre, etc., while giving to Londoners some 20 acres of riverside gardens and terraces. Full use was made of changing levels and varied skyline—including the 25-storey office tower. Subject to the three-dimensional control implied by this master-plan, possible only when the public

authority is also the ground landlord, the lessees—Shell—were allowed their own architect, Sir Howard Robertson. Whether or not the implementation in detail of the LCC master-plan will justify this compromise system now appears doubtful; a year ago the LCC scheme promised an elegance and grace that seems to have got lost in the process of detailing.

The Planning Division's ring-road system is inevitably a very long-term affair, but the wiping out of 'bottlenecks' has begun, and this often involves so much rebuilding as to make such schemes in effect further Reconstruction Areas,

although sites have to be acquired ten years ahead. A scheme such as the Elephant and Castle, due to begin next year, has been criticized as too 'peripheral' but does, even so, in solving a single traffic 'node', mean rebuilding some 31 acres. Planning in greater depth on either side of the road is contemplated at Notting Hill, while the Strand widening and the Cromwell Road extension are under way. Traffic-free precincts, as in Westminster and Bloomsbury, are envisaged, but lacking Ministry of Transport grant, are more utopian. Such are a few of the architectural opportunities arising from the work of the Planning Division.

the housing division is the largest building department. At only one remove from the Architect himself, it is served by the Housing Engineer's Division (roads, sewers, services, site works, etc.), the Structural Division (steel, reinforced concrete, foundations, etc.) and the Quantities Division. The Principal Housing Architect is J. Whitfield Lewis who was appointed in 1950 to take over from the former Valuer whose work is now more properly divided between the Housing Architect, the Director of Housing and a new Valuer with more limited functions. It is under Whitfield Lewis that the Housing Division has been given its present architectural importance. In 1950 the Division had a nucleus staff of 20. It now has a staff of over 400—about 310 architects, 47 administrative and clerical, and 70 clerks of works. Until recently the aim was to build some 8,000 to 10,000 dwelling units each year; owing to shortage of sites this is now reduced to under 7,000. Even so the value of work in the Division at the beginning of this year was £64m., with about £20m., in construction. The shortage of sites and the wish to keep the Division's staff intact has reduced the amount of work given to private architects; nevertheless some ten schemes have been thus dealt with since 1950.

The organization of the Division under Whitfield Lewis and his Assistant is the key to its architectural success, and this in turn involves a full use of technical services and clear briefing; after that, a maximum delegation particularly in design and execution. So far as the brief is

concerned the first step is for the Housing Architect to tell the Valuer of suitable sites for housing with a view to purchase—whether by compulsory purchase or agreement—through the Valuer. This recommendation to the Valuer may be accompanied by a 'test' scheme—a sketch plan—and can in any case be made only in full collaboration with the Planning Division²⁵ to assure conformity with the Development Plan.²⁶ The brief thus comes back from the Valuer to the Housing Architect as a piece of collective information: (a) Planning Division's views on zoning, density, school sites, etc.; (b) Director of Housing on number and size of dwellings, shops, playgrounds, club-rooms, etc.; (c) Chief Engineer on roads, sewers and services. Note: the building is not being 'hatched' by a conglomeration of technicians; no one, so far, has touched the design, but the designer can now receive full instructions and full information to enable him to design and execute a building. The brief is thus ready for the Housing Division's own organization.²⁷

It is at this point—the brief having been drawn within the framework of high policy—that delegation of responsibility for design and execution may properly begin. What must be avoided are, one:

the 'pyramid' with a supreme designer at the top, and two: a few 'back-room boys' with hack draughtsmen to execute their schemes. What must be done—within the brief—is to exploit such ideas, creative powers and technical knowledge as second line staff may possess. This involves a 'team' or group system.

Under the Principal Housing Architect and his Assistant are four Assistant Senior Architects and their Site Managers. There are then some 22 groups each averaging about 15 architects, the group leaders being normally of the £1,300 maximum salary grade. Each group has about five job architects, a complement of assistants and usually one or two senior architects who may deputize for the group leader or be responsible for one large contract. Subject to normal supervision and ultimate responsibility of the Architect to the Council, *initiative comes from the groups.*

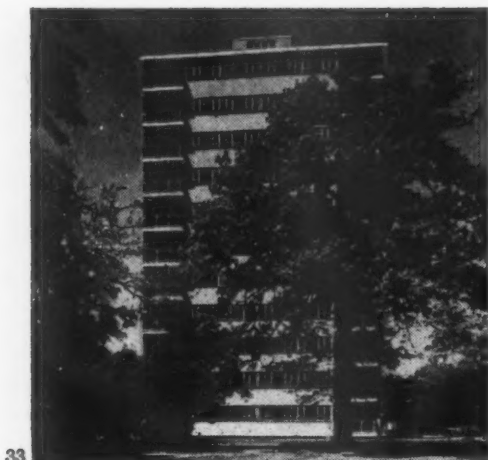
The group leaders, while carefully briefed and technically well served, may of necessity be only a few years post-graduate. Does this mean in practice that LCC work is sometimes immature or brash? Yes. Does it mean that it is alive, progressive, provocative and seldom dull? Yes. Does it mean that it is self-conscious? Yes. Does it mean that the individual schemes bear the hall-mark of individual designers, of particular schools of aesthetic thought, rather than of the Department? Yes. That seems to be a fair balance.

Such balance is not achieved by organization alone. Human judgment, assessment of staff, is the real key. Firmness

²⁵ There is in fact a Joint Development Sub-Committee of the Housing and Planning Divisions.

²⁶ In cases where the Planning Division is developing a site in detail—as in a Reconstruction Area—the Housing Division may in effect have from the Planning Division a sketch block plan, but this degree of development by the Planning Division is limited to such areas.

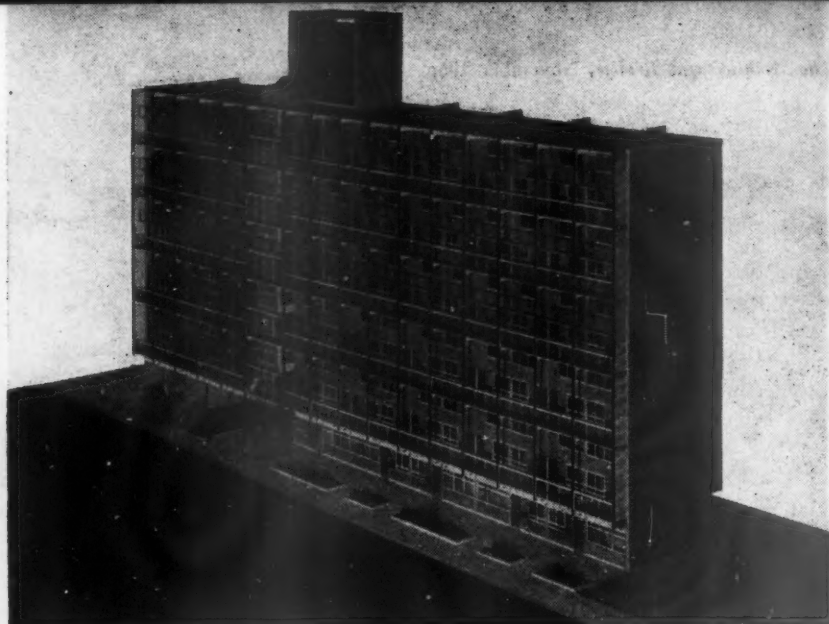
²⁷ It will be noted that at this point the embryo of a brief for the Schools Division has also begun.



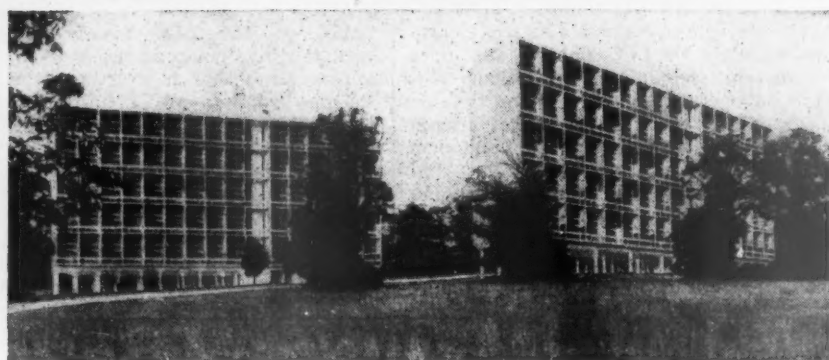
33



34



35



36

33, Ackroydon Estate, Wimbledon: one of three point-blocks. The rest of the housing is contained in lower blocks of flats, maisonettes and houses. 34, Bentham Road, Hackney: model of an 11-storey maisonette block. 35, Picton Street, Camberwell: model of one of four 11-storey maisonette blocks,

which will form part of a mixed estate of 682 dwellings. Work began in January, 1955. 36, Roehampton Estate: models of two of the five maisonette blocks. This Estate will comprise 1,875 dwellings, of which 660 flats will be in 15 point blocks. Work began in 1953.

in the senior architects must lie less in dictating design than in appointing and grouping staff. A will never work with B. C is full of creative energy; he must be used, not subdued, but may need D—a hard-headed technician—in his group. E is a 'social-realist,' believing in the revival of a tradition, while F is a strict formalist; they each have their place, but not on the same job.

Even a superficial survey of the group of estates in Wandsworth makes this clear. In the mixed development of Ackroydon, 33, while the point-blocks are beautifully detailed and some of the low blocks (houses and maisonettes) won the London Street Architecture Medal, there is too much evidence of different and differing minds at work. At Albert Drive, 17, 18, the formalist, with his geometric façade infilling between cross-walls is paramount and gives consistency, if even the architecture itself is for the esoteric. At the Alton Estate, 6-13, the point-blocks reach a new degree of excellence and are not divorced in feeling from the low housing which, both in colour and in its grouping on difficult contours, is magnificently handled. At Roehampton Lane, 35, the formalist housing is rather monotonous in its prolonged terrace grouping, but the point-blocks (still in construction) will, when viewed from Richmond Park, give to London a

truly dramatic and lovely townscape . . . the real fruit, after thirty years, of *La Ville Radieuse*.

Possibly it is this manner of using staff that the LCC has done its best work. At least it must be clear to Leslie Martin's successor that he must never allow architectural appointments to drift—and it is a danger—into the hands of a non-architectural Establishment Officer . . . that, surely, would be too much like a return of Housing to the hands of a Valuer.

This brief account of the organization may seem—and not least to those within it—an account of the ideal rather than the reality. Sometimes the group may seem more like a miniature 'pyramid' than a true team; sometimes the stronger personality may attract the more able to his group, to the detriment of other groups. It must also be realized that the very validity of a public office would vanish if each group operated as if it were a private office; while, on the other hand, the group would be resentful if the plums—e.g., basic sketch designs—were merely passed to them from a back-room élite. Each team must ideally be a team, but must also be fed not only with its brief but from a common pool of information so that it may function not only in its own right but as a part of the LCC.

In effect this is achieved inside the

Housing Division by means of the Technical Development and Research Group²⁸ under Cleeve Barr—in many ways the key to the Division's success. This Development Group can conduct experiments and investigation (often torpedoing the by-laws in the process)—examples are timber houses, shunt flues, concrete cladding, under-window panels, single-stack plumbing. It can conduct technical research, including cost investigation—examples are refuse shoots, tank rooms and lift motor rooms, frost precautions, paints, foundation costs, central and district heating. It can design components and make such designs economic by advising on bulk purchase—examples are baths, basins, ball-valves, Bendz plumbing, pivot hinges, metal windows, drying cabinets, etc. The work of the Group is done in collaboration with BRS, manufacturers, contractors and the LCC laboratory. The results are available to all Housing Division groups as actual components, as information sheets and as comparative cost charts . . . hence the overall consistency of schemes which also contain varied aesthetic expressions.

More far-reaching, perhaps, is the work of the Group in the costing of type plans of dwelling units, and in exploring methods of contracting, of designing for

²⁸ Some of the work of this Group was described in the RIBA Journal for October, 1955.

site erection, degree of component pre-fabrication relative to site mechanization and plant.³⁰ This kind of work can bear fruit only when done in fullest collaboration with the contractor—and the right contractor. The LCC, so far, has had only one scheme, Picton Street, 35, built by a nominated contractor.³⁰ Financial controllers still suffer from the fallacious idea that to spend the smallest sum is the most economic method! Nevertheless the success of the now famous Picton Street contract, plus an ever closer relationship between drawing-board and site plant, must eventually break down the old system of competitive tendering concerning which the LCC had its first doubts nearly sixty years ago.

With an increasing shortage of open sites and a lag in decentralization of population, the balance of Housing Division work may be changing. There is now a marked shift towards more slum clearance and rehabilitation. A scheme like the Reconstruction Area at Clarendon Crescent—in the 'little Venice' district—will involve slum clearance as well as large-scale 'decanting' from cleared slums to new point-blocks planned on the cleared sites—as opposed to the virgin spaces of Roehampton. Even without such new building there is a vast programme of clearance and conversion ahead; the 1956-60 programme for dealing with 21,000 slums has been approved and young architects with a strong feeling for such work will be needed in the next few years at County Hall.

If only a brief word can be given to the remaining Divisions of the Architect's Department—the Schools and the General Divisions—that is no reflection upon their work, it is only that much of the general background and organizational detail already described for Planning and Housing applies also to them. Moreover, owing to the sheer immensity of London, both Planning and Housing create very special problems with their own solutions, as well as being intimately related. The work of the Schools and General Divisions is not, however, very different from that of any other progressive authority.

the schools division, after a chequered period, has now come under Michael Powell as the new Schools Architect. Under the Architect to the Council it bears the same relationship to the LCC organization as does Housing. The team system, for instance, as opposed to the 'pyramid,' again applies. The Division differs in one respect from smaller authorities in that London's population has involved the design of a number of 'special' schools for handicapped children, and the LCC record in this sphere is as good as any in the world. It has also recently built its first out-county secondary boarding-school—modern additions to Woolverston Hall, a Georgian country house. One other point that distinguishes the Schools Division from the Housing

Division is perhaps that the single school building—as opposed to the complex housing estate with tentacles back into planning policy—lends itself rather more to design by private architects, and indeed some of the more interesting LCC schools are 'farmed-out.'³¹ This again might not have happened had the LCC, like Hertfordshire, pioneered a single structural system—such as the Hills system—that would have meant keeping all the strings in their own hands. This, however, was not so, and in the immediate post-war years—whatever the future may now hold—the LCC schools, while good, were never positively outstanding.

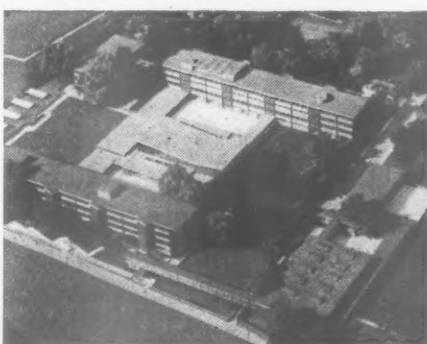
In general these schools have followed the main stream of advanced design in this country. In the first post-war years they made use of the widespread 'octopus' plan, hugging the contours—with its charms and its drawbacks. It was the type that was so fully exploited by Hertfordshire but which had its starting point in the Impington days. More recently the LCC have in effect—like other schools architects—faced the alternative, the choice between the rather scattered, educationally correct MOE solution—e.g., Belper—and the more rationalized solution of the compressed plan, formalized around an internal court, a type ably designed elsewhere by Clarke Hall. The LCC, with their own modifications, seem to be choosing the second type. The most interesting example—now in construction—is the school for delicate children at Avenue Road, St. John's Wood, 39, where a comparatively small suburban site has produced an elegant courtyard plan, condensed but of great charm and practicality. Another school to watch as it progresses is Alleyn's, Dulwich, 37, with its highly flexible Assembly Hall, capable through moving screens and its varying levels, of serving lectures, concerts, exhibition, drama and social functions.

³¹ Two examples are Mayfield School at Putney (Architects, Powell and Moya; see A.R., March 1956) and Bousfield School in The Boltons, Kensington, S.W.7 (Architects, Chamberlin, Powell and Bon; see A.R., September 1956).

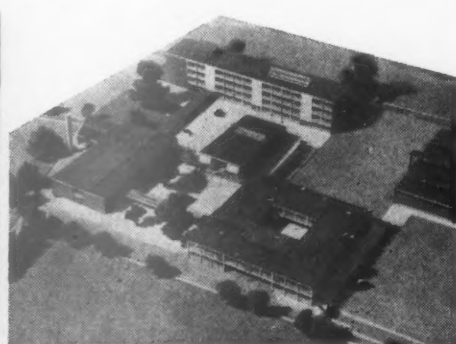
A major æsthetic problem is the comprehensive school, 37, one to which the LCC has so far made the most important contribution. The political hostility to the comprehensive school has produced, even in the minds of those politically neutral, the feeling that this is likely to prove a most intractable and soulless architectural problem. Hence the first efforts by private architects in the desire to avoid the overpowering have tended, as at Kidbrooke for instance, to disintegration. In fact the comprehensive school is no larger than many university or even collegiate groups. It is new only in State education. By facing this fact and by interpreting the problem in a very direct way, in a modern idiom, the LCC—as at Catford, 24, 25, and Woodberry Down—have taken the first step to a solution.

These few comprehensive schools can now be seen as a small part of a big programme—the LCC attempt to cope with the birth rate 'bulge' as it moves upwards into the higher age groups. Ten LCC secondary schools, seven of them comprehensive, opened this summer, with two more almost complete: £5m. worth of building for 18,000 children. Secondary school places for a further 26,000—whether in comprehensive schools or not—will have to be provided in 1961. This is in addition to the 28,000 school places provided as a whole since the war. This may well add up to the biggest school building programme in the world.

Yet, as with housing, the future of the Schools Division may lie more and more in the sphere of rehabilitation. Many of the tall old buildings of the London School Board are structurally sound and even well lit. Correct, if sometimes drastic, internal rearrangement can produce an effective modern school, and work of this sort is in hand. It may become a major part of the work of the Schools Division, since some 50 schools are ripe for this sort of treatment.

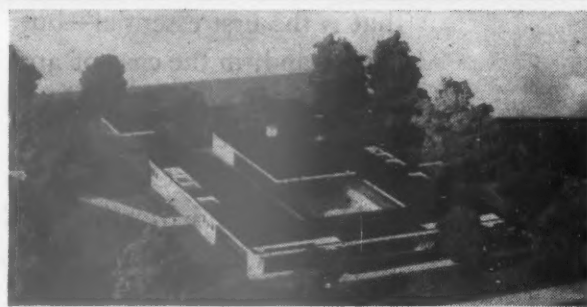


37



38

37, model of Holland Park Comprehensive School, Kensington: the school's site is divided by a public footpath which is crossed by two bridges. 38, model of Alleyn's School, Dulwich. 39, model of Avenue Road School for delicate children, St. John's Wood: all rooms are on one level and south walls of classrooms are completely glazed. The assembly hall gives on to an enclosed court.



39

³⁰ For details of site organization and speedy erection of Trinity Road blocks, see *Architects' Journal* 3.2.55.

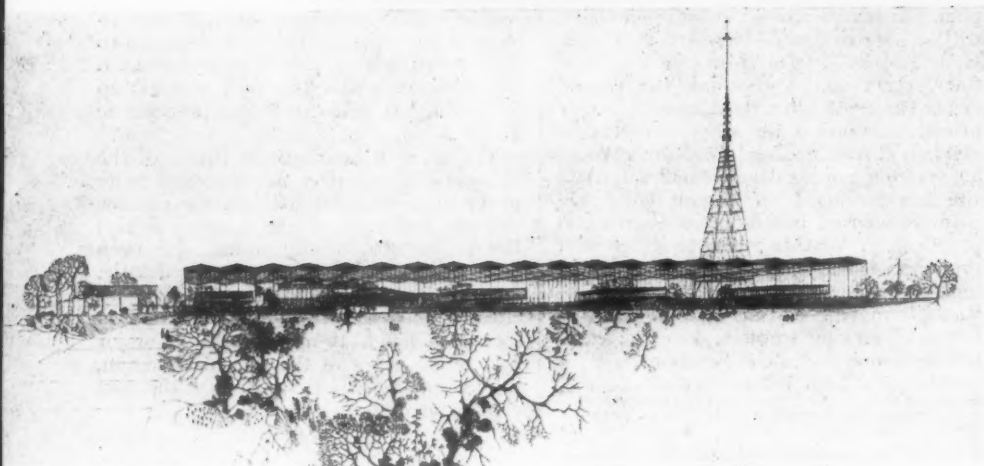
³¹ For details of the Picton Street contract see *Architect & Building News* 10.11.55 and *Architects' Journal* 3.2.55.



40, School Equipment Centre, Kennington, for the storage, repair and permanent display of school equipment. The four-storeyed block, which houses offices and display areas, straddles the single-storeyed building containing workshops, etc.



41, home for 80 old people, Tulse Hill, predominantly single-storeyed with rooms arranged round two internal courts. 42, the proposed exhibition centre and television mast [(already erected) on the 200-acre Crystal Palace Development site.



42

the general division, now under Kenneth Campbell, has a future. Its function is to design everything that is neither Planning, Housing nor Schools. This in practice has meant that for many years, from the outbreak of war to the end of licensing and priorities, the Division was moribund; even now it means that little of interest can have yet passed from the drawing-board into construction. There is, however, much work in hand that is interesting and some of a very high standard. The General Division, in view of the vast ramifications of the LCC, is responsible for a wide variety of jobs and in some ways resembles a prosperous private office. At present on the drawing-board, for example, are an LCC stores at Lambeth and a School Equipment Depot in Kennington, 40, Old People's Homes at Tulse Hill, 41, and at Wandsworth, a Fire Brigade Station, also considerable domestic and industrial work for the new Northern Outfall Sewage scheme. Day nurseries and ambulance stations are the concern of the Division. It also undertakes a number of 'tidying-up' jobs as, for instance, the boundary and party walls that are emerging in the raw from the Cromwell Road extension. Of high merit are the sections of the Division dealing with furniture design (mainly for schools), exhibitions, memorials and park furniture. The Division also deals with LCC lettering and notices—the 'house style.' It has a fine colour group for redecoration of LCC buildings, specially old schools. Its work goes down to the scale of ash-trays, and up the scale to repainting County Hall or Power Station building. One or two famous prestige jobs, such as the Crystal Palace Site scheme, 42, come under the General Division although, at sketch plan stage, the Architect himself has sometimes made such jobs his own. The most recent (AR, frontispiece, p. 214, October, 1956) is the proposal for a permanent National Film Theatre to replace that built for the Festival of Britain, under an arch of Waterloo Bridge on the South Bank.

This article has been an attempt to describe an organization deserving of a whole volume; it is to be hoped that some day that volume will be written. To the casual visitor the LCC must seem chaos and darkness. This impression quickly vanishes but can never perhaps be replaced by an entirely accurate picture. This article, in spite of all the help given by officials at County Hall, must stand as a personal impression, plus a few facts and, it is hoped, not too many errors. *Reasonable men reasonably organized*—that is the first essential—but in the end the finest organization comes back to human beings and, in the case of architecture, to the artist. To be head of a great organization and also an artist is the hardest of all tasks. Outside the Cabinet there is no job that affects the lives and happiness of so many people as that of Architect of the LCC. The success of the LCC in recent years has been due to many men and women, but above all to Matthew and Martin. To their successor, Hubert Bennett, one can offer congratulations upon his inheritance; one can express high hopes not only for his own future at County Hall, but also for the future of London.

current architecture recent buildings of interest briefly illustrated



1, the entrance porch at night with the reinforced concrete barrel vault floodlit; inside is seen Peter Yates' mural of birds. 2, the same in daylight.

HOUSE AT CARLISLE

ARCHITECTS, RYDER AND YATES

The house is screened from Scotby village by an apple orchard. Only its narrow end is visible from the drive, which rises through sculptural earthworks. The children's wing (playroom, bath and three bunkrooms) is separated from the main building by a glass link through which is seen the external fireplace to the living room and its white concrete funnel. The reinforced concrete barrel-vault over the entrance porch forms a floating cerulean ribbon when floodlit at night. The entrance hall has a granite-like floor of black thermoplastic with white flecks and a mural painting of birds.



3, the north front, with the living room left and children's wing centre.



7, Peter Yates' mural in the kitchen, which is in red, yellow, green and black.



8, the mural facing the front door, in black, green, blue and red. See also 1, previous page.



4, 5



6



9, the cube-shaped fire-place in the living-room.

4, immediately above, the living-room with the western clerestory window over the entrance to the dining room. 5, the window of the maid's room on the north, right, and the glazed passage to the children's wing, left. 6, the living-room looking east.

- key:
- 1. entrance hall.
 - 2. living room.
 - 3. dining room.
 - 4. kitchen.
 - 5. maid's room.
 - 6. garage.
 - 7. playroom.
 - 8. children's rooms.
 - 9. bathrooms.
 - 10. master bedroom.
 - 11. guest bedroom.
 - 12. w.c.



floor plan

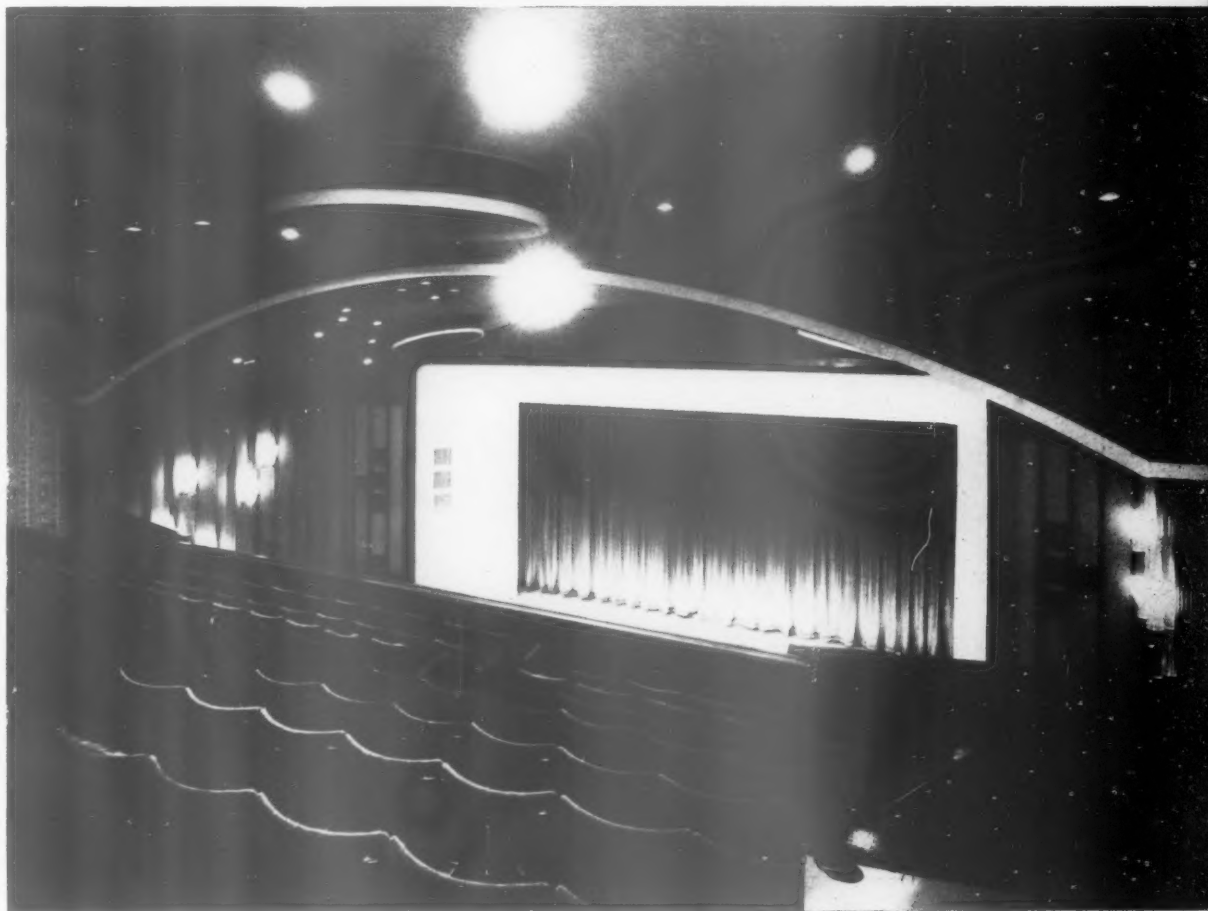
Scale: 1/24 in. = 1 ft.



10, the house seen from due north.

House at Carlisle

with white, black and mauve Italian *saico* glass mosaic. The kitchen is equipped with gas cooker, dish-washer, waste disposer, refrigerator and drying cabinet. The boiler is between the maid's bedroom and the double garage. The tank for fuel oil is set among the mounds in the garden.



11, the auditorium of the cinema. The underside of the curved ceiling is steel blue asbestos spray; the spandrel maroon red.

CINEMA IN BIRMINGHAM

The Cinephone Cinema is the first all-Continental cinema in the Midlands. The building on the site was formerly the 'Broadway' Cinema, and originally little more than a 'face-lifting' was thought necessary. However, the clients' requirements included a complete plenum system fed by an automatic solid fuel stoker, an all-purpose screen for Cinemascope, etc., entailing a new setting out of the sight lines, and the replacement of a modestly planned coffee bar by a café, with a comprehensive kitchen. Hence it was

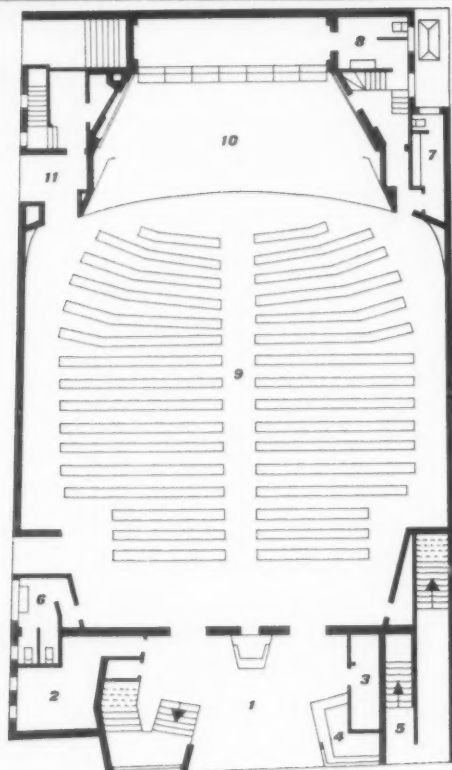
ARCHITECT, H. WERNER ROSENTHAL

decided to pull down the whole front to a depth of about 20 ft. and rebuild on a new building line 6 ft. farther out. The existing balcony rakers, the main roof and the back stage parts were retained, but the stalls floor was rotted and was rebuilt, being raked in conjunction with the new sight lines. The café was planned on two levels, the lower under the rakers and a higher one over the entrance foyer; where the rakers came down too low for head room, partitions were inserted to form alcoves. Stairs and columns are



Cinema in
Birmingham

12

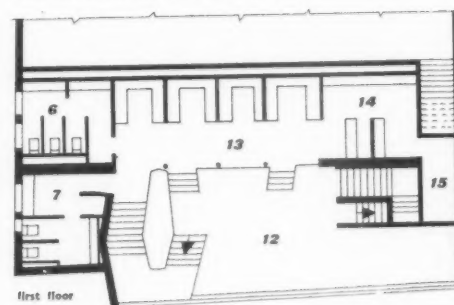


ground floor



13

12, the main frontage. The title 'Cinephone' consists of box letters in sheet steel, containing neon tubes. 13, the same at night.

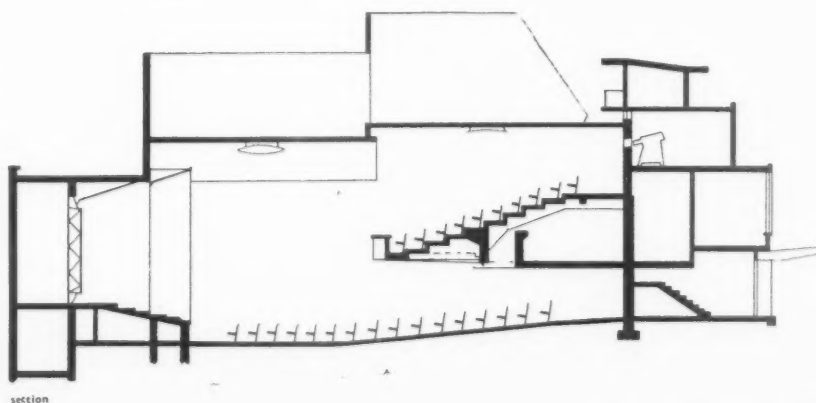


first floor

- key:
- 1, foyer.
 - 2, manager.
 - 3, switchboard.
 - 4, kiosk.
 - 5, escape stairs.
 - 6, ladies.
 - 7, gents.
 - 8, doormen.
 - 9, stairs.
 - 10, screen stage.
 - 11, exit.
 - 12, cafe.
 - 13, dining recess.
 - 14, kitchen.
 - 15, refrigerator.

scale: 1/24 in. = 1 ft.

of in situ reinforced concrete and prestressed planks form most of the floors. Over the auditorium the existing ceiling was partly curved, and flat over the balcony. The deep surround to the screen is white roughcast; this reduces contrast and eyestrain. The window wall on the street front consists of teak mullions; the solid end wall is faced with grey, green and gold mosaic. The ground floor consists mainly of show-cases; the walls flanking the entrance are faced with 'verte des Alpes' marble. The canopy is steel, with timber fascia. The underside of the raised centre part is translucent plastic and stretches back into the foyer; the underside of the remainder is faced with brick-red rendering.



section

HOUSING

EXPERIMENT IN JOHANNESBURG

It was announced in August that a £3 million loan had been advanced by a group of mining companies to the Johannesburg Municipality for native housing. This will provide something in the region of 15,000 houses. Here the South African correspondent of the AR examines the special problems and opportunities, social and visual, of native housing in South Africa.

In the South African countryside there are still many Bantu¹ living under much the same conditions as they did when the Europeans landed 300 years ago. The homesteads consist of groups of circular huts, 2, the actual number and detail construction of thatch and mud varying somewhat from tribe to tribe. Low domed or conical roofs linked together by screen walls enclose charming outside living spaces which form an organic growth as natural and beautiful as a bird's nest. All is in harmony, the household belongings, the ample simplicity of the storage jars, the reeded sleeping mats, and the ornamental dress of the inhabitants. Such living demonstrates a culture, on a low level perhaps, but complete and established, at peace with itself.

Today some 25 per cent of the Bantu live in European² towns. These people no longer honour their old culture. Their whole aim and object is to assimilate all things European. With this change has come a change of personality. The Bantu of the past was known for his courtesy, staunchness, dignity, honesty and innate good breeding. Today there is a current feeling of dislike for the upstart cheekiness of the contemporary urban Bantu. Although this feeling is doubtless coloured and exaggerated by antagonism it is true that the individual insecurity resulting from a broken civilization does not make for charm of personality.

Africans in the towns live in segregated areas; that is to say the towns proper are occupied by Europeans, and the African townships are removed to some distance.

¹ Bantu is the ethnological term for the African people. African the term by which they prefer to be called, and Native is the official term and the one most commonly employed.

² European is the common term in South Africa for the two white races, English and Afrikaans.

These townships are purely residential with a few schools, churches and general stores to serve the population. They are the complete antithesis of rural settlements, desolate, disintegrated and miserable, a parody of European living without any ameliorating features, 3. In addition a large number of Bantu live in rooms provided by their employers.

About one-sixth of the township houses are built by local authorities, thus ensuring a fair standard. The remaining houses are built by the township dwellers themselves, mostly out of secondhand scrap, mud bricks and thatch.

In Johannesburg, the largest industrial area in the Union with a population of over a million, the old African townships have become engulfed by the rapidly growing city, 1. A new, vast area has now been allocated well into the country where all future native residential development is to take place and where, eventually, it is intended to transfer inhabitants of the older townships.

This residential segregation³ brings in its wake two major complications. The first, transport, of which the authorities are well aware and are in the process of solving expensively but fairly effectively by a subsidized electric train service; the second, so far not officially recognized, the necessity for developing a cultural, social and service centre which would turn the area into a satellite town. With a population of 200,000 already, there is nothing but a few scattered churches and schools, a minimum of shops, a clinic or so and one community hall built by a European benefactor. This is, at any rate in part, the result of legislation which prohibits any but Africans, who seldom have the necessary capital, to trade in the area.

The population is large enough to support a centre with shops, department stores, cinemas, restaurants, beer halls and a market place as well as such service industries as dry cleaning works, laundry, bakery and so on. Factories producing goods much bought by Africans, such as clothes and furniture, might also be related to the area with advantage.

The Johannesburg municipality has a large native house-building programme in hand at the moment. Houses are produced at the rate of 12 to 15 a day at one-fifth the cost of European houses,⁴. They are constructed by teams of African building workers employed by the Municipal Native Affairs Department and materials are

³ Residential segregation is an accomplished fact beyond the orbit of the planners' control.

⁴ These were the figures prior to the loan mentioned above. Production along the same lines is to be stepped up.

bought in bulk and as cheaply as possible.

The houses now being built are almost all 4-roomed. They have asbestos roofs, stock brick walls bagged inside, concrete floors, steel windows and a front and back door. A flue is provided in one room for the stove, and a water closet and stand tap are built in the back-yard. Plots are 40 ft. by 70 ft. Everything has, in fact, been done to provide what are considered adequate standards for the absolute minimum amount of money.

It is of interest that prefabrication, though tried, has not been found to be economic in what appear to be such very favourable circumstances for its use. The requirements are so vast that overheads should be negligible in proportion, the dwelling units are standardized to three or four types and the building takes place in a single open stretch of country. The system tried was efficient and quick. The cost was only slightly higher than that of the present method, and it must be taken into consideration that the work was done by a building contractor and therefore included two expenses avoided by the present method: contractors' profit and skilled European rates of pay.

Township layout is invariably a modified grid served by 40 ft. roads. A few sites are left for schools, shops and churches which are filled in gradually after the houses are completed, but sites for playing fields and parks and most of the roads remain undeveloped, dusty wastes.

What has happened is that the demand for houses is so great (Johannesburg has only half supplied her estimated requirements) that no thought has been given beyond this crying need. This short-sighted policy is creating a vast area of publicly owned land which, to develop and maintain at a decent standard, would cost an amount quite out of proportion to the cost of the houses. The waste of space is flagrant, particularly since very few Africans possess cars, and only 25 per cent of householders develop their gardens. In addition such a layout is depressing and wasteful of time.

If one accepts the present conventional layout with its attendant disadvantages of land wastage and expensive services, some improvement is possible, as was shown by the winning design in a recent competition for native housing layouts, 5. Here Government standard house plans have been cleverly arranged, linked by courtyards enclosed by low walls. This scheme would seem to represent an ultimate along conventional lines.

In fact something much more drastic is

called for. In the present state of cultural transition of the urban African well planned residential areas might be a very potent force in shaping his future. Housing is usually considered as a purely practical matter, the provision of dwellings for a given number of families. Only gradually is it being realized that it is in fact very much more, that by its workability and the environment it creates it is a major factor in man's happiness. A well-designed residential area will broaden the lives of its inhabitants by introducing them to social activities they have previously been denied, and by its attractive orderliness foster a contented frame of mind.

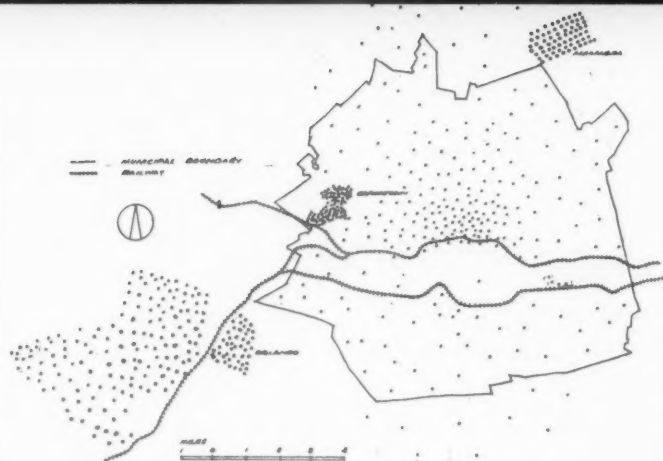
The grouping of dwellings might be arranged to encourage the development of communities both in small residential groups and on the neighbourhood scale. These intended groupings must be very clearly expressed in the planning and arrangement of buildings if they are to be effective socially. The dwellings must be closely grouped, the common areas must be exclusive and intimate, the communal facilities appropriate to the group, and the division between one unit and another closely defined, whether road or park strip.

Next the visual scene must be organized so that it is satisfying to the eye. Here the most important single aspect is the need for growth, particularly trees. In the hot dusty South African landscape pools of shade form the most delightful retreats. It is important, too, that all portions of the land should be put to some definite and healthy use; not left, as at present, zoned but unused. In addition all the usual aesthetic laws apply, the charm of enclosure, the need for contrast and so on.

Nothing which I have to say is new to town planning theory though it is new to apply it to this particular problem. It is apparent that building must be undertaken at a higher density to shorten travelling distances, make more constructive use of the land and economize in the lengths of roads and services.

High-density development could be achieved either by flats or grouped houses. While segregation is practised, flats are not economic as a housing solution for Africans. Land in the African townships is cheap so that economy in its cost is negligible. In addition it would be impossible to build flats without providing them with electricity, proper sanitary equipment and a higher standard of internal finishes than are given in the houses, which would further push up the cost.

Grouped houses, on the other hand, would be less expensive and seem more appropriate to the semi-outdoor life of the Africans. Two possible layouts along these lines are illustrated, 4. Gardens are reduced to the minimum of outdoor space normally used and the majority of



roads turned into pedestrian ways. The small residential groups are defined by roads and provided with communal gathering places. Neighbourhood units would be made up of a number of such groups together with the necessary shopping centre, schools and so on. The actual residential areas would be interspersed with such wide open spaces as playing fields and allotments.

This type of layout, which is particularly intimate and non-individualistic, might very well suit the African in his progress from the wide tribal group to the single family unit of Western culture. It would help the working mother by providing safe play spaces for her children overlooked by friendly neighbours. If the number of working women in the community were large, creches, nursery schools, laundries and restaurants could be conveniently and easily incorporated in the layout.

Such a layout, while providing opportunities for easy social contact and a better visual scene, presents a small public area for maintenance the cost of which would be more than covered by the reduction in the cost of services. It must be emphasised that for such a high-density layout to be a success proper planting and upkeep of natural growth are of prime importance.

In all housing schemes it is important that the occupants are proud of their new dwellings; for otherwise they will not co-operate in the necessary care and cleanliness which contributes so much to the environment. This is a particularly difficult problem where one race is building for another. The urban African aspires to the local European residential ideal of a single house on a single plot—the current township layout is indeed about as close to this as the African pocket will allow. Unless it is proved to the contrary he is bound to assume that any change, particularly to a socially despised dwelling like a terrace house, is provided for him because it is cheaper, something which a European would never occupy, but which is 'good enough for a native.'

Since housing schemes must be experienced to be judged, experimental

neighbourhood units might be built, and since it is important that the inhabitants of these first schemes are not unduly prejudiced, every effort should be made to enlist their co-operation. First an African liaison committee could be elected which would be kept fully informed of the intentions of the experiment, have access to all documents and hold meetings amongst prospective occupants to explain the scheme. Other methods of propaganda would be used—posters, broadcast discussions, models displayed and so on. Occupants of the first scheme should be volunteers who would be encouraged to enter into the experiment and submit reports on their new conditions. These suggestions, though normal practice elsewhere, would be quite revolutionary in South Africa. They, with many similar problems, are the province of the skilled sociologist, perhaps more essential in this field than in any other.

Again, where one race is building for another, it is imperative to make clear that any saving effected in services and land cost will be employed to raise standards in the new dwellings, by providing baths, hot water supply, better finishes, etc. Also schemes must be handled in time as well as in space. It is essential that after building work is completed public land be planted and tended. That this is part of the scheme must be understood from the outset so that its area can be limited to a manageable amount and money set aside.

For the planner African housing presents a most exciting and unplumbed field of experiment. The vast numbers of houses required allow for the development of an idea, tried in one layout and improved in subsequent ones, until satisfactory solutions are determined. It remains an excellent opportunity for trying out new building methods. But, most important, the unsettled cultural condition of the contemporary urban African presents an opportunity for social experiment which might well make the difference between disruptive revolution and peaceful evolution in the future of South Africa.

Betty Spence

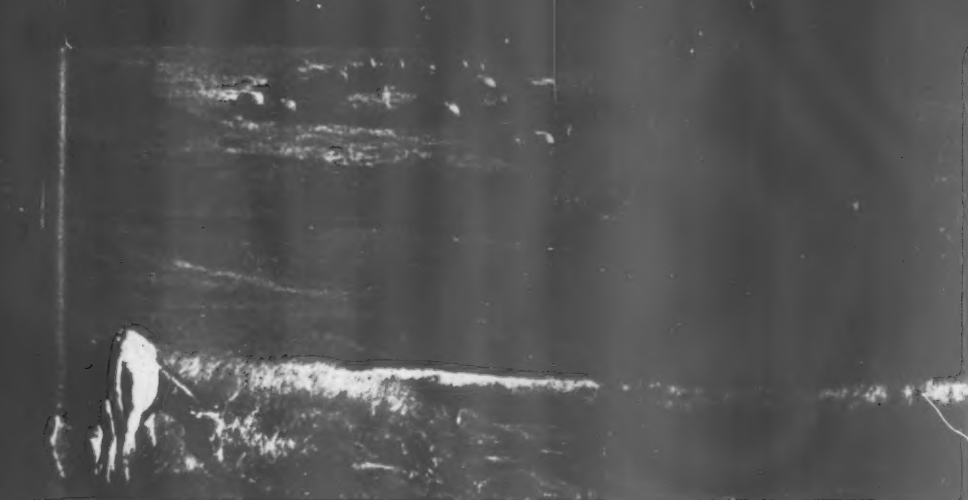


CENTENARY

THE ARCHITECT OF FREE ENTERPRISE

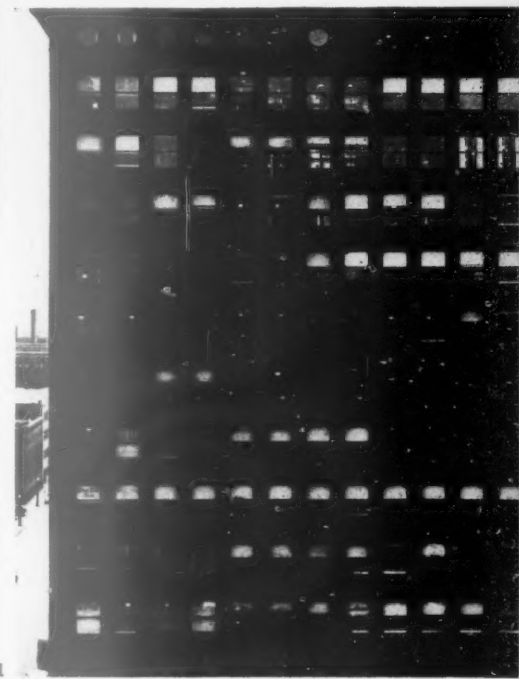
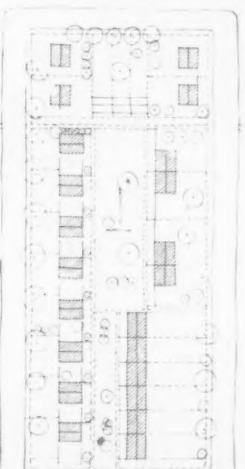
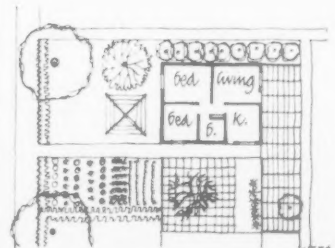
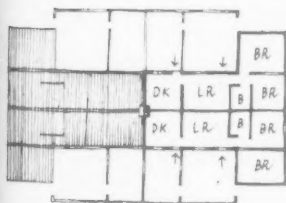
Centenaries are the traditional occasions for reappraisals and revaluations, and the centenary of the birth of Louis Sullivan comes at a time when the revaluation of his own work, and that of the Chicago School, is in full swing. On pages 285-289 of this issue will be found a radical refocusing by Colin Rowe of our view of Chicago's place in the Modern Movement, while the Centenary Exhibition of Louis Sullivan and the Architecture of Free Enterprise at the Art Institute of Chicago, by bringing together a great body of photographic documents of the master's work, should precipitate some revisions of his significance as a designer.

Of his status as the first master of the framed skyscraper, there can be no question—the almost perfect neutrality of the façade of the Guaranty Building in Buffalo, 1, with every floor of equal height



experiment in environment

2, above, a Bantu homestead; screen walls enclose the small groups of low domed mud and thatch huts. 3, above, Orlando, one of the non-European suburbs of Johannesburg. 4, left, a design for non-European housing. Top, a sketch of some house courtyards; centre, house plan; bottom, site plan. The houses are 2-, 3- and 4-roomed; approximate area is 3 acres, and total number of houses is 61. 5, below, the winning design in the recent native housing competition, by Peter Coltman. Top left, a typical forecourt; bottom left, house plan; right, site plan.



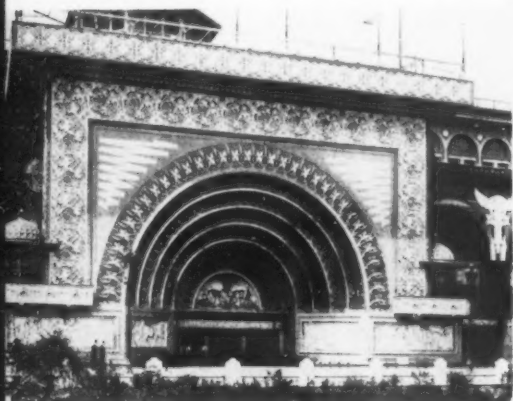
and equally fenestrated, and yet unmistakably a closed composition, shows his complete control of the major components and the gross form of the building. But where Sullivan's genius takes on new aspects is in the new emphasis on, and study of, the decorative work that emerged from the Adler and Sullivan office. Hitherto, neither academic interest nor the camera has been directed much at this subject—which indeed would have gravely embarrassed those who have created Sullivan's international reputation.



2

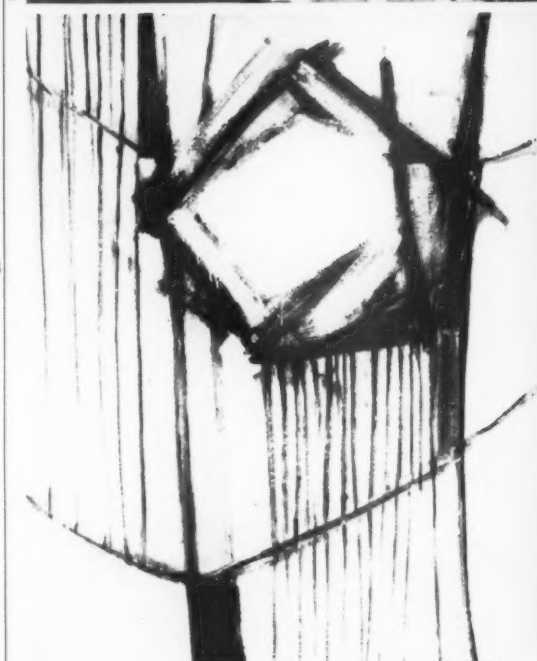
Yet it is integral to his mode of design. In the Guaranty Building it gives texture, and thus scale, to the structure. Around the corner entrance to Carson Pirie Scott, 2, it adds a proper note of commercial fantasy—and also demonstrates that it is possible to be of the period, and of the same mind, as the masters of European Art Nouveau, without ever arriving at the same forms or flourishes.

Yet it is in the management of repeats that Sullivan shows his hand most characteristically. Whoever designed the decorative details, Elmslie or Wright, it was Sullivan himself who ordained their presence and their location. At the Golden



1

Door of the Transportation Pavilion, 3, at the Chicago Exhibition of 1893, he deploys a decorative vocabulary of fantastic richness, yet in key with the structure it adorns, because the repetitions measure and modulate the scale. As is commonly known, the exhibition was a triumph, not for Sullivan, but for the architecture of Beaux-Arts orthodoxy, and yet in the long run his reputation has outlasted that of the apparent victors, and while their buildings appear ever more barren, those of the Architect of Free Enterprise, like all great architecture, grow richer with every reappraisal. P.R.B.



2



3



EXHIBITIONS

'Cézanne's aim, rigorously followed, has led step by step with inexorable logic to the kind of painting I have chosen for this exhibition,' wrote Sir Herbert Read, introducing recent works by Ben Nicholson, Victor Pasmore, William Scott, Terry Frost, Patrick Heron, Alan Davie and Peter Kinley assembled at Arthur Tooth & Sons for the second show in the series called 'Critic's Choice.' Without wishing to be portentous about a charming exhibition, I think that when the name of a master is emotionally evoked to give status to the works of others—the emotive words 'rigorous' and 'inexorable' disclose Sir Herbert's intention—we are entitled to ask if this so-called logical development has resulted in an enrichment or impoverishment of the art of painting. As far as Sir Herbert's selection is concerned, the answer, to put it politely, is that there is no sign of enrichment. These works are not, however, important examples of what he himself calls 'that extreme in contemporary art which is known as "abstraction",' so the *kind* of painting is not necessarily invalidated by them.

Ben Nicholson was Sir Herbert's first choice, and his unaffected delight in his work is not a matter for criticism. Someone said recently, in praise of Nicholson's white reliefs, that 'they go further still than the pictures of Mondriaan, which never gave up the relations of colour,' and although renunciation has never seemed to me to be much of a virtue in an artist, the severity of his white reliefs is preferable to the prettiness of the coloured works in 'Critic's Choice.' Both Mondriaan and Nicholson have been overpraised as colourists; by keeping their colours apart on a white ground they have reduced their relationship to a nodding acquaintance: one has only to recall the complex juxtapositions of colour in Cézanne's 'Le Château Noir' to realize that Mondriaan and Nicholson have in fact steered clear of the problems of colour organization. The same Cézanne picture, considered simply as a painted surface, is one of the finest examples of 'tachism' in the history of art, and Patrick Heron might find that he would lose none of his up-to-dateness if he tried to reduce it to a studio formula. The result would only bear a superficial resemblance to Cézanne of course, because 'Le Château Noir' is primarily a work in praise of nature, and the sense of a particular landscape impregnates its formal structure.

The paintings of Heron, Frost, Scott and Kinley are addressed exclusively to praise of their profession. The appeal of their paintings is directly related to the

virtuosity with which they use their medium and the sophistication with which they refer to the work of other painters. Scott comes off best on both counts. His paint is a rich substance blandly applied, and his little picture of a black bottle bending over a creamy squarish something on a brown ground whispers its memories of de Staël, middle-period Derain and Morandi as if it were a tale of delicately requited loves. Kinley comes off worst because he still insists on telling us with touching naivety that he is very good at imitating de Staël. Alan Davie, our arch-invoker of creative accidents, did not succeed in rocking this boat-load of aesthetes: his pictures merely looked rather turgid beside the others, but it was faintly amusing to see that one of his favourite shapes, a tilted, out-of-square square, had been rescued, so to speak, from the lower depths of automatism, to lead a blameless life of pure abstraction in a painting by Terry Frost, 2.

'Millet was one of the great draughtsmen of the nineteenth century,' wrote Sir Kenneth Clark in the catalogue of the Millet drawings shown at the Arts Council Gallery. It may be so: if one placed him well below Ingres, Van Gogh, Degas, Seurat and even Toulouse-Lautrec, he would still be not too far from the top of the list. His drawing of women carrying faggots, lent by the Boston Museum of Fine Arts, 4, with its pre-Raphaelite feeling for the magic wood and its sharp sense of the strenuousness of the task, is extremely lovely. But if I may digress a little, I am surprised that Eric Newton thinks that it was shallow and cynical of us in the twenties to find Millet's sentimentalism unacceptable. He must have forgotten that we were absorbed at the time by such pictures as Cézanne's 'Card Players,' in which he was able to represent two working-class men with a resplendent amplitude which almost

achieved the integration of art and life. The basis of Millet's rising reputation in the fifties is the avoidance of such comparisons.

The catalogue of the exhibition of American Cartoons held at the Institute of Contemporary Arts—you must have noticed by now that I am a diligent reader of catalogues—contained the 'reminder' that *New Yorker* humour is 'born of a highly moral point of view.' I thought I saw more evidence of an engaging amorality, and I find Malraux's view that the fairy story has taken refuge in the comic, more to the point. An element of the matter-of-factly preposterous seemed to run through them all, from the wolfish glare in the eyes of Peter Arno's amorous males, and Thurber's 'I thought you'd enjoy Miss Perrish, darling—she has a constant ringing in her ears, too,' to George Price's flock of birds alighting on top of a step-trolley at an airport and walking sedately downstairs to the ground. Then there are the obvious sorceries of Charles Addams—gilded coaches dotted

about a pumpkin patch, and the gargantuan confirmation of a we-are-being-followed feeling in the drawing reproduced here, 5. The idea exploited in this drawing could have become eerily beautiful in the hands of an artist like Odilon Redon, and I presume that the total absence of refinement in Addams's draughtsmanship and composition is responsible for the instantaneous comic impact, and protects the idea from its commercially valueless undertones.

The rather commonplace exhibition of



'Children Painted by Dutch Artists, 1550-1820' was given a certain amount of character by the inclusion of some downright ugly little mites. None of them, alas, was among the photographs available for reproduction, and I had to be content with Joannes van Noordt's portrait of a pretty one, 3, painted about 1670. I would have preferred to reproduce the red-nosed, avid little girl holding a golf-club, painted by Pieter de Hooch, or the portrait of a child eight months old, dressed to kill, and looking like a fat, middle-aged, bad-tempered barmaid. Its dotting parents obviously thought that nothing was too good for their darling, and ordered the full treatment regardless of expense: Johannes Vollevens made a good luxury job of it, with swags of crimson curtain and a view of ruins beyond.

Much against the grain, I am refraining from quoting some hilarious tit-bits which are to be found in the nicely produced catalogue of 'This is Tomorrow,' because Reynier Banham cleverly unravelled its assorted messages in the September AR. The exhibition was arranged at White-chapel Art Gallery by a number of architects, sculptors, painters and farceurs, working in teams, to promote the integration of the arts and a more conscious control of environment. At one extreme there was a demand for more erotic and horror posters outdoors and more luxury, at the super-cinema level, indoors; at the other extreme the demand was for cities as white as driven snow; but the Smithson-Henderson-Paolozzi section returned us safely to the bicycle shed at the bottom of the garden in a singular tribute to the Pottering Man, 1.

Robert Melville

BOOKS

AGAINST AGGLOMERATION

THE NATURE OF CITIES. By L. Hilberseimer. 286 pp. 252 ill. Paul Theobald & Co., Chicago, 1955. Price \$8.75.

Professor Hilberseimer was trained at Karlsruhe and founded the town planning department in the Bauhaus at Dessau. Since 1938 he has been head of the Department of City Planning at the Illinois Institute of Technology. His latest book is likely to irritate town planners, geographers and administrators in much the same way as H. G. Wells used to irritate historians and scientists: for its vast scope, for too many quotations from Plato, Xenophon and Henry Ford; for odd *obiter dicta* ('Some believe the plough is a phallic symbol' and 'Human beings are the indispensable resources of any country'); for a too rosy belief in huge regional planning schemes based on logic and the co-ordinated work of teams of scientists and technicians; and, perhaps most of all, for being—in the main—quite right.

It is this last that we should cling to.

Cities exist by transport, and the great cities of the western world were built up during the steam train and horse and cart period. There is no need now for such close agglomerations and we have the means to end them. We also have two very strong reasons for doing so: the threat of nuclear war, and the need for every country to pay far more attention to agriculture, forestry, water conservation and the like. The foreseeable future suggests a pattern of towns mainly of 50,000-100,000 inhabitants in a countryside that has learnt the lessons of Holland, Israel and T.V.A. Professor Hilberseimer sees all this and his patterns for new cities—mostly arranged like beads on the strings of major highways—are well suited to a nuclear and motor-vehicle age.

He does not tell us how to tackle the vested interests of all kinds that tend to perpetuate the great cities, or who is going to provide the funds for the complete renewals he proposes for Chicago and elsewhere. Why should he? He is one of those who are trying to see the whole problem and point out the right way to go. The broad picture that emerges from his essays—for the book is really a collection of essays on sixteen aspects of architecture and planning—deserves careful study.

There has been so much loose and worthless writing about planning since the war that planners have become very tight-lipped over all large-scale towards-a-better-world books. Professor Hilberseimer's should be noted as one exception. He has read very widely and thought a great deal; and the stories may easily be skipped.

H. Myles Wright

LOMBARD CARVING

ROMANESQUE SCULPTURE IN ITALY. By G. H. Crichton. Routledge & Kegan Paul. 50s.

After an earlier book on Nicola Pisano, Mr. Crichton now presents a general account of Italian sculpture of the period roughly between 1100 and 1250. He discusses the material regionally, a method fully justified by historical and stylistic considerations. He gives most of his attention to the sculpture of Northern Italy; for it was unquestionably the most important centre of Italian sculpture and the only one that had a profound influence on artistic development north of the Alps.

The style of Romanesque sculpture in Italy varies from region to region but on the whole it presents a greater uniformity than contemporary sculpture in France. As Mr. Crichton points out, three fundamental reasons account for this fact. The first is the direct influence of classical art on the Romanesque sculpture of the whole peninsula, the other two, the intimate links with Byzantine and Moslem civilizations. The early preoccupation with the problems of volume and three-dimensional modelling that distinguish Italian Romanesque sculpture from that of other countries was the most striking outcome of the classical heritage. These qualities, already present in Italian sculpture in the early twelfth century, bore a promise of great future development, but they also deprived Italy of that stage of development which in all other countries of Western Europe

produced the masterpieces of linear, truly Romanesque stylization.

Mr. Crichton's solutions of the problems of chronology or sources are expressed in such general terms that without much more convincing documentation they must remain only tentative, and the value of this publication as a reference-book is severely diminished by the index which is grossly incomplete, foolishly arranged and full of mistakes. Taking as an example p. 42, chosen at random, one finds that five places mentioned there are omitted in the index. Looking in the index for Saint-Denis or Saint-Gilles one discovers them hidden under Denis, S. and Gilles, S. but S. Angelo in Formis is in its correct place under S. The mistakes in spelling both in the book and the index are irritatingly numerous, and cannot all be explained by oversight, like the reference to Liège (under Lüttich; p. 86) as being in Germany.

For an English reader it is a disappointment to find that Mr. Crichton has nothing to say about the links between Italian and English sculpture, although he has a chapter dealing with *The Diffusion of the Lombard Style in Europe*. He seems to be unaware of the suggestion made by Kingsley Porter that the Prior's Doorway of Ely Cathedral is based on Lombard models nor does he know more recent English publications discussing Italian influence on Romanesque sculpture in this country.

Denis Tout

Shorter Notices

PENROSE ANNUAL VOL. 50, 1956. Lund Humphries, 35s.

Mr. R. B. Fishenden died on 7th October this year, and the fiftieth volume of *Penrose* also marked the coming of age of his editorship, a memorable editorship indeed. The job he had was much the same every year. Yet he managed to give every volume individuality and character. In addition to the choice of subjects and authors which secures that, he also provided an annual survey of progress in printing, and this was unfailingly urbane as well as learned. That the colour plates make *Penrose* an incomparable thirty-five shillings' worth goes without saying and must rouse the envy of many another publisher who cannot possibly try to compete with so amply subsidized and so justly subsidized a book. This year the most generally interesting articles are Christian Barman's on Harold Curwen, Desmond Flower's on McKnight Kauffer, P. Selz's and R. Kostka's on American Graphic Design, Misha Black's on Post Office Printing, and Alec Davis's called 'The Picture on the Pack.' Mr. Fishenden himself, at the beginning of his survey, illustrated the hideous title-page of *Penrose*, volume one, 1895. The volume was then published by A. W. Penrose & Company. Some years later Lund Humphries acquired an interest in it, and again a little later they became the proprietors. For a short time Stanley Morison handled the typography. Now design and typography are in the hands of a different expert every year. The fiftieth volume is by Graham Johnson, 1955 was by Leslie Unwin, 1954 by Alan Dodson, 1953 by John Denison-Hunt, 1952 by Edward Price, 1951 by Herbert Spencer—choices as enlightened and catholic, and sometimes surprising, as one might have expected of that vessel of wisdom its editor.

N.P.

NOTE:—An obituary of R. B. Fishenden will appear next month.

SKILL

A MONTHLY REVIEW

OF BUILDING TECHNIQUES & INDUSTRIAL DESIGN

1 interiors

2 design review

3 techniques

4 the industry



1, corner of the restaurant immediately to the left of the entrance from the foyer. At the edge of the gold papered ceiling are white louvers above which is concealed lighting and ventilation.

1 INTERIORS

RESTAURANT IN GERRARD STREET, W.1

Architects: Leonard Manasseh & Partners

In changing the old Villa Restaurant into a quite new restaurant called La Reserve, certain structural alterations and a complete renovation of the kitchens and service area were necessary, with a great deal of additional cold

storage and all shelving and work tops in stainless steel, to comply with the new health regulations. A new ventilation system was installed throughout.

The decoration was a special problem. The atmosphere was to be rich and yet provide a suitable background to first-class food and wines; at the same time it had to be lasting, and not indulge in exhibitionism. The whole conception was architectural. It is not a stage set, nor

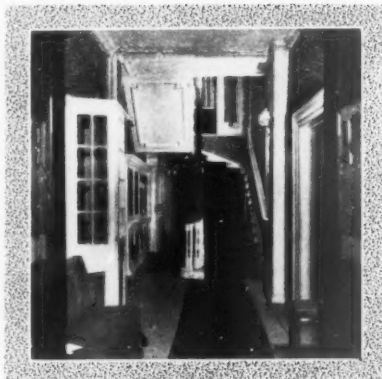
is it a piece of 'interior décor,' self-conscious 'design' being rigorously avoided. Carefully chosen colours and materials speak for themselves, and the whole scheme consists of a clear but subtle contrast of colours and textures, related to the form of the building.

The two main difficulties were first, that the old restaurant shared its main entrance with the offices above, and a new entrance clearly had to be provided; and, secondly, that the ceiling of the main restaurant was covered with a criss-cross of beams and coarse pseudo-classical decoration, which demanded bold measures. A single sweeping curved ceiling was therefore suspended the whole length of the room, papered in gold and thus setting the whole atmosphere; at the far end it recedes into infinity through a wall of black mirrored glass.

The main walls of the restaurant are coloured dark heliotrope, like the bloom on black grapes. The fixed seats are crimson plush topped with white marble and the carpet is seaweed green. White linings and edgings, brass and crystal lights, white louveres over part of the restaurant and at the edges of the suspended ceiling all add glitter to the scene. A folding screen covered in a corded cloth of bright colours can divide the restaurant in two.

In the entrance foyer and bar a lighter and more sparkling atmosphere is provided by strong contrasting colours set off by jet black and pure white. The entrance doors, which are ebonized with brass fittings, are set in white frames. The bar has a matt black top and a white statuary marble front, with a polished brass foot rail. The ceiling lamps are like little Paul Klee boats, some black and some white. An enlarged engraving of a French feasting scene faces the entrance. The colours here are cadmium red on the ceiling, and part of the wall; a very light olive brown on another ceiling; a much reduced tone of burnt umber on the majority of the walls, and on one wall the darkest possible olive green. Two small areas on each side of the bar are an electrical shade of blue-violet. Where joinery is not ebonized it is dark polished mahogany. The carpet is a smoky blue-green.

The only standard furniture and fittings are some Italian chairs for the bar, the light fittings in the bar and on the ceilings. The dining chairs were designed and made by L.M. Furniture Limited. All other furniture, the fixed seating, bar stools and tables, joinery and light fittings were designed by the architects.



2

BEFORE

2, view from the entrance door before the alterations. To the right was a private dining-room, and the foyer was shared by users of the offices above. Now, 3, the old dining-room is partly taken up by the bar and an extension to the foyer, and partly by a new passage-way leading to the staircase, which is concealed behind the photostatic mural. The ceiling is painted cadmium red.



3

AFTER



4

BEFORE

4, the private dining-room before alteration. 5, the bar which now partly occupies its position.

The ceiling lights are black and white. The entrance to the offices now passes through the former window in the right of 4.

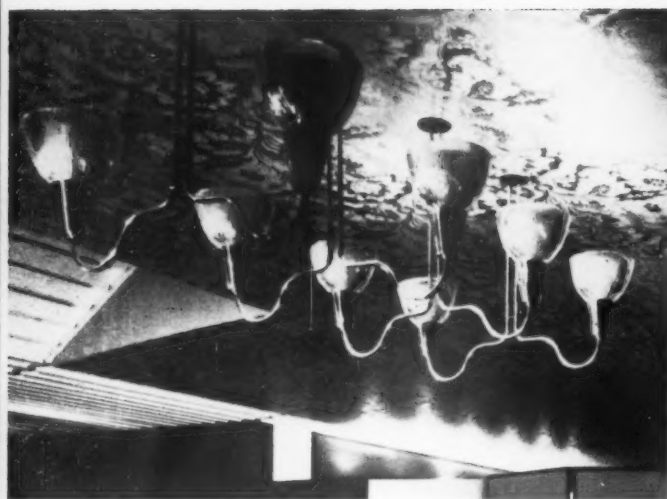
6, the bar. The bar top is black, the front white statuary marble. 7, looking towards the end of the restaurant farthest from the street; the end wall is completely covered with black mirrored glass. 8, looking towards the front of the restaurant. The shallow-curved false ceiling conceals a grid of beams and coarse 'repro.' detail.



5

AFTER





9

9, brass and crystal lights in the rear part of the restaurant. 10, black and white lamps in the bar. 11, bar stools.

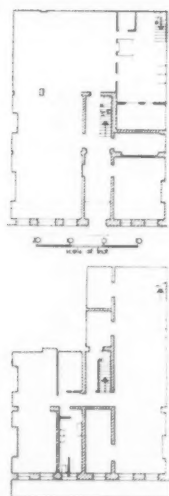


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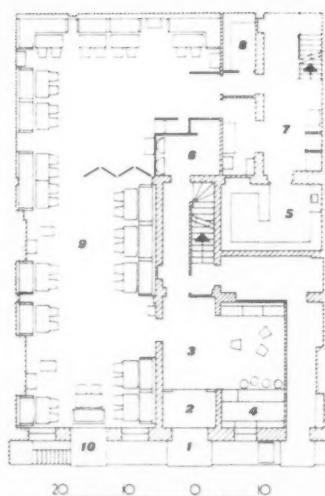


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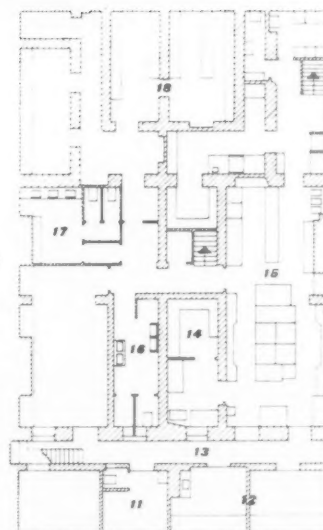
Key: 1, main entrance. 2, lobby. 3, foyer. 4, bar. 5, liquor dispense. 6, cloaks. 7, servery. 8, cigar store. 9, restaurant. 10, escape floor. 11, staff. 12, preparation. 13, area. 14, cold room. 15, kitchen. 16, gents. 17, ladies. 18, wine cellar.



ground floor (above) and basement before alteration



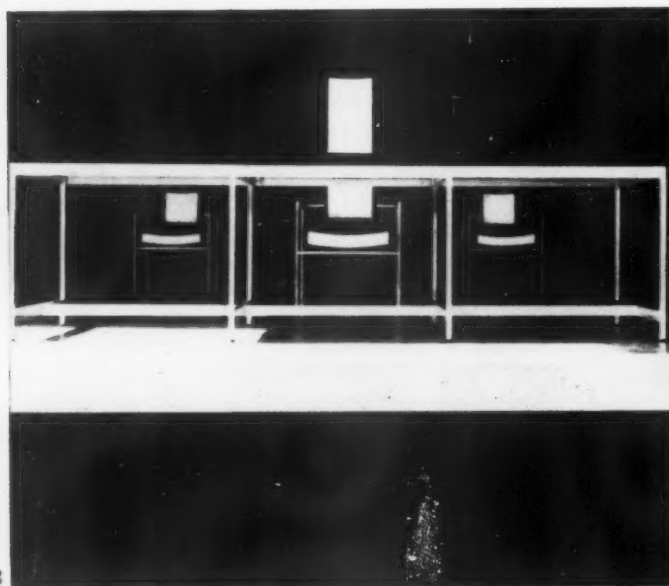
ground floor after alteration



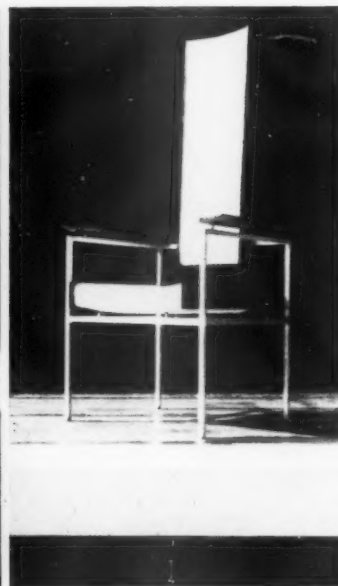
basement after alteration

2 DESIGN REVIEW

1, headmistress chair, two other chairs and table, Mayfield School, Putney. 2, headmistress chair.



1, 2

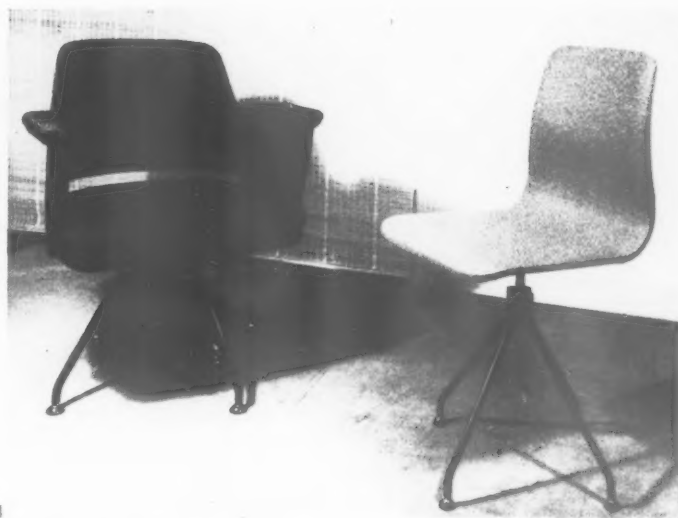


Furniture for Mayfield School

Three chairs and a table for the platform of the main assembly hall were commissioned by the Parent Teachers Committee to mark the opening of the new extension to Mayfield School, Putney, 1 and 2. The extension turns this grammar school into a comprehensive school for 2,000 girls. The furniture is designed by Peter Stewart from the office of Powell & Moya, the architects of the building.

Framing is $\frac{1}{2}$ in. square section aluminium, welded, and anodized the natural colour. Table-top and arms of chairs are in polished black bean, screwed to but clear of the framing. Upholstery is by bandaging white nylon cord over softwood underframing, faced with foam cellulose and white linen, between black bean linings. The cellulose grips and maintains the positions of the cords.

The table is demountable for easy handling and storage. The top is made in three sections, of black bean boards, with glued softwood cross tongues and grooves. Tongues at the junctions slot into the grooves but are not of course glued. End grain to the cross tongues is faced with redwood, which is exposed on the leading edges, and all screwed timber joints are clearly expressed with hardwood pellets.



3

Swivel Chairs for Executives

The main demand upon a swivel chair is strength. Often it is required to tilt as well. Yet for the modern minded executive who happens to weigh over twelve stone, and likes to swivel and tilt all over the place, there is no ready-made chair on the market at all. On one hand is an immense number of uninspired chairs

of good revolving and tilting performance, 5. On the other, the three Hille designs in 3 and 4. These are elegant, business-like, and dignified in line, but their light tubular support is for only moderate action, and they do not tilt at all. The challenge of the rugged-playing, high-powered salesman, who likes his feet



4, 5

5, executive swivel chairs, upholstered in leather or cloth: prices £32 14s. 9d. and £27 8s. 2d. 4, junior executive's or typist's chair in ply upholstered over plastic foam. Price from £9 14s. 0d. These three are designed by Robin Day. 5, a tilting and revolving chair from Heals. Its design brings the drawing-room into the office, and is in painful contrast to the heavy pedestal mechanism.

Waiting Room Furniture

Seating and tables for waiting rooms at the main railway stations in the Eastern Region have been designed by Robin Day to the requirements of the Architect, Eastern Region, and made by Hille of London.

Single armchairs and bench seating in units of 2, 3 and 4, have been made in both hard and upholstered seating, 6-9. Seating and tables are constructed in welded stove enamelled steel frames, with the lower 6 in. of all legs made in stainless steel to take the knocks. Upholstery is in hard rubber on moulded plywood and covered with 'Vynide' leather cloth. The table top is of polished Makore, 10, and the chairs have arms of this hardwood. The hard seating has seats and backs made up of Makore slats. Simplicity



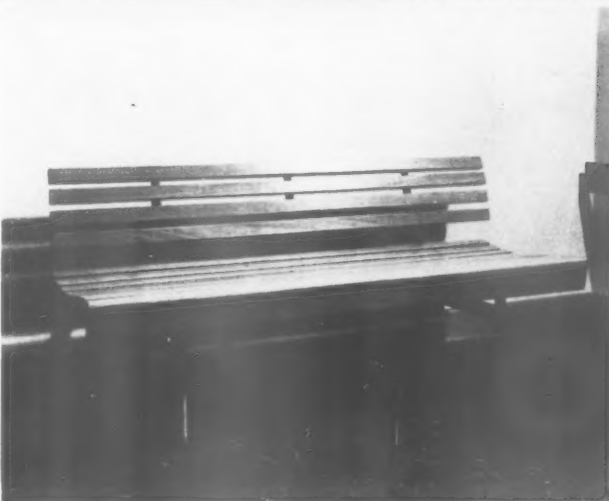
6



7

6, upholstered chair. 7, 4-unit upholstered bench seat. The length accentuates the casual height. At King's Cross these are well used, dividing the waiting room into bays.

Seats are upholstered in geranium red leather; the walls are light grey. 8, 3-unit bench seat with slatted seat and back. The admirable designing of the slatting on the lines of the traditional park seat does arouse comparison with the flowing curves of the traditional wrought iron frame. 9, hard chair.



8



9

and solidity is are equally well stressed; the result a stylishness with no hint of clumsiness or naiveté. (Robin Day in this mood would make short work of designing the most elephantine swivel chair.) This furniture states uncompromisingly its public ownership, and promises to resist squalor to the bitter end.

The only adverse criticism arises from regional sentiment. The connoisseur of British and pre-British Railways might justly complain that this particular furniture was more appropriate to any of the other regions, Eastern Region having always been remarkable for the intricacy of its curves. D.R.

10, table with polished Makore top. Another example of Eastern Region waiting room furniture:



10

Furniture in Brazil



11



12



13

11, entrance of Sao Paulo Mobilia Contemporanea, with 45-cm. module furniture, by Westwater and Arnoult. 12, chairs with a steel spring on the back; table, dresser and cupboard, of Imbria wood, Westwater and Arnoult. The table has screwed-in legs without nails. Coffee cups and plates are Santa Caterina brown glaze peasant ware. 13, armchair in Imbria wood by the same designers.

Glass and the student designer.

An exhibition of the work of students at the Royal College of Art, the Edinburgh College of Art, and the College of Further Education, Stourbridge.

Most glass objects are best seen in contrast to other materials. For this reason, and because, though the objects on show may be of similar size, they vary quite unmanageably in scale, a glass showroom tends to be a depressing sight. This exhibition, skilfully arranged to minimize this difficulty, contained the whole gamut of scales. They must be considered singly.

Edinburgh students experimented usefully in the largest scale, pro-

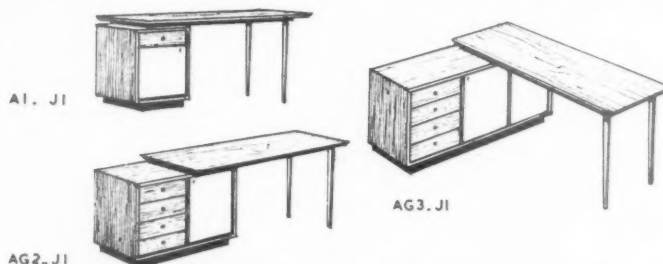
ducing bowls in free shapes in very thick glass. At the other end of the scale were technically excellent examples of small tumblers engraved pictorially. This method of decoration, applied after the glass has taken shape, depends entirely upon the engraver's imagination for its interest. It is not well enough understood that this is an artist's medium, requiring far more than an engraver's skill to save it from boredom. Though the same is true of diamond point, this more sensitive and less perfectible method seemed to give more lively results. Of the engravers and decorators Charles Richards seemed to

The modern architecture of Brazil has gained world-wide recognition. Now for the first time the Mobilia Contemporanea Ltda. offers at its shop in Sao Paulo furniture specifically designed to meet modern needs. The designers are Michel Arnoult and Norman Westwater.

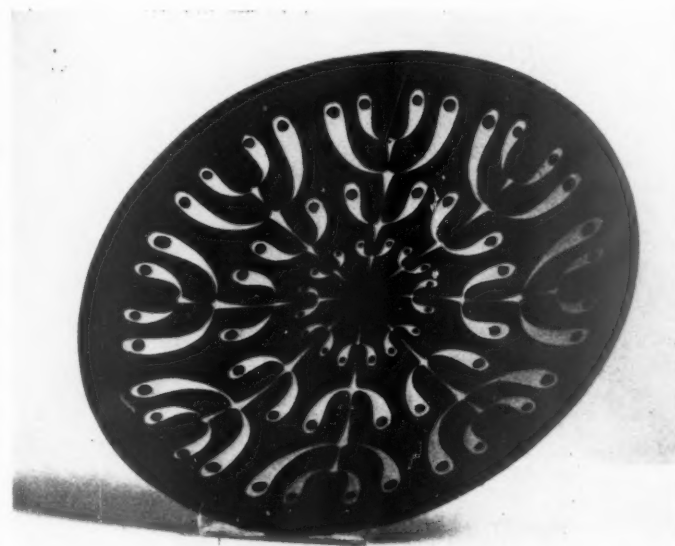
In two years of research and prototypes they created a series of thirty-three pieces of medium-priced furniture designed with an eye on rationalized methods of manufacture and good finish. They claim to have adopted the simplest of lines, relying almost entirely on the beauty of the woods found in Brazil.

A module of 45 centimetres was adopted to suit standard building sizes normally used in Brazil. This is applied to all cupboards, shelves, tables, wardrobes, sofas and beds. Any one piece can be purchased separately, even to an extra shelf.

Judging by the photographs the designers seem to have been most successful with the rectilinear pieces of furniture, ladder units and beds. Here their claim to the simplest of lines seems justified. Their touch with chairs seems less happy, possibly because their inspiration is architectural, and their habit of mind wide ranging rather than minute. D.R.



14, two-legged table and cupboard of one, two or three units.



15, red flashed circular dish with sandblast decoration, by Charles Richards.

have disciplined the scale of his decorations to that of the objects he was engraving, and to the scale of contemporary interiors. On his red flashed dish he had formalized a natural form of sufficient interest to hold its own against the interest of the decorative technique, 15.

Among some good technical examples of cutting Edna Batham's

vase was outstanding, having the largeness and weight that distinguish early eighteenth-century work without any suggestion of pastiche. In the tradition of heavy glass objects was a dark posy bowl and an inkwell in crystal with purple glass inset and cut decoration. Several students produced distinguished designs without recourse to surface decoration. Gillian



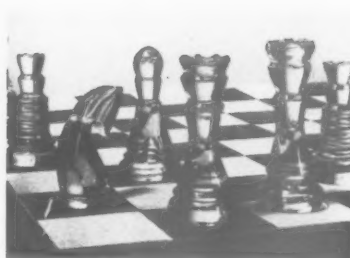
16

glass and the student designer



17

Crowther's lead crystal water jug compares favourably with the commercial examples illustrated in September's *Design Review*. My prize would go to Robert Welch's crystal vase with purple foot and amethyst neck, 16, reminiscent but original. G. D. Robinson's cheese dish, 17, though it has well handled decoration in combed thread, would be noticed for its shape alone. It could compete with the Orrefors dishes illustrated



18

in September.

Perhaps the most outstanding exhibit was R. Renton's set of chessmen, 18. These were wheel-cut from various blanks, mainly goblet stems. This highly ingenious idea was executed with a blessed economy. The photograph does not do justice to their simplicity, since by chance it exaggerates the element of reflection at the expense of the boldness of the designer's style.

D.R.

16, left to right, crystal vase with sandblast decoration, C. Richards; crystal vase with purple foot and amethyst neck, Robert Welch; crystal vase with vertical green threads and black foot, Jane Webster; 17, cheese dish with combed thread decoration, G. D. Robinson. 18, chess set in crystal glass, Ronald Renton.

3 TECHNIQUES

WASHING MACHINES AND BOILERS

by Mary Ward

Laundering must be, for many women, one of the complex penalties of married life and in recent years it has certainly received scant attention from home planners. A hundred years ago, Isabella Beeton described a domestic laundry establishment as consisting of a washing house, an ironing and drying room and, ideally, a drying closet heated by furnaces. Today the job is generally relegated to the kitchen and only the ingenuity of the light engineer makes it in any way tolerable.

Clearly, since a return to Mrs. Beeton's standards is unlikely, the kitchen and bathroom are the only parts of a house suited to this demanding exercise by virtue of supplies, drainage and finishes, but the choice between these rooms is not so simple as current practice suggests, particularly in flats. The kitchen is used during many hours of the day for the storage, preparation, cooking and often eating of food; the steamy heat of wash-day does nothing to assist these functions. The bathroom, on the other hand, is dedicated to steam and heat and, furthermore, stands empty for longer periods at a time. The matter is, of course, more complex than just this first consideration suggests. Outside drying will generally be most simply achieved from the kitchen, though a drying cupboard is probably most happily situated in the bathroom. A sink is a facility not generally found in a bathroom, but sometimes a bath is a more than adequate replacement—and so on.

The choice is nicely balanced and decisions are likely to be often made on the basis of Local Authorities' and Electricity Boards' reluctance to accept bathroom laundries. These authorities generally base their rulings on the recommendations of the Institution of Electrical Engineers* who suggest that the connection to electrical supply, all controls and the equipment itself should be out of reach of the bath when the latter is in use and that the connections of

* See Regulations for the Electrical Equipment of Buildings, 1955. Pub. The Institution of Electrical Engineers, Savoy Place, W.C.2. Regulation 405 (C), 405 (B), 314 (B) (iii).

equipment to the supply should be permanent.

The decision where to site the laundry will have some bearing on the choice of equipment and this is, perhaps, helpful, as a bewildering range of laundry equipment is now available, from simple wash boilers to fully automatic machines doing the whole job at the push of a button.

There are a great many simple boilers available with capacities ranging from 5 to 10 gallons. The old round galvanized type is cheapest, but is of a form that will be unacceptable to many people. The boilers illustrated are mostly examples from large ranges produced by each manufacturer.

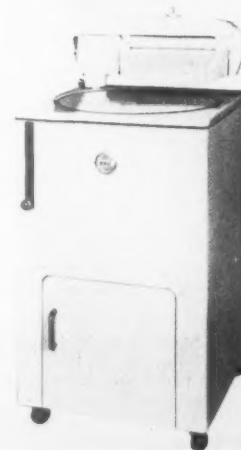
electric boilers

1, Baby Burco, Model 761, made by Burco Ltd., water capacity 5 gallons, 2 kw. boiler, gravity emptying, 19½ ins. high by 15½ ins. diameter, A.C. or D.C., 200/220 and 230/250 volts. Anodized aluminium body, black stove enamelled base, rubber feet, £6 2s. 6d. Enamelled cream and eau de nil or cream and maroon £6 10s. 0d. This is not large enough for bed linen, but would be useful for a daily boil of nappies or other small articles.

2, G.E.C. model D.E.4759, made by the General Electric Co. Ltd., 9½ gallons, 3 kw. boiler, gravity emptying, 16½ ins. by 16½ ins. by 28 ins. high, A.C. or D.C., 200/220 and 230/250 volts. Tinned copper pan, exterior stove enamelled white or honeysuckle, £15 15s. 0d., including worktop.



1



2

gas boilers

3, Model R5, made by G. L. Howarth & Co., 7½-10½ gallons, gravity emptying, 19½ ins. wide by 22 ins. deep by 27½ ins. high, copper pan coated 80 per cent tin and 20 per cent lead. Galvanized steel case vitreous enamelled grey mottle, £6 8s. 6d., or cream or green or white or honey with black, £6 18s. 6d.

4, Model 927, made by W. H. Dean & Sons, 10 gallons, gravity emptying, 17½ ins. wide by 20½ ins. deep by 30 ins. high. Tinned copper pan, steel case, vitreous enamelled in cream, white, £10 1s. 3d., or grey mottled, £9 5s. 6d.

gas boilers with attached wringers

5, The New 55, an exceptionally neat design, made by Morley Products (Padiham) Ltd., capacity 10 gallons, 15½ ins. wide by 15½ ins. deep by 28 ins. high, steel pan, steel case. Finish cream or grey mottled vitreous enamel, £7 18s. 6d., grey, £8 3s. 6d. cream.

6, Model 101/1, made by W. H. Dean & Sons, capacity 10 gallons, 19 ins. wide by 20½ ins. deep by 30½ ins. high, tinned copper tub, steel case, cream and green or white vitreous enamel finish, £19 3s. 6d. Hand operated agitator optional, £1 15s. 10d. extra.

7, Model G.77, made by Bolton Metal Products Ltd., 7½-10½ gallons capacity, 18½ ins. wide by 21½ ins. deep by 30 ins. high. Tinned copper tub, cream or white vitreous enamelled steel case, approximate

prices £20 4s. 2d., hand agitator £1 15s. 10d. extra.

8, The Apex, made by the

gas and electric machines with hand wringers

Appliances incorporating powered agitators are either all electric or combined gas and electric, the latter using gas as being the most speedy boiling agent; they are generally equipped with hand or power operated wringers. A number of all-electric machines are fully automatic and utilize spin drying. It is difficult to make factual comparisons between the various agitating processes devised by various manufacturers. The minor time differences are clearly of little importance: capacity, convenience and appearance will weigh more heavily as a basis of selection. Capacity will depend on the household and under the heading of convenience, consideration will be given to the desirability of pump emptying, power wringing, spin drying, control positions, mobility and overall dimensions. Planners will need to notice particularly the working position of controls and hand wringers.

9, Model G.E.51P, made by Morley Products (Padiham) Ltd., wash load 3½ lbs., aluminium impeller, hand wringer folds down at side of case, pump emptying, 24½ ins. wide by 20½ ins. deep by 29½ ins. high.† 200/220, 230/240, 240/250 volts, A.C. Tinned copper pan, sheet steel case, aluminium lid, finished cream or white stove enamel. Rubber wheel feet, £53 9s. 0d. approx. The outward folding wringer seems clumsily contrived and is the more surprising as a product of the same maker as 5 above.

10, The Slaxon, made by Henry Slack & Sons, wash load 6 lbs. aluminium paddle reciprocating agitator, fold-down hand wringer,

† Dimensions are given throughout for the closed position of the machines unless otherwise stated.

gravity emptying, 18 in. wide by 21½ ins. deep by 31½ ins. high, 200/250 volts, A.C. Anodized aluminium pan, steel case, white or cream vitreous enamelled. Rear castor feet, £51.

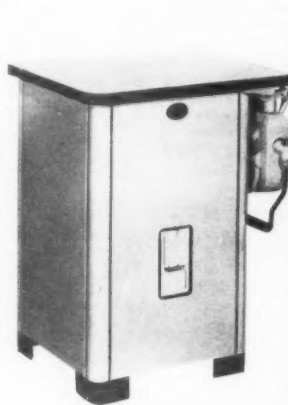
11, Model A.L., made by W. H. Dean & Sons, wash load 7 lbs., bakelite reciprocating agitator, hand wringer detaches and stores in back of case, gravity emptying, 20 ins. wide by 22 ins. deep by 29½ ins. high, A.C.: 220/230, 230/250 volts. Anodized aluminium pan, steel case finished green, white or cream vitreous enamel. Two rubber feet and two castors, £54 11s. 11d. D.C. 200/220, 230/250 volts, £66 3s. 11d. Other voltages to special order.

12, The 'Live-Water' washing machine made by the Parkinson Stove Co. Ltd., wash load 4½-5 lbs.,



7 Economic Gas Boiler Co. Ltd., 8½-10½-gallon capacity, 17½ ins. wide by 17½ ins. deep by 29½ ins. high. Tinned copper tub, white or cream

8 stove enamelled steel case, aluminium cornice. Approximate prices £17 10s. 10d., hand agitator £1 11s. 10d. extra.





15 is remarkable not only for exceptionally neat appearance, but also for the method of agitation which is performed entirely by jets of water. There is also a filter incorporated, an important asset. In machines without a filtering device lint is interchanged between garments. This can be quite a serious disfigurement if fabrics of very dark and very light colours are washed in the same water. Fold-down hand wringer, pump emptying, 16½ ins. wide by 18½ ins. deep by 30½ ins. high, A.C. 200/210, 220/230, 230/240. Tinned copper pan, zinc coated steel case, finished white or cream stove enamel.

13, Model E.W.4, made by Easicleene Porcelain-Enamel (1938) Ltd.,



16 wash load 4½-5 lbs., four vane reciprocating aluminium agitator, fold-down wringer, gravity emptying, 16 ins. by 16 in. by 28 ins. high, 2.7 kw. heater, 200/220 and 230/250 volts, A.C. Vitreous enamel steel pan, porcelain enamelled steel case cream/green, blue/white, cream/red, all cream, all white, two castors, £54. Model E.W.2 with powered wringer also available.

14, Model S.H.P. made by Wilkins & Mitchell Ltd., wash load 4½-6 lbs., alachromed aluminium turbulator, fixed wringer with folding handle, pump emptying, 20 in. by 20 ins. by 32 ins. high, 2 kw. heater, A.C. 200/220 or 230/250, vitreous enamelled steel pan and case, white, £59 12s. 3d.



17, Model W.130, Goblin, made by the British Vacuum Cleaner and Engineering Co., wash load 4-6 lbs., aluminium alloy reciprocating agitator, fold-down wringer, pump emptying, 18½ ins. wide by 20 ins. deep by 31½ ins. high, 2½ kw. heater, A.C. only 200/220, 230/250, vitreous enamelled steel pan, white stove enamelled steel case, two castor feet, £54 12s. 10d.

16, The Scales machine, made by W. & S. Summerscales Ltd., is available in four models, S.1, without heater or time switch, S.2 without heater, with time switch, S.H.3, heated, without timer, and S.H.4 heated, with time switch. Wash load 6-8 lbs., aluminium rotator agitator,

fold-down wringer, gravity emptying, 17½ ins. wide by 17½ ins. deep by 30½ ins. high, 3 kw. heater, A.C. 230/250, black and white mottle vitreous enamelled tub, white stove enamelled zinc sheet case, castor feet. Prices are respectively £49 4s. 7d., £55 5s. 6d., £56 15s. 8d., £59 16s. 1d.

17, Mark II, made by Hoover Ltd., a very well detailed design. Wash load 6 lbs., plastic moulded pulsator in tub side (the agitator is situated in the bottom of the tub in the majority of machines), fold-down wringer, pump emptying, 17½ ins. wide by 16½ ins. deep by 30½ ins. high, A.C. and D.C., all voltages. Anodized aluminium tub and lid, enamelled steel case, wheeled feet, £52 6s. 0d.

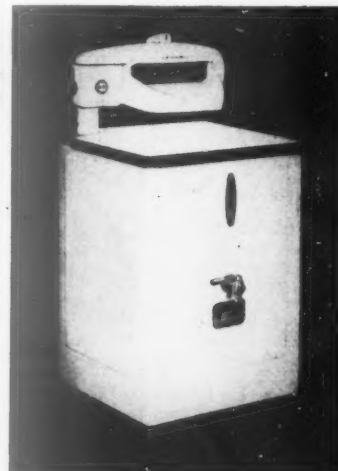
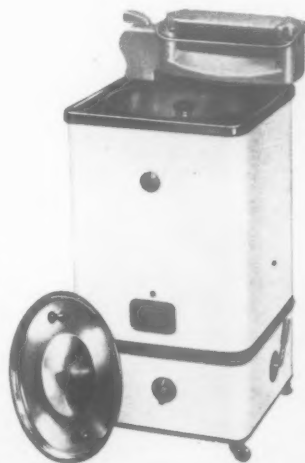
gas and electric machines with powered wringers

Many machines which incorporate powered wringers allow radial adjustment of the wringer. This facilitates starching, rinsing and bleaching of clothes whilst others are still washing without the water from the wringer draining back into the agitator. Powered wringers stow away in cabinet unless described as 'fixed' or 'fold-down.'

18, the Ega, made by the Economic Gas Boiler Co., wash load 5 lbs., reciprocating agitator, four position wringer, pump emptying, 18 ins. wide, by 18 ins. deep by 34 ins. high, over wringer 42 ins. high (wringer is fixed). A.C. 200/210, 220/230, 240/250. Tinned copper pan, steel case, white or cream stove enamelled. Black vitreous enamelled cornice, £79 9s. 3d. approx.

19, The Auto, made by the same

company, wash load 9 lbs., aluminium agitator, fixed eight-position reversible wringer, gravity emptying, 22 ins. by 22 ins. by 34½ ins. high, A.C. 200/230, 240/250, corrugated tinned copper pan, steel case stove enamelled white or cream, black vitreous enamelled cornice, castor feet, £79 9s. 3d. It seems a pity that this machine, fitted with a worktop, and too high for under drainer storage, cannot be made 1½ ins. higher to conform to standard worktop height.

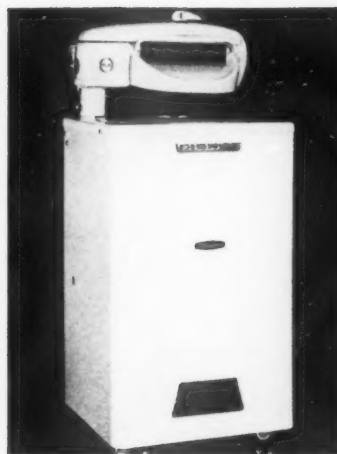




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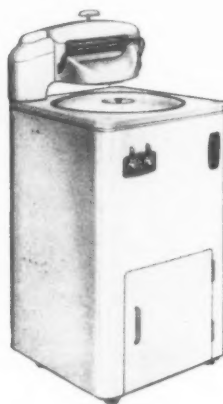
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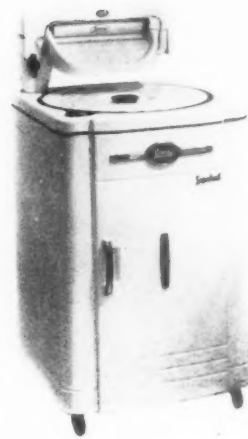
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26



27

20, Prefect Princess, made by Clegg & Coupe Ltd., wash load 5½ lbs., four-position wringer, gravity emptying, 2 kw. heater, 19 ins. wide by 19 ins. deep by 31½ ins. high, aluminium tub, steel case, vitreous enamelled. £73 19s. 0d., or £64 11s. 0d. without heater.

21, E.W.50/H, made by Parnall Yate Ltd., wash load 5½ lbs., plastic reciprocating agitator, eight-position wringer, pump emptying, 3 kw. heater, A.C. or D.C. 200/220, 230/250, 20.2 ins. by 20.2 ins. by 36 ins. high. Vitreous enamelled zinc coated steel tub, and stove enamelled cream or white zinc coated steel case, castor feet, £79 14s. 6d. Model E.W.50 without heater also available.

22, The Creston, made by H. Fisher (Oldham) Ltd., wash load 6 lbs., oscillating agitator five-position wringer, pump emptying, 21 ins. by 21 ins. by 34 ins. high, 46 ins. over wringer. A.C. 200/220, 230/250, special voltages and D.C. to order. Vitreous enamelled tub, cream or white stove enamelled case, vitreous enamelled top, castor feet. £68 10s. 3d. for A.C. with cut-out, £76 17s. 9d. for D.C. without cut-out, rotary ironer (A.C. only) and worktop optional extras. In this machine, as in some others, it would seem worth while to make the low-level switch more suitable for foot-operation.

23, Mark III by Hoover Ltd., wash load 6 lbs., plastic pulsator side mounted, power wringer stores in cradle in tub. Pump emptying, 2 kw. heater, A.C. all voltages. 17½ ins.

wide by 16½ ins. deep by 30½ ins. high. Stainless steel tub, white stove enamelled steel case, £78 12s. 6d., or £67 15s. 0d. without heater. This design equals the Mark II, expressing and encouraging efficiency.

24, Model CH/P, made by Hotpoint Electric Appliance Co., wash load 7 lbs., six-position wringer interchangeable with rotary ironer (extra), moulded plastic reciprocating gyrtator, pump emptying, 3 kw. heater, 200/220, 230/250 A.C. 23 ins. wide by 25½ ins. deep by 36 ins. high, aluminium pan, cream or white stove enamelled zinc coated steel case, castor feet, £89 18s. 6d., worktop available £2 2s. 9d. extra.

25, Model D.E.200, made by the General Electric Co., wash load 8 lbs., plastic moulded agitator, six-position wringer interchangeable with rotary ironer (extra), gravity emptying, 200/220, 230/250 A.C. 22½ ins. by 22½ ins. by 36 ins. high. Mottled porcelain enamel tinned copper tub, white stove enamelled steel case, castor feet, £79 2s. 8d. Vitreous enamel worktop £2 2s. 8d. extra bought separately. D.C. model D.E.201 £82 14s. 7d.

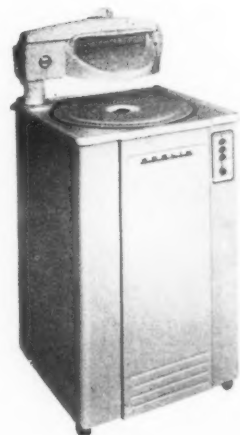
26, Ada Mark I, made by Ada (Halifax) Ltd., wash load 8½ lbs., plastic agitator, four-position wringer interchangeable with rotary ironer (extra), pump emptying, 22 ins. by 22 ins. by 36 ins. high. A.C. or D.C., 200/220, 230/250. Aluminium chromate treated tub, white or cream stove enamelled zinc coated steel case (other colours to special

order) rubber tyred castors, £71 1s. 0d. or £79 15s. 0d. with heater.

27, Model MHP Superheat made by Wilkins & Mitchell Ltd., wash load 9 lbs., plastic reciprocating agitator, detachable five-position wringer, pump emptying, 23 ins. by 23 ins. by 34½ ins. high. 3 kw. heater, A.C. 200/220, 230/250. Vitreous enamelled steel pan and case, white or cream, 4 wheeled feet, £86 5s. 6d. D.C. model £93 15s. 6d. Yellow/green, blue/red door and lid £2 18s. 0d. extra.

28, Model W.140, Goblin, made by the British Vacuum Cleaner & Engineering Co., wash load 8-10 lbs. This machine is remarkable for a unique floating rubber paddle agitator which allows equally efficient washing whether the machine is used at full capacity or not. Four-position wringer, detachable but not stored in machine, pump emptying, 2½ kw. heater, 200/220, 230/250, A.C. only. 22½ ins. wide by 22½ ins. deep by 34½ ins. high, vitreous enamelled steel tub and white stove enamelled steel case, castor feet, £85 17s. 7d., or £77 1s. 5d. without heater.

29, Model 4005, made by English Electric Co., wash load 8-9 lbs., plastic agitator, eight-position wringer interchangeable with rotary ironer (extra), pump emptying, 3 kw. heater, 200/220, 230/250, A.C., also 100/110 with 1.6 kw. heater. 21½ ins. wide by 23½ ins. deep by 36 ins. high. Steel tub, vitreous enamelled, alkali resistant, steel case, cream or white stove enamelled, rust-proofed, castor feet, £88 19s. 9d.



28

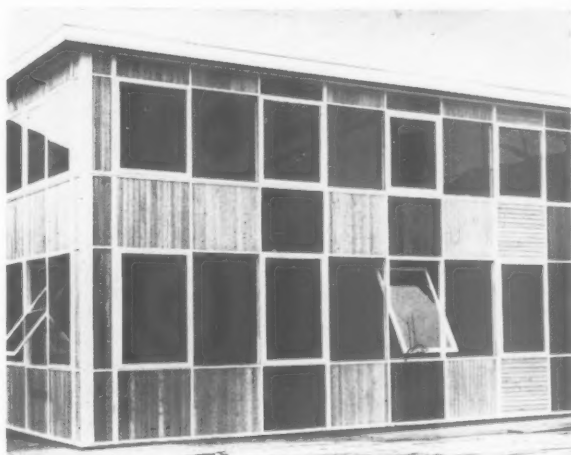


29

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fully automatic machines

30. Model 244, made by Thor Appliances Ltd., does not require special plumbing or fixing *in situ*. The wash load capacity is 8 lbs. After the clothes have been agitated the soapy water is pumped from the inner to the outer tub and stored whilst the first load is spin-dried. It is then returned to the inner tub for the next load. Rinsing, which must be done at the end of the whole wash if the suds are to be saved, is achieved by the continuous addition of clean water to the inner tub. It is agitated and allowed to overflow into the outer tub, which is pump emptying. Spin-drying considerably reduces the line-drying time as opposed to wringing. There is no heater in this machine. 200/220, 230/250 A.C. (D.C. models available at extra cost).



30
31

25 ins. by 25 ins. by 36 ins. high. Vitreous enamelled steel tub, cream or white vitreous enamelled steel case, £98 12s. 0d. A dish washing attachment is available £25 2s. 3d. extra.

31. The Bendix, made by Bendix Home Appliances Ltd., wash load 9 lbs. The operation is rendered automatic by an electric timer and thermostatically controlled water valves. The process is divided into two parts, the first part not always used. The sequence is as follows: soak and drain, rinse and drain, spin extraction, automatic stop. Wash and drain followed by rinse, drain and spin extraction three times, fluffing tumble, automatic stop. The machine can be set for up to 9½ minutes soaking and 12 minutes washing time, both of which are determined by the



operator, who adds the washing powder after the first automatic stop. The rinsing processes follow automatically after the washing period. Water temperature is always warm for soaking and the control setting determines the wash temperature according to the type of wash. During the rinsing the temperature is gradually reduced to 95°F. A water rationer measures the water entering the machine according to the weight of the load, thus economizing in the case of small quantities. The steel tumble cylinder and tub are vitreous enamelled inside and out and the case finished in high-lustre alkali and heat resistant white or cream enamel high-baked on bonderized steel. The adjustable legs allow levelling and the machine is bolted to the floor. Hot and cold water connections are made through flexible hoses to standard couplings ½ B.S.P. to fit special Bendix stop taps. Drain is by pump to drain or sink. Electric connection is to an ordinary three pin power plug. 200/230, 230/250 A.C. 25½ ins. wide by 22½ ins. deep by 36½ ins. high, £109.

sink and washing machines

32 and **33**, incorporating the Hoover Mark III machine with stainless steel sink and surrounds and removable stainless steel drainer, £132 18s. 0d. The second incorporates the Prefect washer, £132 0s. 9d., or £157 13s. 1d. with heater. The dimensions for both models are 42 ins. wide by 24½ ins. deep by 36 ins. high plus 4-in. backsplash. Both, Ezee Kitchen Ltd.

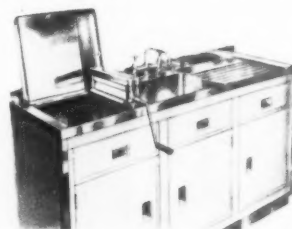
34, a combination of a 3 kw. heated washer with hand operated wringer, wash load 8 lbs. The tub,



32



33



34

[continued on page 348]



Architects: Rider & Yeats, A/R.I.B.A. Building Contractor: John Laing & Son Ltd.

ANDERSON FLEXTILE TRIPLEX

was used for the roof of "Harlequins" Mr. D. V. Damarell's Private Residence at Scotby, Carlisle.

Contemporary styling in the roof structure of Mr. Damarell's house demonstrates the suitability and flexibility of Anderson Built-up Roofing Systems.

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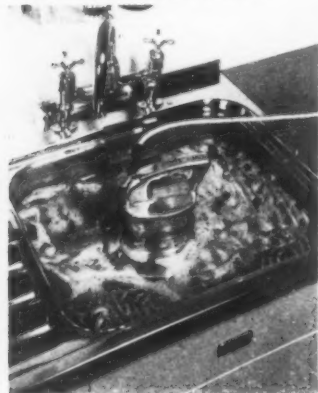


*The Gotham Company Limited, Gotham, Nottingham.
The Carlisle Plaster & Cement Co., Cocklakes, Nr. Carlisle.
Thomas McGhie & Sons Ltd., Kirkby Thore, Westmorland.*

WASHING MACHINES AND BOILERS (continued from page 346)

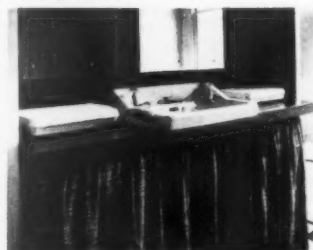
wringer, hinged cover, sink and drainer are all stainless steel. The cabinets are bonderized aluminium. The two-section Dovedale model is 42 ins. wide by 21 ins. deep by 36 ins. high, £110 4s. 9d. The three-section Millersdale with grooved draining board, 63 ins. wide by 21 ins. deep by 36 ins. high, £125 17s. 9d. W. H. Paul Ltd.

vibrosonic machine



35. The Laundmaster, made by the Syndi Manufacturing Co., is a vibrosonic washer, replacing mechanical agitation by sound waves, a device used in the launderer's own container replacing the agitation process only. It does not move the clothes in the water, but 'shakes' the dirt from them. Made in polished aluminium and stainless steel, it must be used with the special transformer for use on A.C. mains 200/230. Total price £22 17s. 6d.

tail-piece



36. a possible arrangement of a Hoover machine and a linen basket stowed away below a toilet bench and washbasin in a small bathroom-laundry.

Unless a fully automatic machine is required these units provide the ideal arrangement in the pre-planned kitchen laundry, although a demand for the under-draining-board models will no doubt be maintained by householders acquiring their machines as a luxury to be added to an already fitted kitchen. In addition to the foregoing there is a British machine of special interest as a departure from the usual methods of agitation.

This departure implies that the development of simple economic washing will continue and that the housewife of the future will fail completely to understand the old-world styling of wash day as Black Monday.

list of firms mentioned

Burco Ltd., Rosegrove, Burnley, Lancs.
G.E.C. Ltd., Magnet House, Kingsway, London, W.C.2.
G. L. Howarth & Co. Ltd., Nelson Square, Burnley, Lancs.
W. H. Dean & Son Ltd., Victoria Works, Burnley, Lancs.
Morley Products (Padiham) Ltd., Padiham, nr. Burnley, Lancs.
Bolton Metal Products Ltd., Bakewell Works, Bolton.
Economic Gas Boiler Co. Ltd., Gas Appliance Works, Junction Mills, Burnley, Lancs.
Henry Slack & Sons Ltd., New Factory, Accrington, Lancs.
Parkinson Gas Stove Co. Ltd., Stechford, Birmingham.
Easiclone Porcelain-Enamel (1938) Ltd., Kent House, Market Place, Oxford Circus, W.1.
Wilkins & Mitchell Ltd., The Green, Darlaston, Staffs.
British Vacuum Cleaner & Engineering Co. Ltd., Goblin Works, Leatherhead, Surrey.
Hoover Ltd., 211 Regent Street, London, W.1.
W. & S. Summerscales Ltd., P.O. Box No. 12, Parkside Works, Keighley, Yorks.
Clegg & Coupe Ltd., Molesworth Street, Rochdale.
Parnall (Yate) Ltd., North Circular Road, London, N.W.10.
H. Fisher (Oldham) Ltd., Oldham, Lancs.
Hotpoint Electrical Appliances Ltd., Crown House, Aldwych, London, W.C.2.
Ada (Halifax) Ltd., West Mount Works, Johnson Street, Halifax.
Thor Appliances Ltd., 64/66 Oxford Street, London, W.1.
Bendix Home Appliances Ltd., Kingsbury Road, Erdington, Birmingham.
Ezee Kitchens Ltd., 46 Davies Street, London, W.1.
W. H. Paul Ltd., Breaston, nr. Derby.
Syndi Manufacturing Co. Ltd., Industrial Estate, Uxbridge, Middx.

4 THE INDUSTRY

The Hille Convertible

The Hille convertible is a comfortable settee of simple and spacious appearance, 1, which can be converted

into a bed, 2, by a single movement of the hand. Robin Day seems to have succeeded in eliminating the

[continued on page 350]

THE LONDON COUNTY COUNCIL'S NEW SECONDARY SCHOOL IN FULHAM

Architect: Richard Sheppard & Partners.

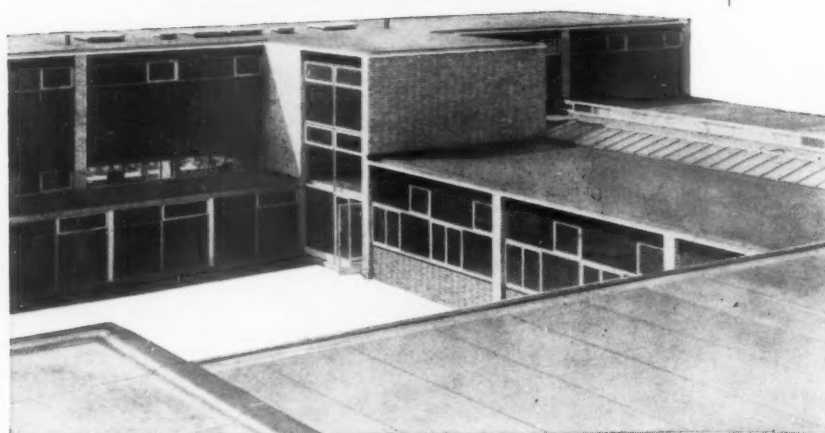
Main Contractor: Gee Walker & Slater Ltd.

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IN RESTAURANTS



THEY SEE THE ADVANTAGES



Banqueting Hall of La Belle Etoile, Jersey.
Architects: Blampied and Biggar, A/A.R.I.B.A. Builder: Peter Hallett & Co. Ltd.

A well-laid table is shown off to advantage under a Lumenated ceiling. Pleasant light of correct intensity is diffused from the ceiling area, giving a bright note on silver, glass, wood and linen. The absence of glare and shadow means greater comfort for the guests, wherever they sit.

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See the advantages, too, in installation and maintenance! The Ceiling is light in weight with a durable, non-inflammable, dust repellent surface which requires little cleaning. It can readily be combined with air-conditioning or acoustic systems.



LUMENATED CEILINGS

U.K. PATENT NO. 756089

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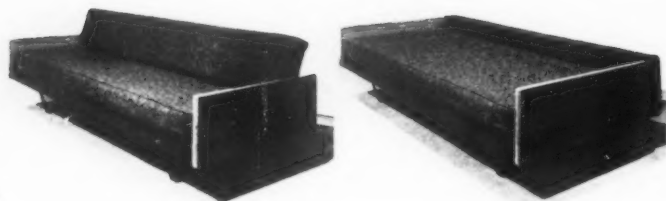
Further information is given in a booklet, "LUMENATED CEILINGS", and our Advisory Service will make recommendations for individual installations.



LUMENATED CEILINGS LIMITED

Alliance House, Caxton Street, S.W.1. Tele: ABBEY 7113
Scottish Sales Office: 10 Bothwell Street, Glasgow, C.2. Tele: CENTRAL 6571/2
Registered Office: Thermotank Ltd., 150 Helen Street, Glasgow, S.W.1

TGA L12



1, 2

tiresome complications of the bed-settee along with the name.

The bed is 2 ft. 9 in. by 6 ft. 3 in., and takes up only 5½ in. more room as a bed than as a settee. The mattress is 4 in. latex foam, set on Pirelli rubber webbing, fixed to allow for adjustment of the springing. The convertible can rest on black metal

underframe or turned wooden legs. The wood sides are made of three ½ in. panels of solid mahogany laminated together for strength and absolute rigidity. It can easily be dismounted for shipment abroad.

Retail price is from £55, according to the upholstery material. Loose cover for mattress extra.

CONTRACTORS etc

Terrace Houses in Hampstead, N.W.3.
Architects: Stanley Amis and William and Gillian Howell. *General contractors:* J. M. Hill & Sons. *Sub-contractors:* Electrical installation: C. H. Pearce & Co. Spiral staircases: The Safety Tread Ltd. Wall and quarry tiling: A. H. Herbert Ltd. Wood block flooring: Horsley Smith &

Co. Linoleum: Catesbys Ltd. Suppliers: Metal gratings: H. & C. Davis & Co. Boilers: Trianco Ltd. Pumps: Mono Pumps Ltd. Sanitary fittings: W. N. Froy & Sons. Adamsez Ltd. Kitchen sinks: W. & G. Sissons Ltd. Plastic worktops: C. F. Anderson & Son. Garage door equipment: Aerow (Engineers) Ltd. Door mats: Tyre Products Ltd. Light fittings, external: Revo Electric Co. Light fittings, recessed: Troughton & Young. Venetian blinds: J. Avery & Co. Curtain track: Silent-Gliss Ltd. Hardware: Alfred G. Roberts Ltd. Other hardware: A. Oakden & Sons;

Lockerbie & Wilkinson Ltd.; Agro Electrical Co. Sliding door gear: James Gibbons Ltd.; Stedall & Co.; Comyn Ching Co.

House at Carlisle. *Architects:* Ryder & Yates. *Building contractor:* John Laing & Son. *Sub-contractors:* heating engineer: M. Aynsley & Son. *Electrical contractor:* David Thomson & Sons. *Roofing specialist:* D. Anderson & Son. *Plastering:* Carlisle Plaster & Cement Co. *Carlisle plaster and bricks:* Cotham Co. *Sliding metal windows:* Williams & Williams Ltd. *Electrical fittings:* Merchant Adventurers Ltd.; General Electric Co. *Domelight:* Wm. Freer Ltd. *Paint:* International Paints Ltd. *Painting contractor:* Reid Bros. *Up-and-over door:* Westland Engineers Ltd. *Hardware:* Dryad Handicrafts Ltd. *Sanitary ware:* Adamsez Ltd.; Shanks & Co. *Reinforced concrete:* Twistell Reinforcement Ltd. *Diffusing plyglass:* Modern Art Glass Co. *Glaziers:* Reed Millican & Co. *'Sava' Vitreous Mosaics:* Commercial Marble & Tiles Ltd.

Cinema in Birmingham. *Architect:* H. Werner Rosenthal. *Main contractors:* Bovis Ltd. *Projection and screen equipment:* Sound Equipment Ltd. *Heating and air conditioning:* H. E. Pritchard & Son. *Lighting and electrical equipment:* Sidney Hare. *Seating, curtains, etc.:* Turner & Co. *Special lighting fittings:* Tucker & Edgar. *Parquet and woodblock flooring:* North Staffs Flooring Co. *Carpets:* Empire Carpet Co. *Canopy illumination:* Luminated Ceilings Ltd. *Canopy steel:* British Steel Construction (Wednesbury) Ltd. *Shopfitting work:* Gupwell Ltd. *Stair*

balustrading: Bigwood Ltd. *Door furniture:* D. A. Thomas & Co. *Plastering:* Plasterers (Liverpool) Ltd. *Suspended ceilings:* Expanded Metal Co. *Screen surround:* Scaffolding (Gt. Britain) Ltd. *Acoustic sprays:* William Kenyon & Son. *Wallpapers:* Coles (Wallpapers) Ltd. *Marble:* W. H. Fraley & Sons. *Kitchen equipment:* W. Page & Co.

Restaurant in Gerrard Street, W.1. *Architect:* Leonard Manassch & Partners. *General contractors:* Hampton & Sons. *Sub-contractors:* All carpets, restaurant tables, fixed banquettes, bar tables and door mat: J. Langton Roper, Ltd. *Restaurant chairs:* L. M. Furniture, Ltd. *Bar stools:* Conran Furniture, Ltd. *Special brass light fittings and various other fittings:* George Forrest & Son. *Various other light fittings:* Courtney Pope, Ltd. *Ironmongery, certain metal work and brass name plates:* J. D. Beardmore & Co. *Ironmongery:* Dryad, Ltd.; Comyn Ching & Co. *Electric heaters:* A. Dean & Co. *Gold paper on restaurant ceiling:* Coles (Wallpapers) Ltd. *Italian chairs in bar:* Heals Contracts, Ltd. *All paintwork (specially mixed colours):* Murray & Jones, Ltd. *Certain floors and underlays:* Cellulin Flooring Co. *Telephone booths:* Acoustic-Booth. *Marble:* J. Whitehead & Sons. *Enlargement for mural:* Carlton Artists. *Illuminated sign:* L. Bloom. *Special glass with lettering for hanging sign:* James Hetley & Co. *Refrigeration plant and cold store:* Pressed Steel Co. *Stainless steelwork and washing machine:* Dawson Bros. Ltd. *Ventilation:* E. V. Hancock. *Cooker:* Benham & Sons Ltd. *Lifts:* Aldous & Campbell Ltd.



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