THE ARCHITECTS' JOURNAL

standard contents

every issue does not necessarily contain all these contents, but they are the regular features which continually recur

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Architectural Appointments Wanted and Vacant

No. 3235] [Vol. 125

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★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ig one week, Ih to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley," Castle Hill Avenue, Berkhampstead, Herts.	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Langham 5721
ABT	Association of Building Technicians. 1, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 4, St. James' Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
ARCUK	Architects' Registration Council. 78, Wimpole Street, W.1.	Welbeck 2915
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Langham 5721
BATC	Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.	Reliance 7611, Ext. 1706
BC	Building Centre. 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council. 13, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5.	Ealing 9621
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Fremantle 8494
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2	Glasgow Central 2891
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Whitehall Gardens, Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
BRS	Building Research Station. Bucknalls Lane, Watford	Garston 4040
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. British Standards House, 2, Park St., W.1.	Mayfair 9000
BTE	Building Trades Exhibition. 32, Millbank, S.W.1.	Tate Gallery 8134
CABAS	City and Borough Architects Society. C/o Johnson Blackett, F.R.I.B.A., Civic Centre, Newport, Mon.	Newport 65491
CAS	County Architects' Society. C/o F. R. Steele, F.R.I.B.A., County Hall, Chichester.	Chichester 3001
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Belgravia 6661
CCP	Council for Codes of Practice. Lambeth Bridge House, S.E.1.	Reliance 7611 Ext. 1284
CDA	Copper Development Association. 55, South Audley Street, W.1.	Grosvenor 8811
CIAM	Congrès Internationaux d'Architecture Moderne. Doldertal, 7, Zurich, Switzerland	
COID	Council of Industrial Design. 28, Haymarket, S.W.1.	Trafalgar 8000
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.1.	Sloane 4280
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 9116
CVE	Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1.	Reading 72255
DGW	Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.	Reliane 7611
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
DPT	Department of Overseas Trade. Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
EJMA	English Joinery Manufacturers' Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 68, Gloucester Place, W.1.	Welbeck 9966
FASS	Federation of Association of Specialists and Sub-Contractors, Artillery House, Artillery Row, S.W.1.	Abbey 7232
FBBDO	Fibre Building Board Development Organization, Ltd. (Fidor), 47, Princes Gate, Kensington, S.W.7.	Kensington 4577
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	Regent 0221
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	The Flush Door Manufacturers Association Ltd., Trowell, Nottingham.	Ilkeston 623
FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C.1.	Chancery 7583
FPC	The Federation of Painting Contractors, St. Stephen's House, S.W.1.	Whitehall 3902
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4341
GPDA	Gypsum Plasterboard Development Association, 11, Ironmonger Lane, E.C.2.	Monarch 8888
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group. 2, Chester Street, S.W.1.	Belgravia 3081
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 29, Belgrave Square, S.W.1.	Belgravia 3755
ICA	Institute of Contemporary Arts. 17–18, Dover Street, Piccadilly, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers. 1, Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, Victoria Embankment, W.C.2.	Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215
IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266

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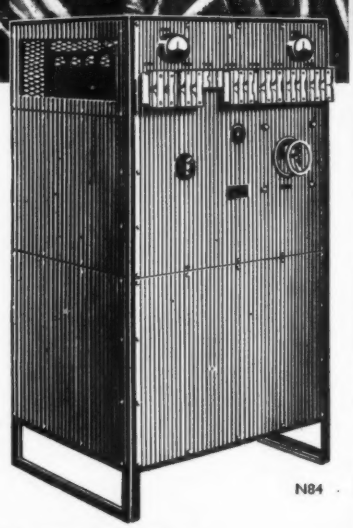

N84

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Here's a true Red Lead Rust Inhibiting Primer that can be applied to dew moist surfaces and overpainted in six to eight hours (even with paints containing searching solvents) and with unequalled adhesion too. This means you can get on with the job even in bad weather. No more hold ups due to lifting or bleeding through and overpaint in six to eight hours, remember!

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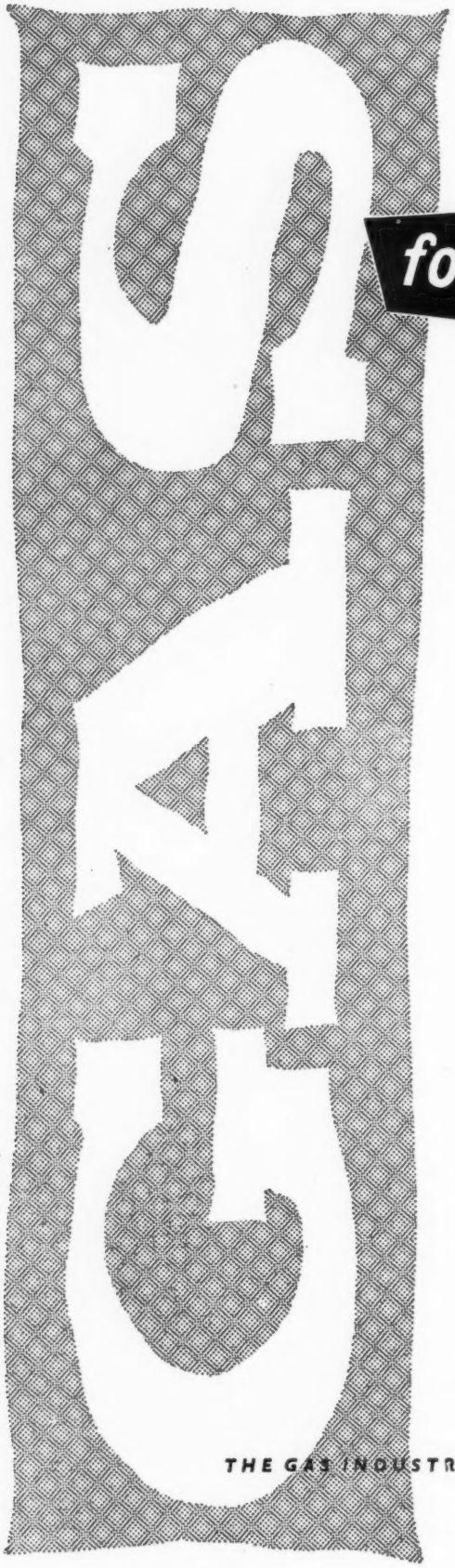

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consult your area gas board

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The Gas Council, 1 Grosvenor Place London, S.W.1

The skin game

In a cold room all of us, like this young lady, play the skin game. We feel cold because our body is heating the room instead of otherwise. Work at school, in the factory or office, suffers. Look at the poor girl again! She will get precious little warmth from hugging her coat! The economic and effective heating of a particular factory, warehouse, school, hospital or office often presents its own special problem. The technical staff at your Area Gas Board have had wide experience of thousands of special space-heating installations.

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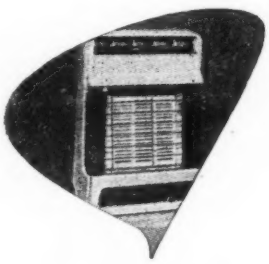

ISSUED BY THE GAS COUNCIL

THE GAS INDUSTRY MAKES THE BEST USE OF THE NATION'S COAL

In the complete re-designing of the Borough of Spenborough's Council Chamber at the Town Hall, Cleckheaton, by the Borough Engineer and Surveyor's Department, it was desirable to have an efficient and concealed system of heating. It is a fine tribute to Crane's reputation that Crane Skirting Heating was chosen for the job. Both Type 'R' (Radiant) and Type 'RC' (Radiant-Convection) were used, together with a number of Crane Concealed Radiators, the complete installation being taken off the boiler plant which serves the Town Hall as a whole. The result is a virtually inconspicuous heating system maintaining an extremely comfortable even temperature throughout the whole Chamber, which has a seating capacity for 80.

Once again, heating by Crane

The Type 'R' sections built into the riser to the platform provide an interesting illustration of the way in which Crane Skirting Heating blends perfectly into its background.

B17

Borough Engineer and Surveyor: J. Wallbank, Esq., M.I.Mun.E., F.R.S.I., M.A.P.L.E.
Heating Engineers: T. H. Rayner & Sons, Ltd., Huddersfield.

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NOW... construct, surface and decorate with the one board . . .

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No need to waste time any longer in glueing down plastic sheeting to base material. WEYDEC IS HERE

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Next, WEYDEC is balanced. This means that a plain plastic backing reduces any tendency of the decorative surface to distort the board.

ALL THAT AND COLOURS TOO...

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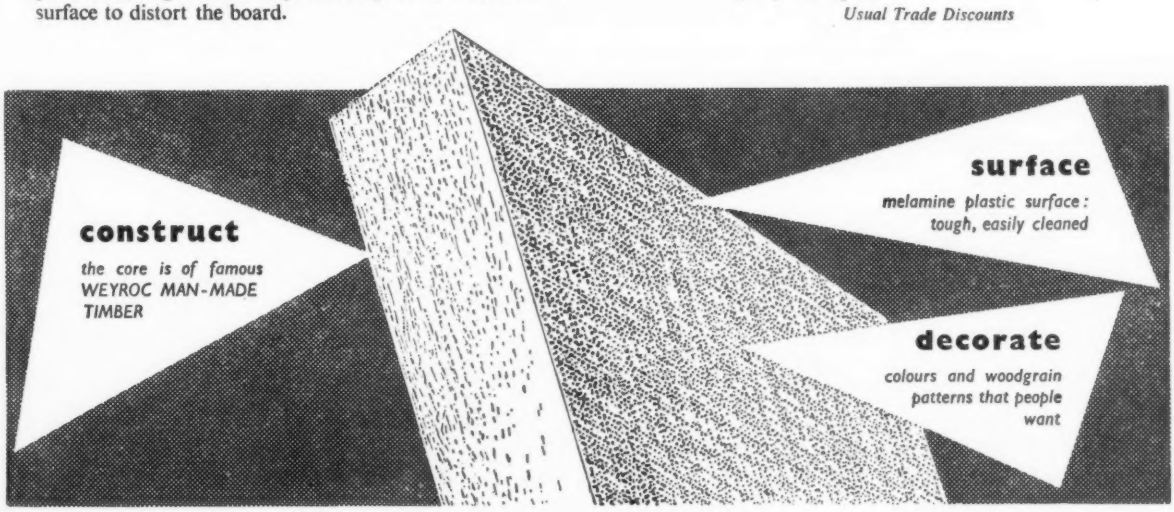
Weydec is made in 8 ft. x 4 ft. boards, ¼" and ¾" thick

Retail Prices: ¼" 5/2 a sq. ft.
¾" 5/11 a sq. ft.
Usual Trade Discounts



and for colour surfacing . . .

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Whenever you think of plastic surfaces remember HARDEC. It is as hardwearing as they come, and you'll find an attractive range of colourful linen-finish and woodgrain patterns. But HARDEC is in a class by itself, because it is *balanced.* Balance gives it outstanding stability, makes it much easier to use. Fix HARDEC flat and it stays flat, whether screwed, glued or nailed—it's no trouble to apply either vertically or horizontally.

Use balanced HARDEC for panelling and partitions, working surfaces and wall-linings. Decorate ceilings and put facings on flush doors with it. In home and industry, in shops, offices, restaurants and bars, in schools and hospitals, there's *nothing* quite like HARDEC.
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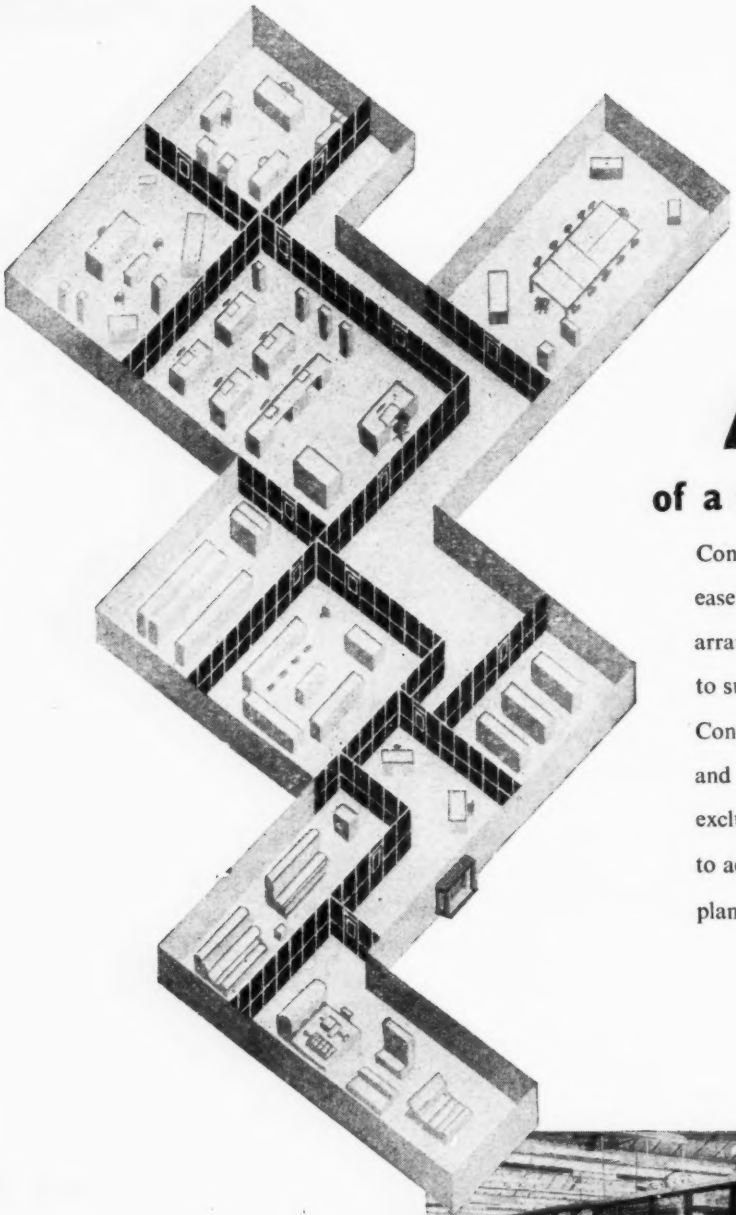

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of a well planned building . . .

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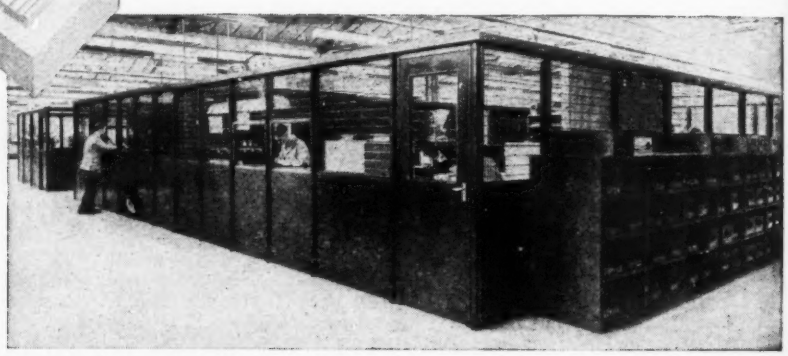

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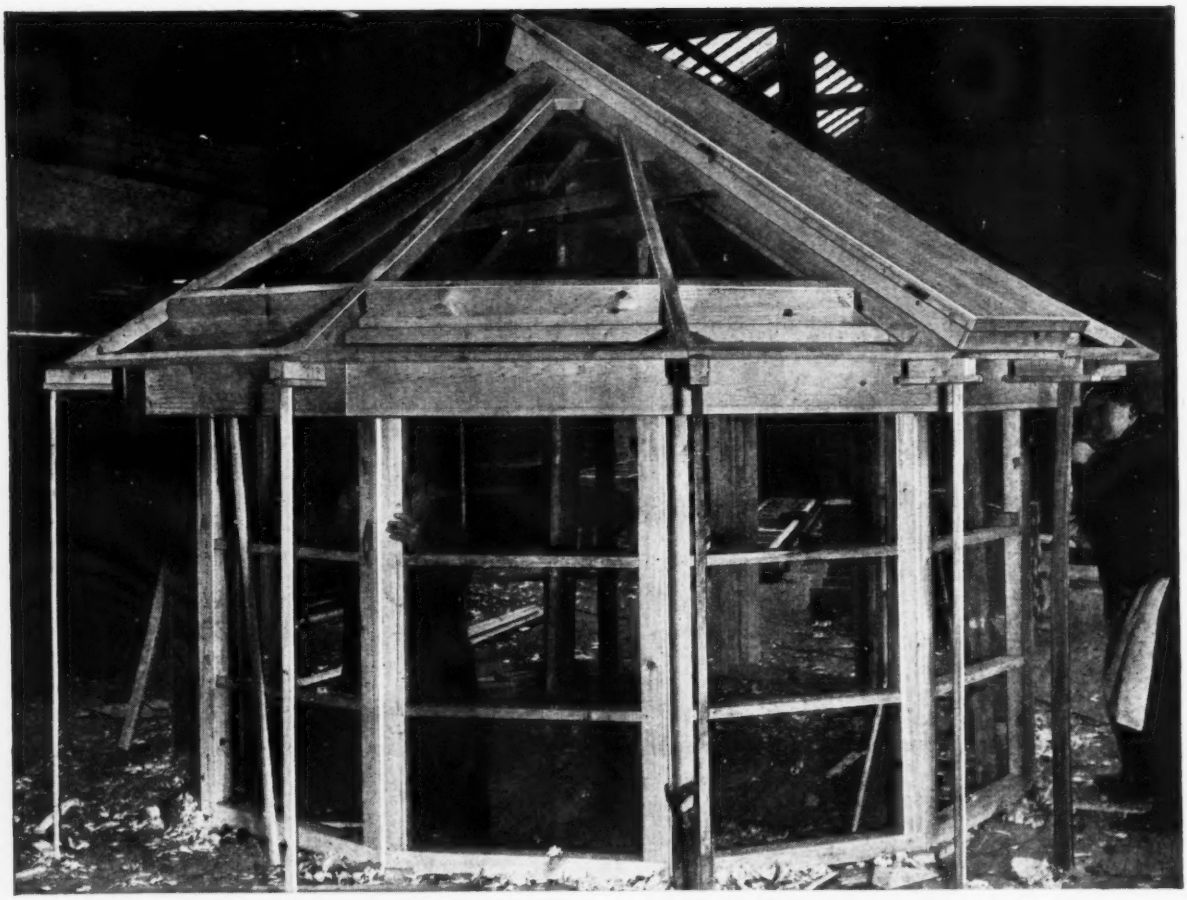

For permanent strength and economy— use 'Aerolite' 300

The telescope housing shown here, is designed for the Quentin Gauge Telescope of the University of Durham. Built entirely of timber, in twelve prefabricated sections, it provides high structural strength from wood of relatively small sections. The only method of connection used is 'Aerolite' 300, a synthetic resin glue which gives a lasting bond of greater strength than the material it joins. This glue is widely recognised in the Building Industry for its many advantages, such as resistance to weathering and to micro-biological attack. Lighter structures of greater strength, the conveniences of prefabricating sections in the joinery shop and the overall economy of this method of construction, have done much to commend the use of timber where heavier materials would otherwise be used.

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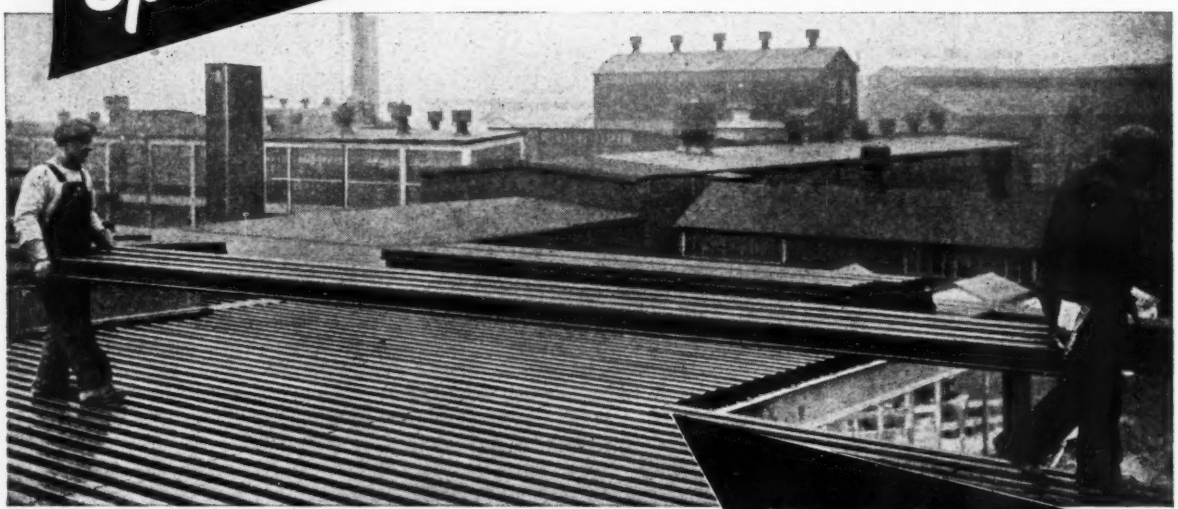

Robertson Long-Span Q-Deck units are 2 ft. wide and made from combinations of 16-20 B.G. steel, in sections and lengths to meet span/load requirements.

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Long-Span Q-Deck is also suitable for other types of insulation and weatherproofing. See publication QD3A.

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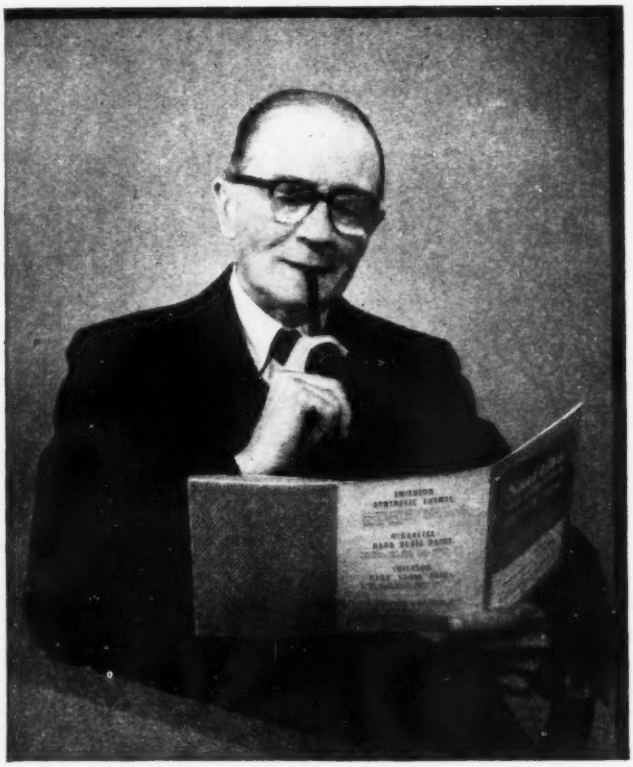


Who are we?

OUR CHAIRMAN CHARLES AMBROSE DEVEREUX HARMAN

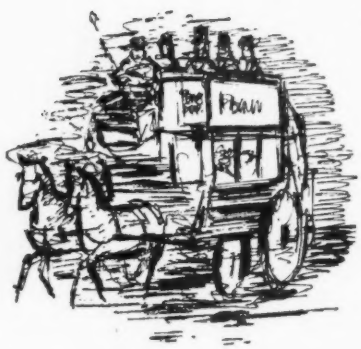
Our Chairman didn't have a chair at all when he joined his father in Thomas Smith & Son in the year 1903. He graced a high stool.

A chair came later when he was made a partner in 1917 and became the sixth generation of the founder's family to take an active part in the business.

Paint manufacture was a strenuous life in those days. Charles Harman's father worked from 7 a.m. to 7 p.m. and all day Saturday as well. He regularly toured our customers on a penny farthing (bicycle, we mean) to keep in touch with their requirements and personally supervised the manufacture of varnish—a process which contained many closely-guarded secrets.

It was in these surroundings that the young Charles grew up and learned the complicated art of paint manufacture. It is a long time since those early years but the family tradition of pride in workmanship has been faithfully preserved through the years.

Even today our Chairman is a regular daily attender at his office —but we suspect he didn't always work a 72-hour week since he won many amateur golf competitions in his day, playing off plus 1.



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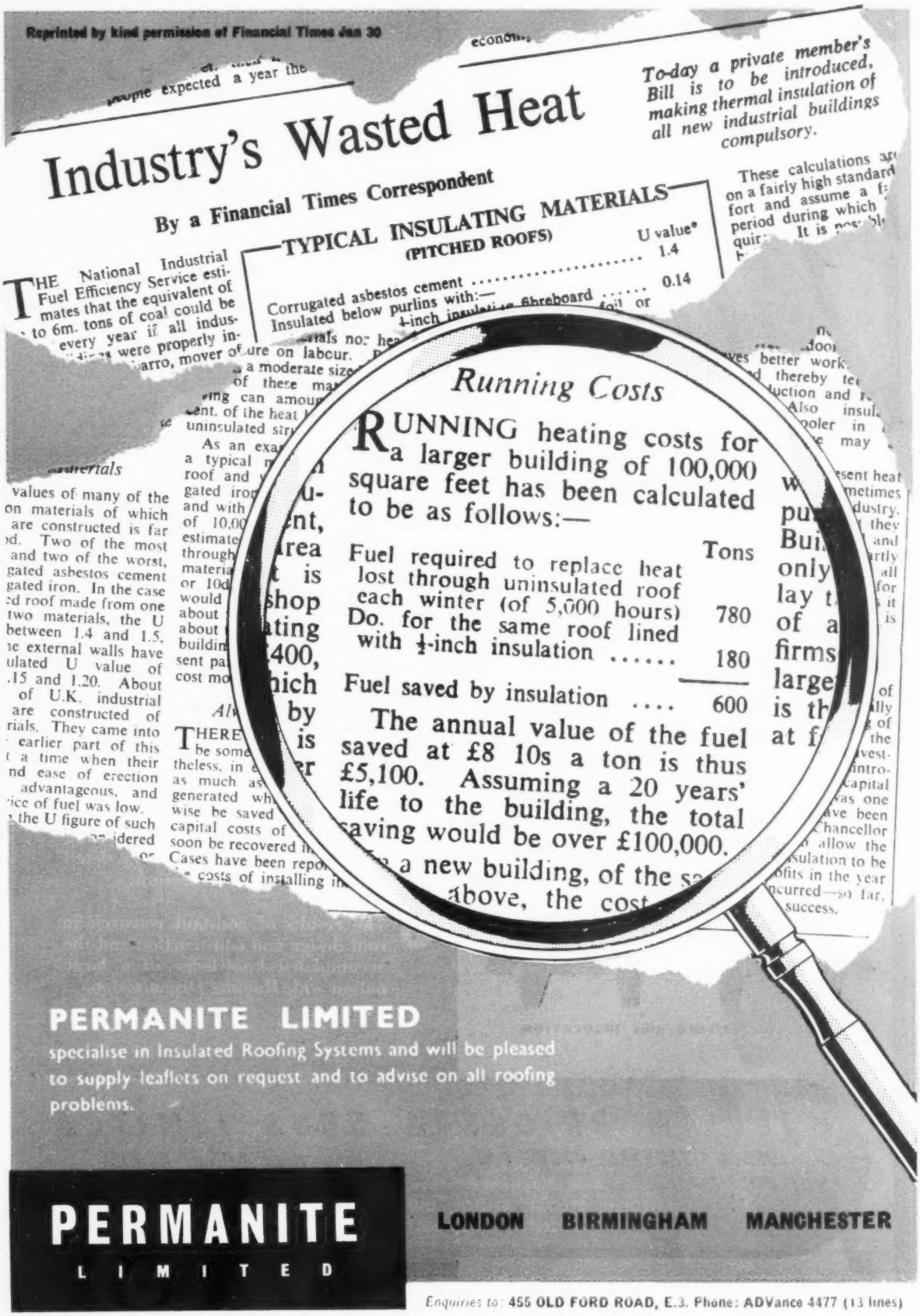
Reprinted by kind permission of Financial Times Jan 30
Industry's Wasted Heat
By a Financial Times Correspondent
To-day a private member's Bill is to be introduced, making thermal insulation of all new industrial buildings compulsory.
THE National Industrial Fuel Efficiency Service estimates that the equivalent of to 6m. tons of coal could be every year if all industwere properly in-
TYPICAL INSULATING MATERIALS
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RUNNING heating costs for a larger building of 100,000 square feet has been calculated to be as follows:—
Tons
Fuel required to replace heat lost through uninsulated roof each winter (of 5,000 hours) 780
Do. for the same roof lined with ½-inch insulation 180
Fuel saved by insulation 600
The annual value of the fuel saved at £8 10s a ton is thus £5,100. Assuming a 20 years' life to the building, the total saving would be over £100,000.
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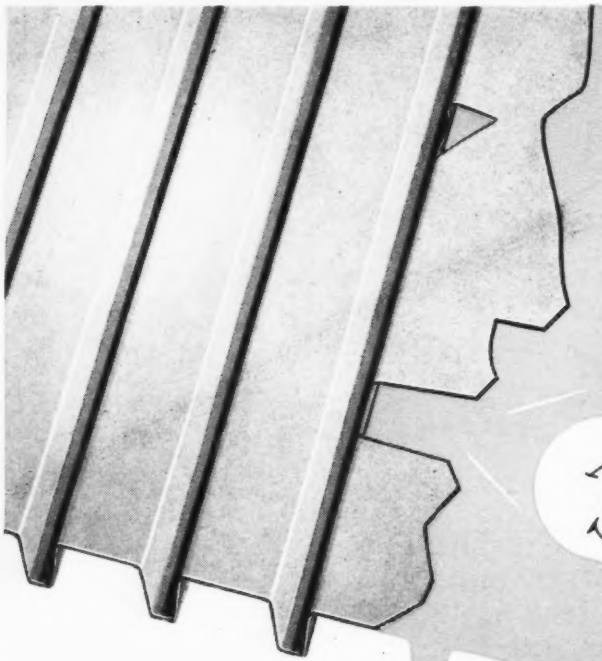

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Our nearest Area Office can give you further details of this Service, which of course, is entirely free and without obligation.

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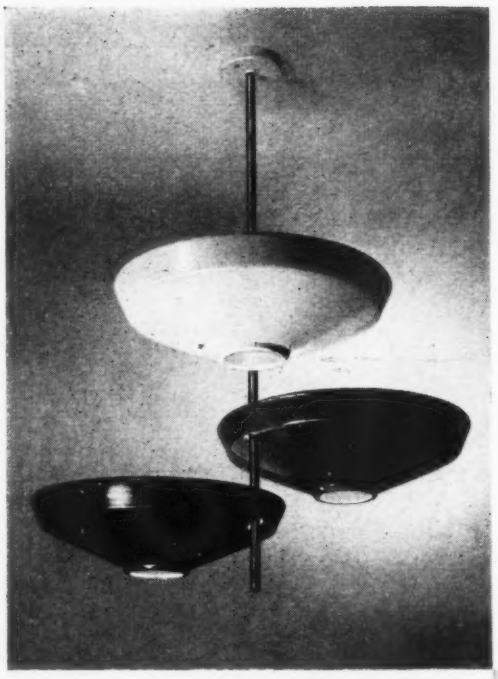
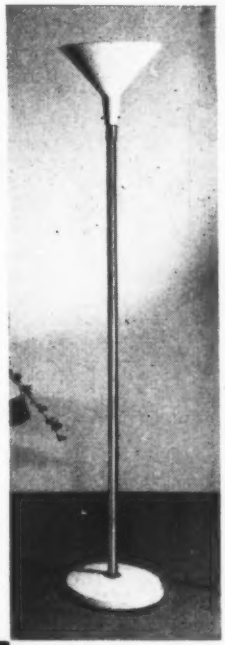


Additions to the current range of Troughton & Young fittings are now complete to supplement the existing designs in the Mondolite, Versalite, and Ultralux ranges.

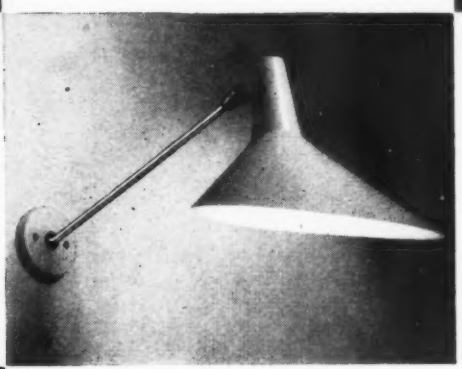
Many of these new fittings, in pendant, bracket, table lamp and floor standard form, have been designed with new materials and the emphasis is on colour, simplicity of design, and interchangeability of units to provide a variety of alternative assemblies.

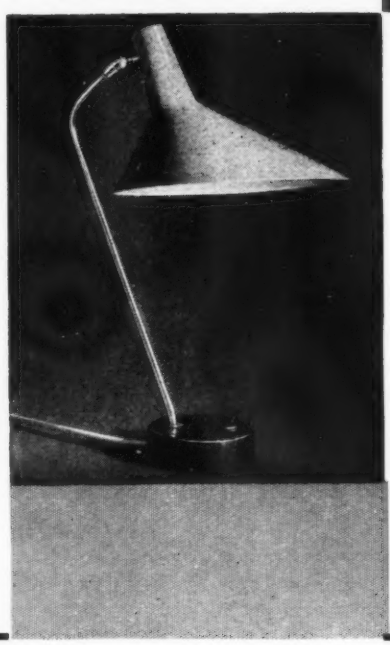
The majority of these fittings have already been approved by the Council of Industrial Design for "Design Review", and an attractive display of the new units has been added to the Lighting Centre at Knightsbridge and our Liverpool showroom.

An illustrated folder of these new fittings Ref. No. TYL/11 is available on request.



new range of lighting fittings...





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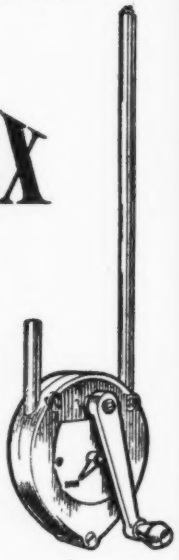

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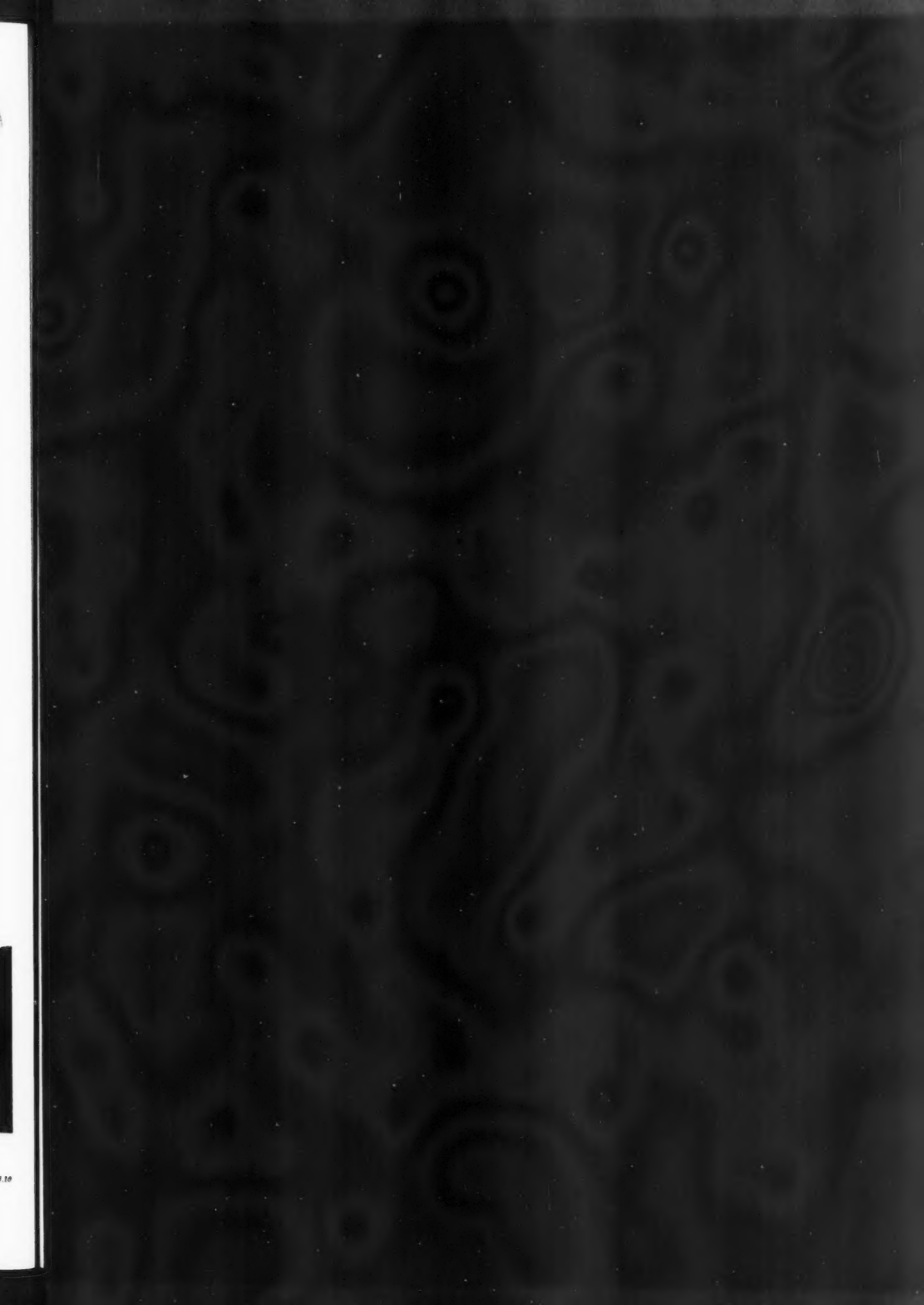

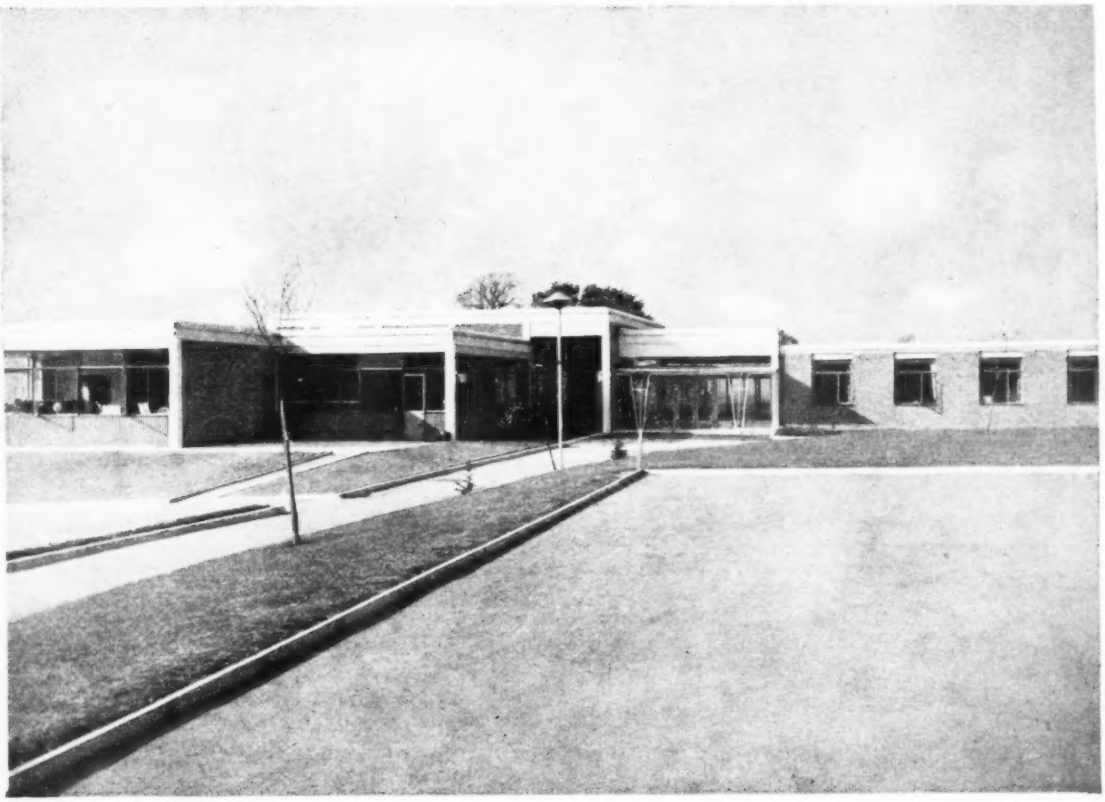

Bank Leaze Infants School, Bristol. Completed in 1956.

Construction: 2½", 3" and 4" Thermalite-Ytong used in inner leaf of external walls, and partitions.

Architect: J. Nelson Meredith, F.R.I.B.A.

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Time is lost, costs rocket upwards when bad weather plays havoc on the building site.

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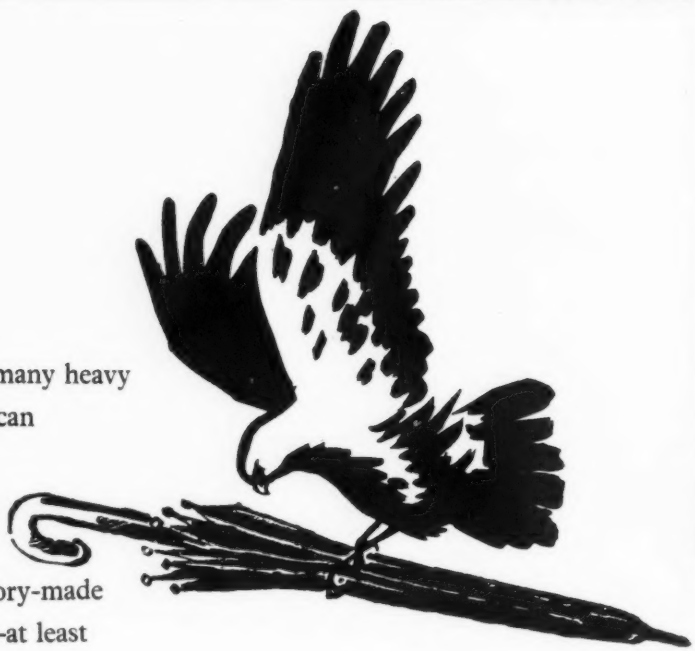

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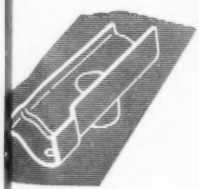

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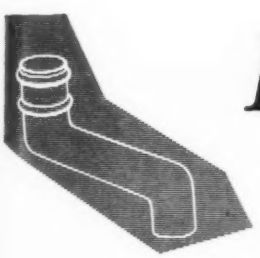
* *Conforming to British Standards Specification 1430/1947.*



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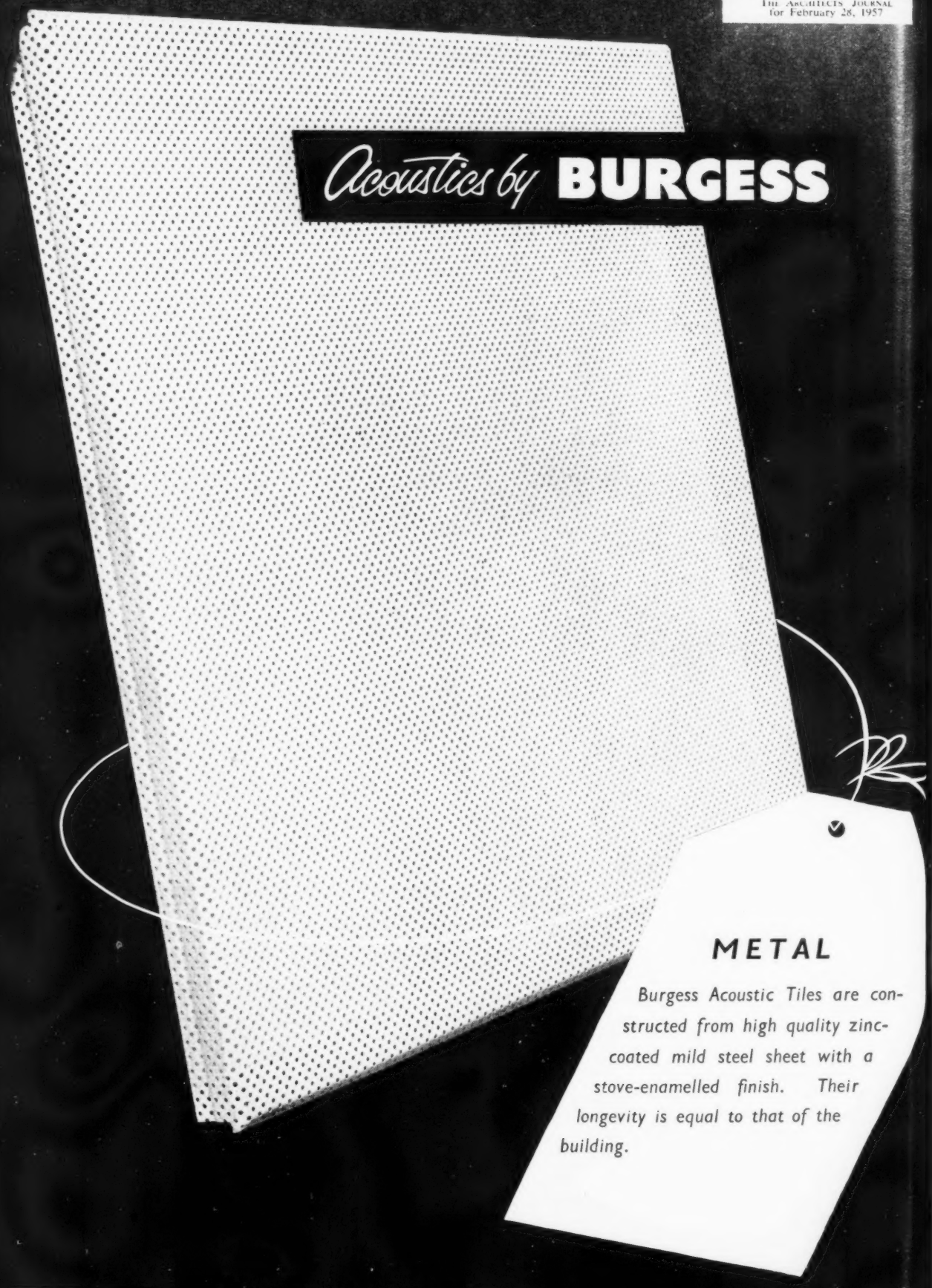

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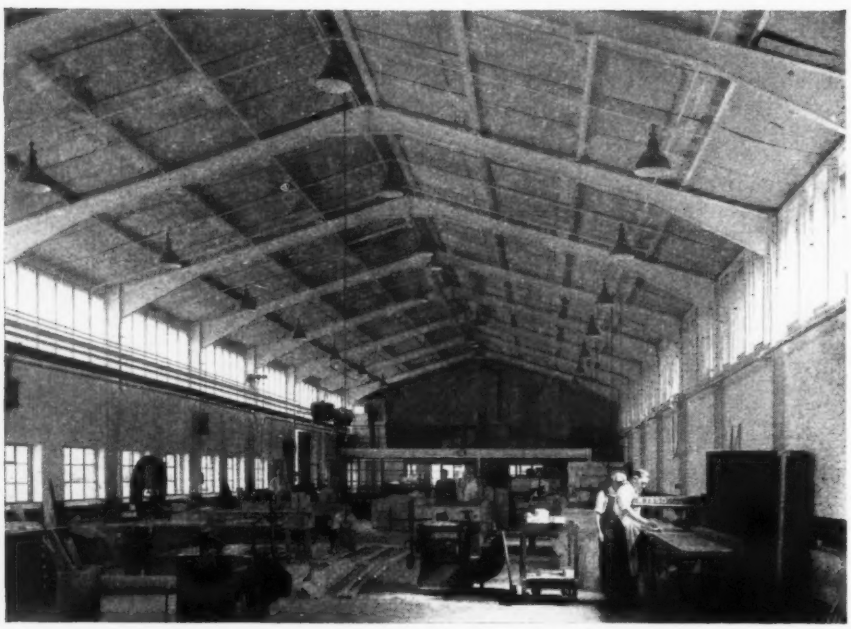

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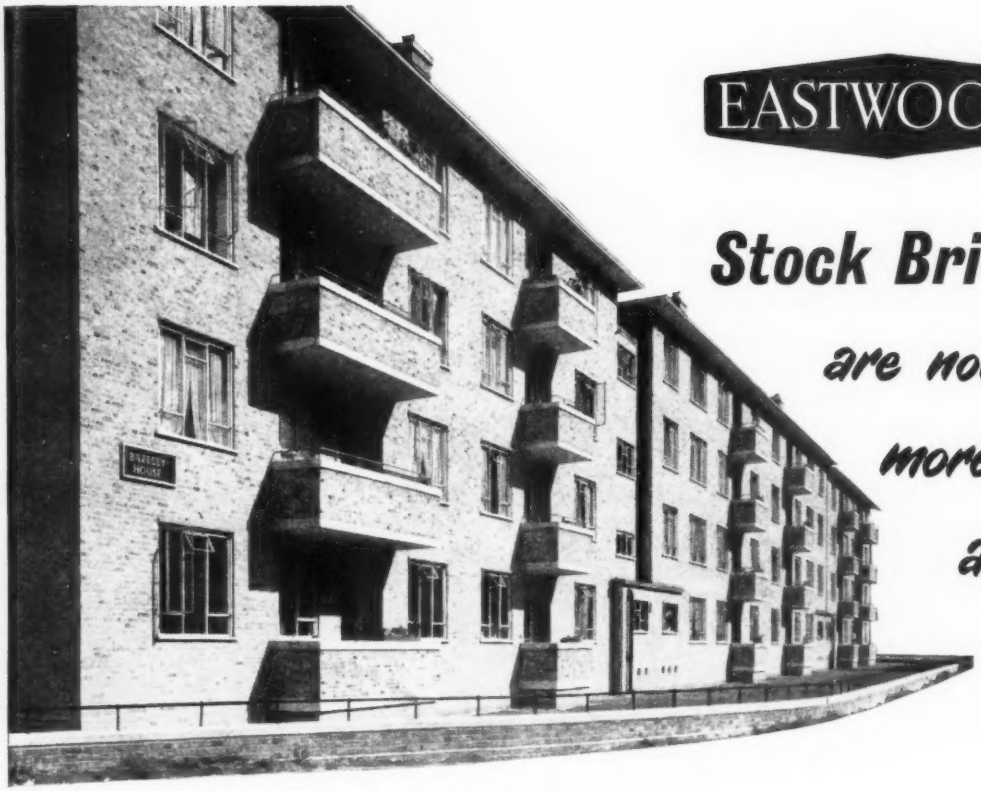

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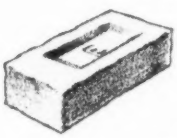
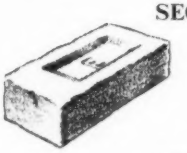
Architect: Victor Wilkins, F.R.I.B.A. *Contractor: H. Fairweather & Co. Ltd.*

YELLOW FACINGS



A hard high grade stock facing of uniform deep yellow colour and regular shape.
Their mellow warm colour make these bricks very suitable for special architectural features.

SECOND HARD STOCKS



An economical, reliable and well burned brick of varying colour and slight irregularity in shape, the well-known "London" Stock is in great demand for both facing and foundation work.

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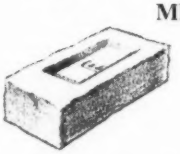

Ideally suited for use as facings for schools, factories and housing schemes. Mild Stocks are fairly hard bricks with faces of good medium yellow colour.
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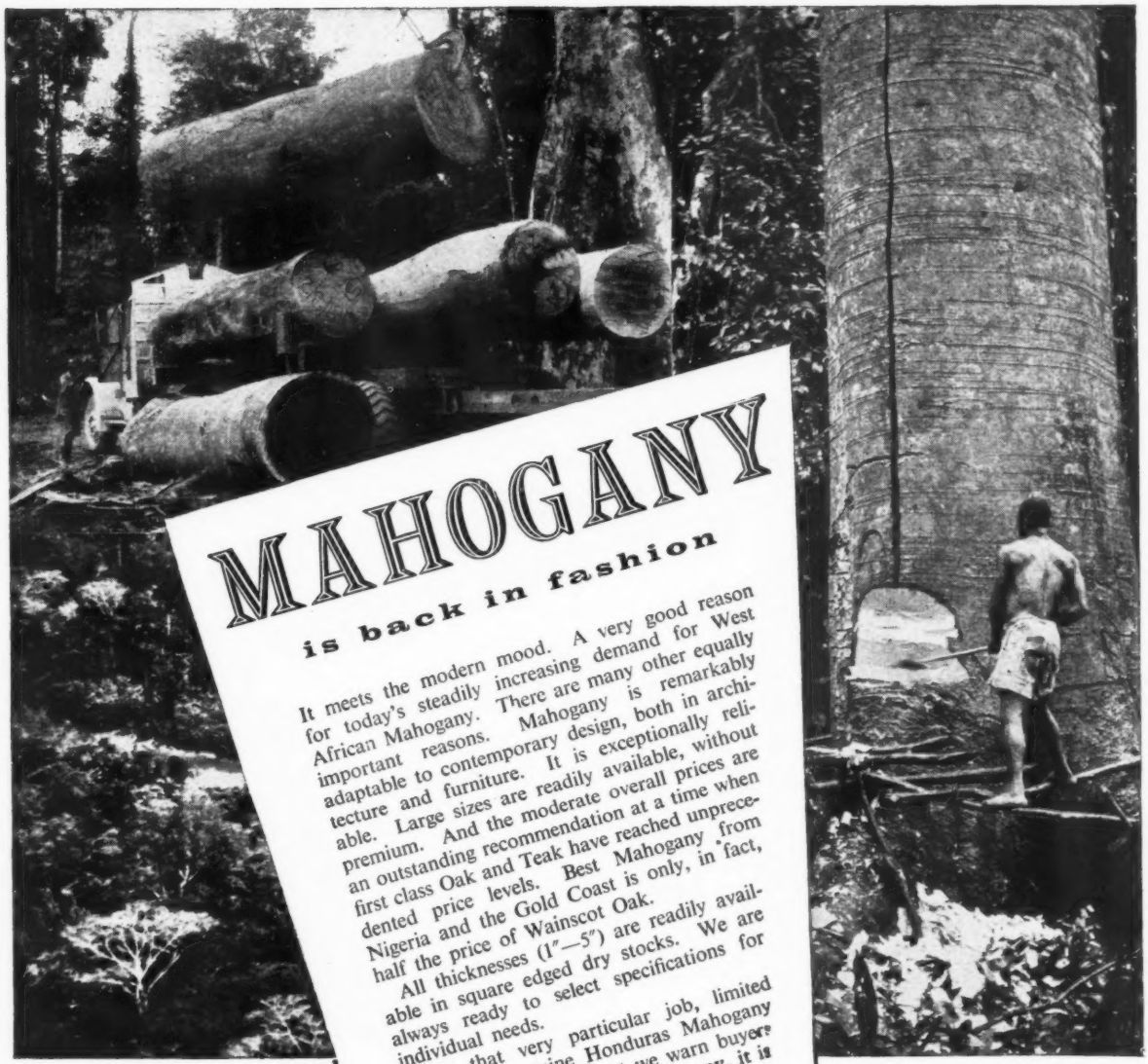

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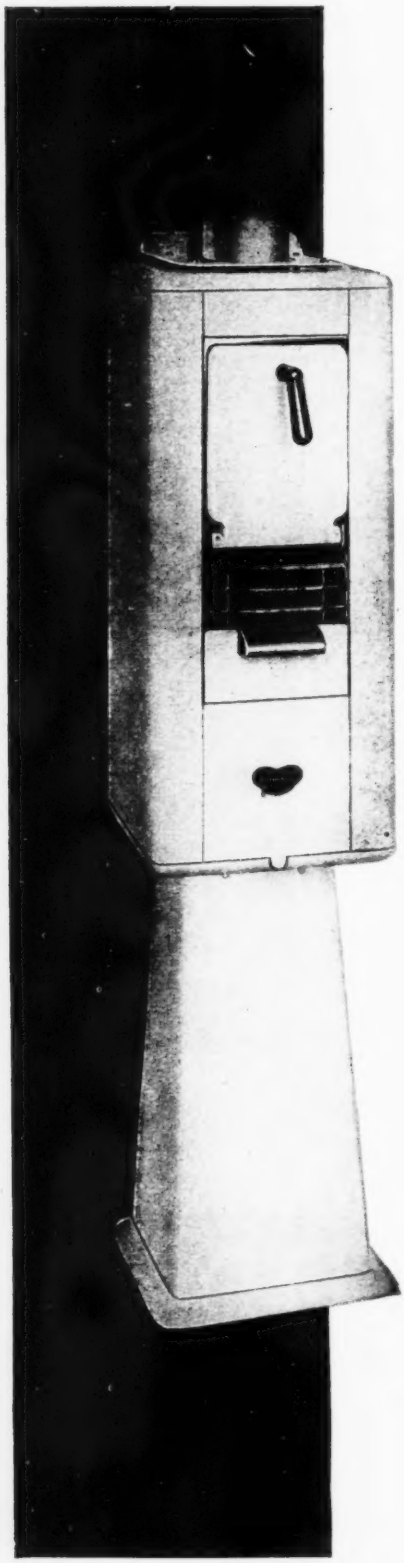

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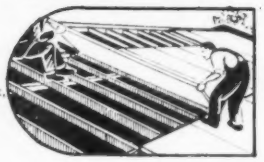

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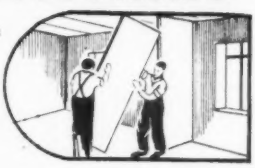

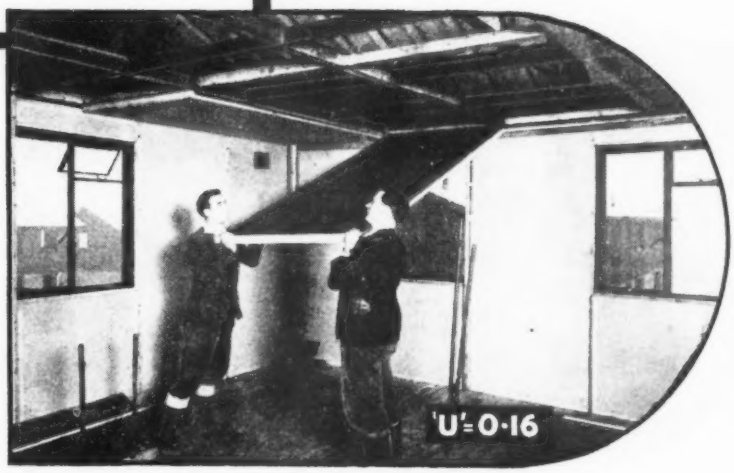

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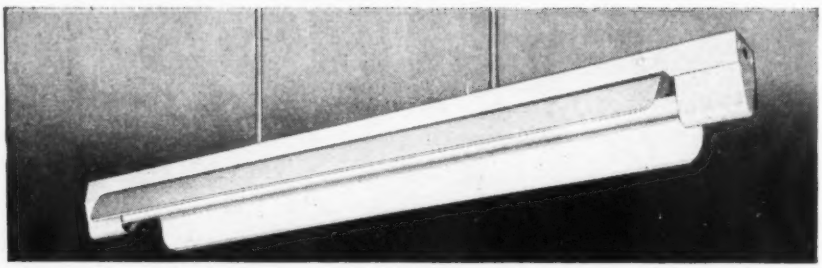

Falk's fluorescent fittings are constructed with scrupulous workmanship to high standards of modern design.

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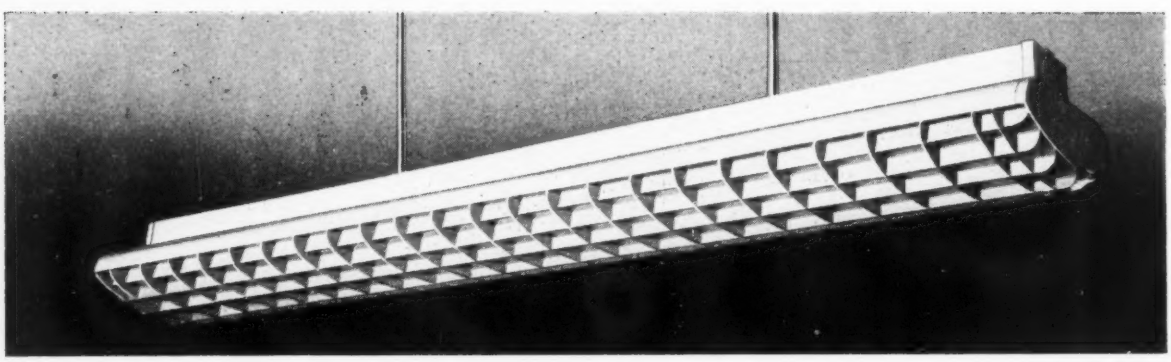
Combining simplicity with high efficiency, this fitting is easy to install and maintain; for direct ceiling mounting, chain or conduit suspension, for one or two lamps.

from the range of lighting fittings by FALKS



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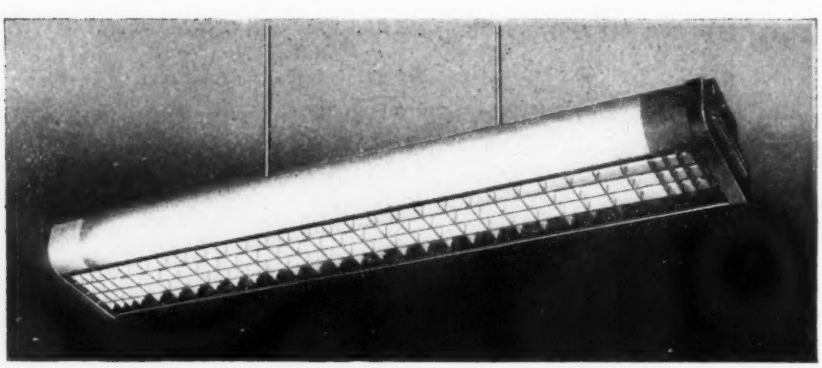

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AP 89/779

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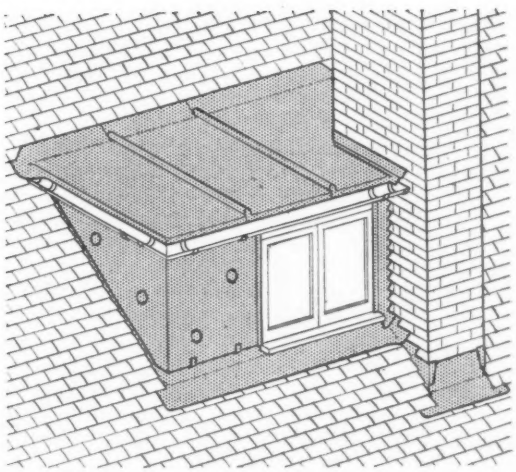
Architect : Clifford Derwent, A.R.I.B.A.



LEAD LASTS

The Council's Technical Information Bureau will gladly help with problems on the use of Lead Sheet and Pipe in building work. Publications that give details of the main uses are freely available. Please state the particular interest when applying for copies.

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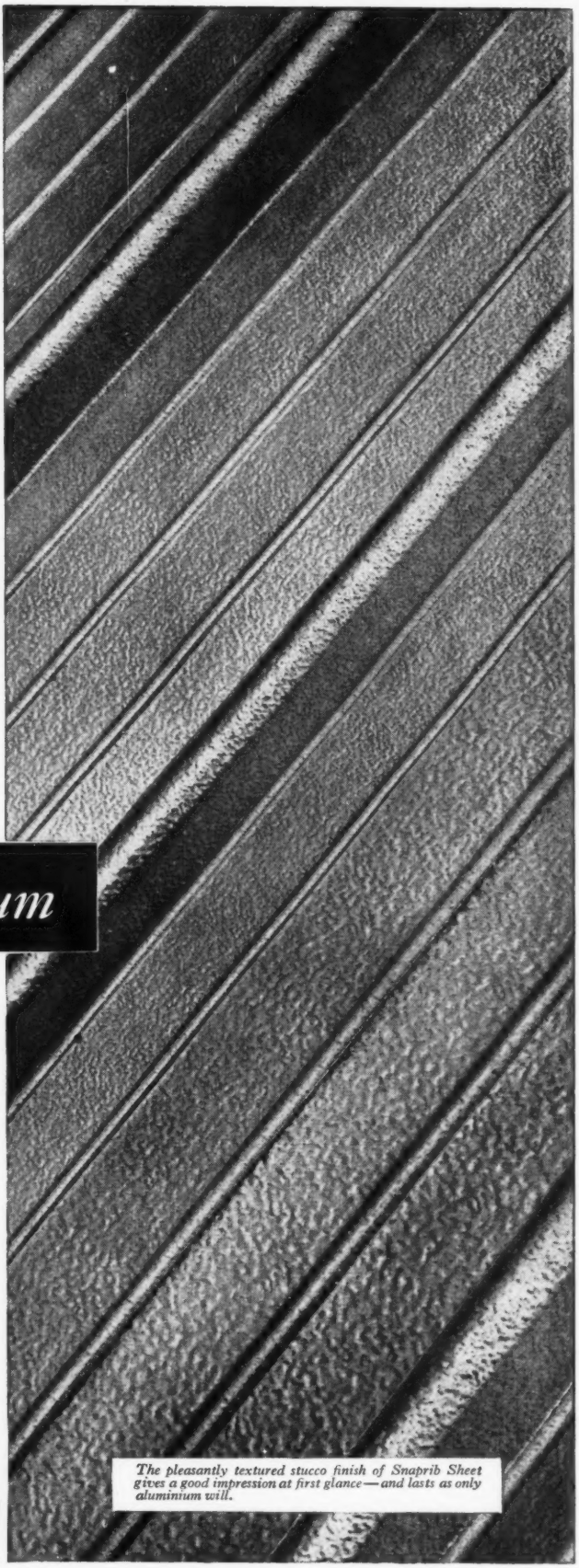

The pleasantly textured stucco finish of Snaprib Sheet gives a good impression at first glance—and lasts as only aluminium will.

BETWEEN THE PIT AND THE SITE . . . one of the links in the 'Phorpres' service is

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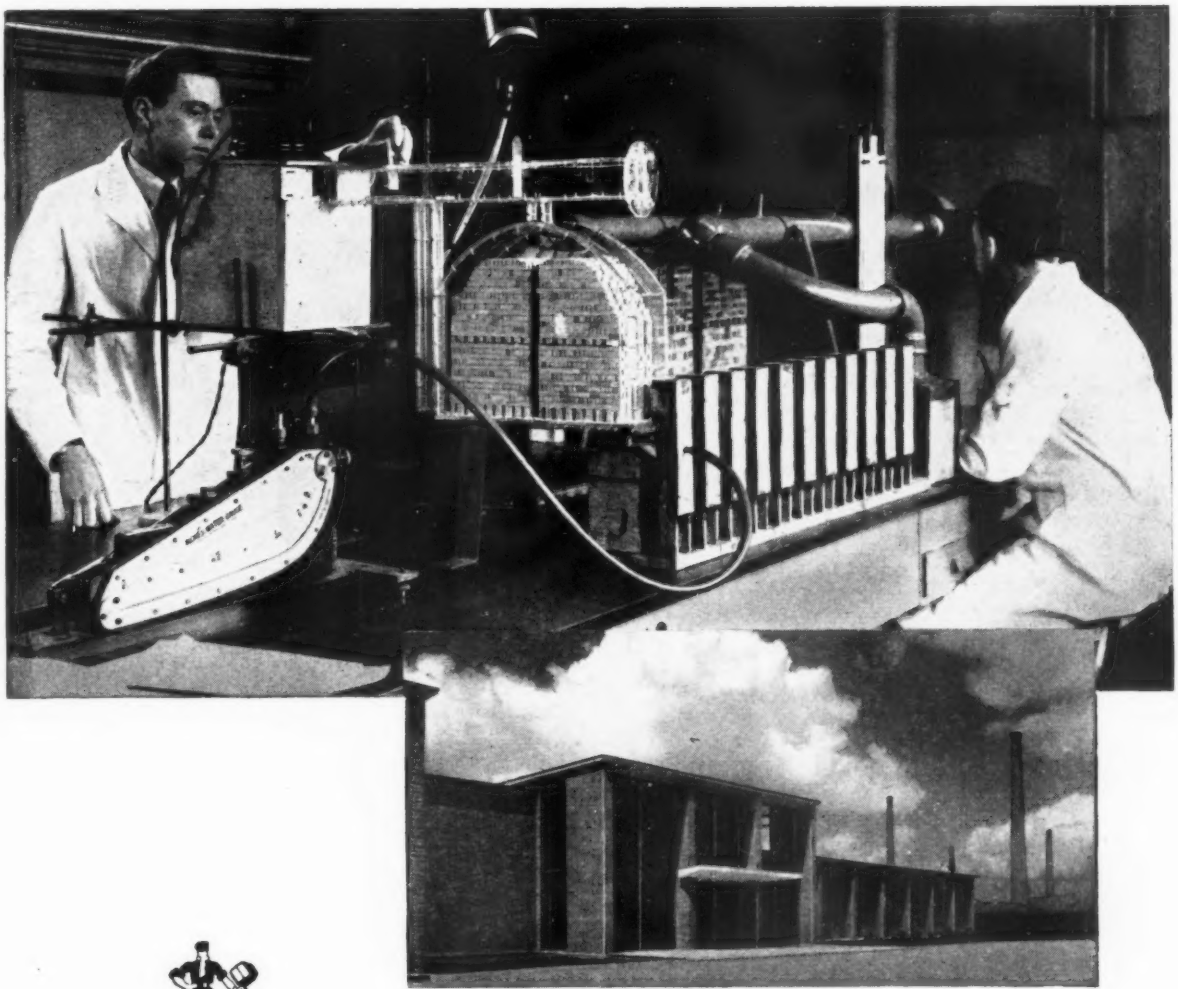

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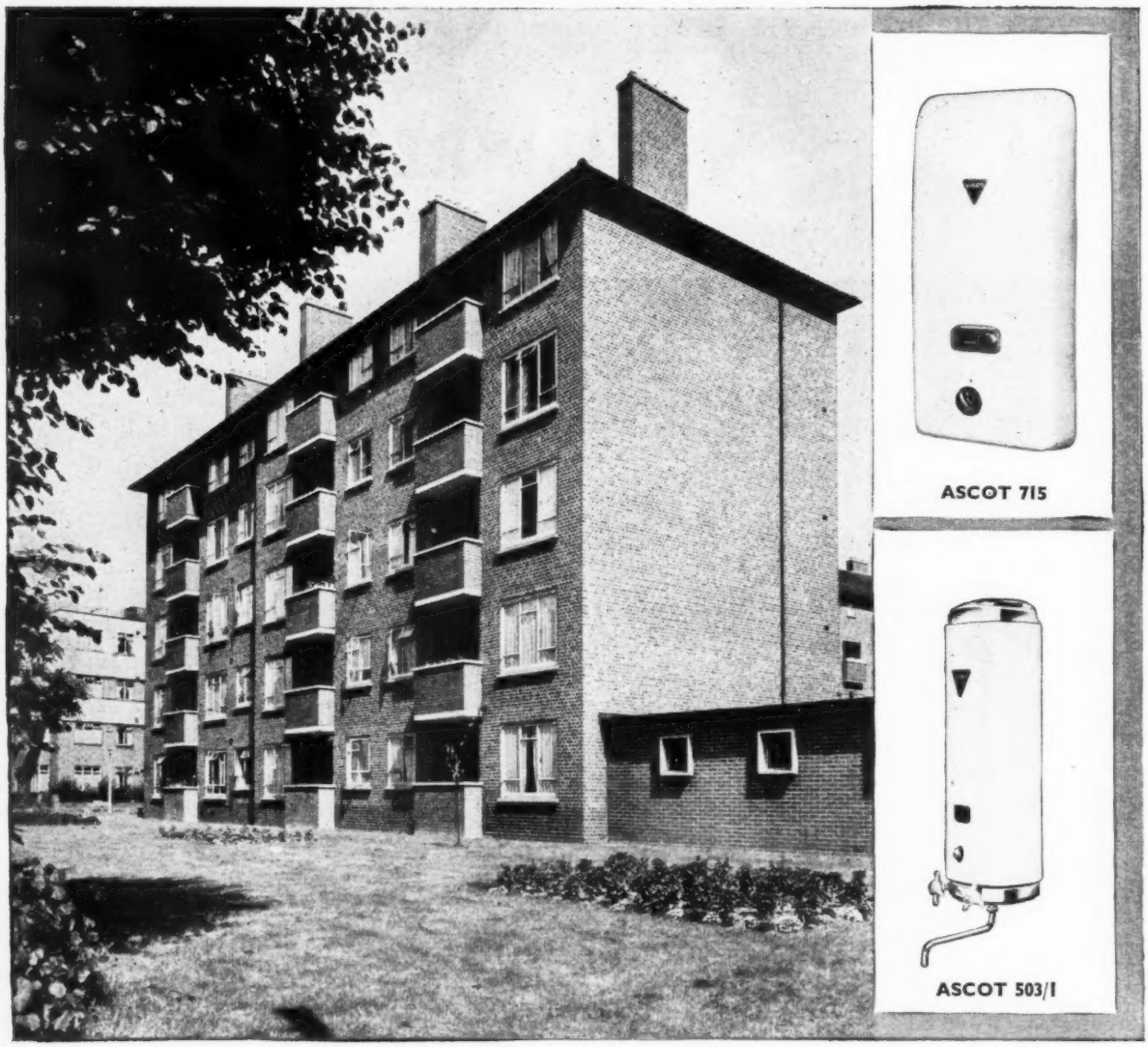


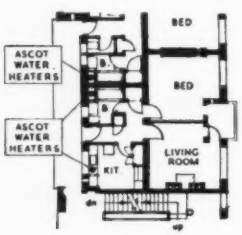
ASCOT 715

ASCOT 503/1

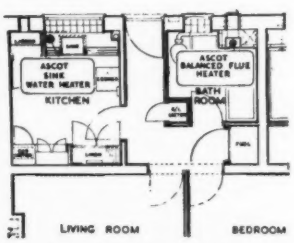
ASCOT IN NEW HOUSING (2)

The Metropolitan Borough of Hackney's new Keir Hardie Estate comprises 49 flats and maisonettes grouped in three five-storey blocks on the east side of Upper Clapton Road. Hot water for all these dwellings, which range from three-bedroom maisonettes to bed-sitting-room flats, is supplied by Ascot Instantaneous Gas Water Heaters.

An Ascot 715 "Balanced Flue" Multipoint installed in every bathroom provides hot water for bath, washbasin and, in the case of the smaller dwellings, for the kitchen sink. Ascot 503 sink water heaters are installed in the kitchens of the larger dwellings where long pipe-runs from the 715's would otherwise be necessary.



Plan of complete single-bedroom flat.



Kitchen and Bathroom of single-bedroom flat.

RESPONSIBLE AUTHORITIES

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(Borough Engineer & Surveyor)

R. H. Harrison, A.R.I.B.A.
(Chief Assistant Architect)

J. H. Elmer, A.R.I.B.A.
(Assistant Architect)

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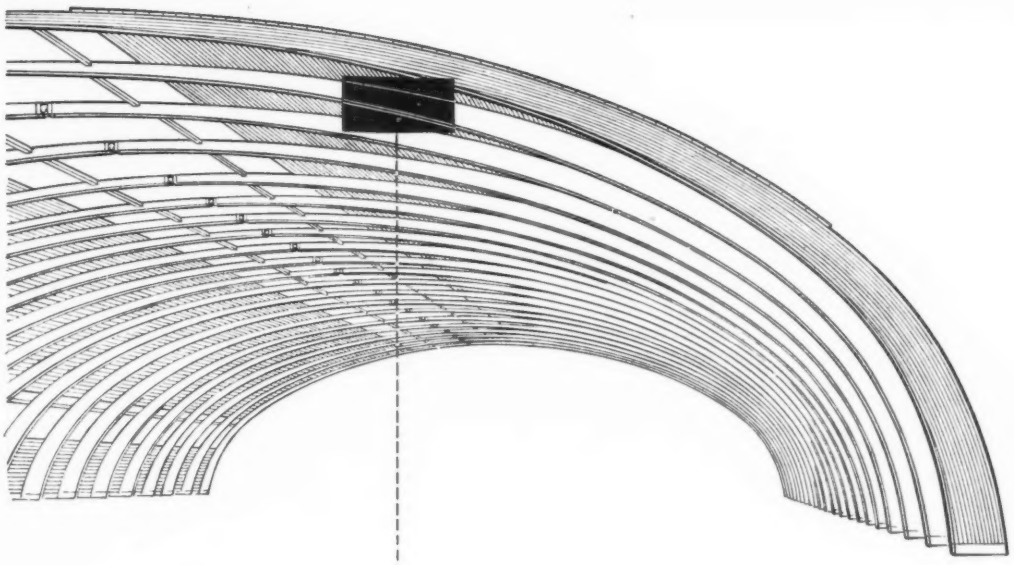
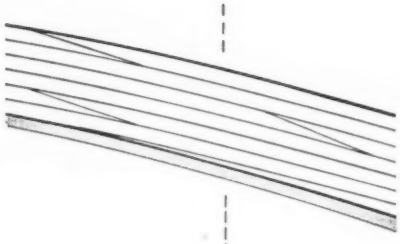


Structural design in **TIMBER...**



Wide-span trusses and girders for industrial structures, glued laminated timber arches and frames, plywood portals and box beams for schools and public halls, rigid frames for farm buildings, timber bridges— in all these fields timber is being used with increasing success.

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Space, Time, and Afterthoughts

SOANE HEIGHTS (architects Soffit & Quoin, A/A.R.I.B.A.) is a seventeen-storey block of flats, overlooking almost everywhere.

The architects made the best of a bad site. Their steel-and-glass structure seems to spurn the comfortable stucco villas which surround it.

Within, no amenity has been forgotten. Fittings include sun blinds from Argentina, double glazing from Sweden, concealed lighting from Italy and waste disposal units from California. There is TV (both channels) in the living/dining/playing area, and h-and-two-kinds-of-c in the usual places.

Such splendour needs protection. May we modestly add that here there is no need to venture overseas for strong, well-designed locks. The office boy found them—in a Chubb catalogue, mislaid beneath a heap of sample tiles from Venezuela.

These Chubb locks are inconspicuous, neat and well-nigh impregnable. They all look the same, but (by a prodigious bit of engineering) their combinations are all different. They will last as long as Soane Heights . . . at least!

Soffit and Quoin now specify Chubb locks all over the place. In this important respect, their work may even be described as Traditional.

If you haven't got a Chubb catalogue (or can't find it), why not ask for the latest one? It makes an excellent door stop or paperweight, and you never know when you'll have a client who wants the best security there is. Write or telephone Chubb & Son's Lock and Safe Co. Ltd., 175-176 Tottenham Court Road, London, W.1. (MUSeum 5822).

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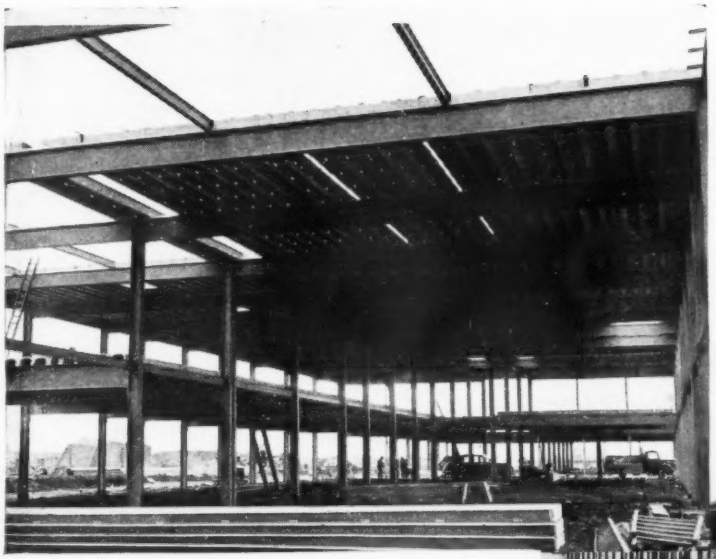

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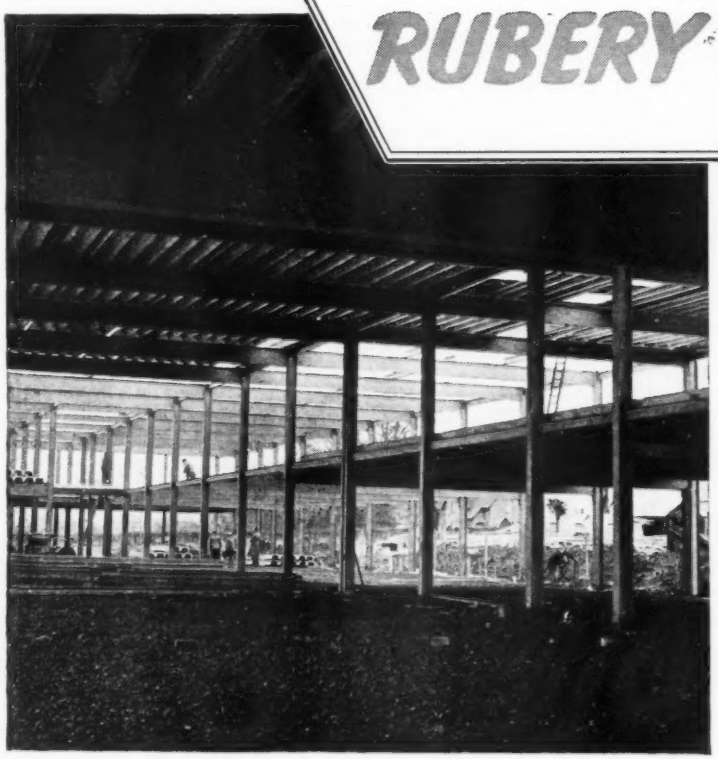

Penkridge School. Here shown is the two-storey building of a new Secondary Modern School for Staffordshire County Council Education Committee.

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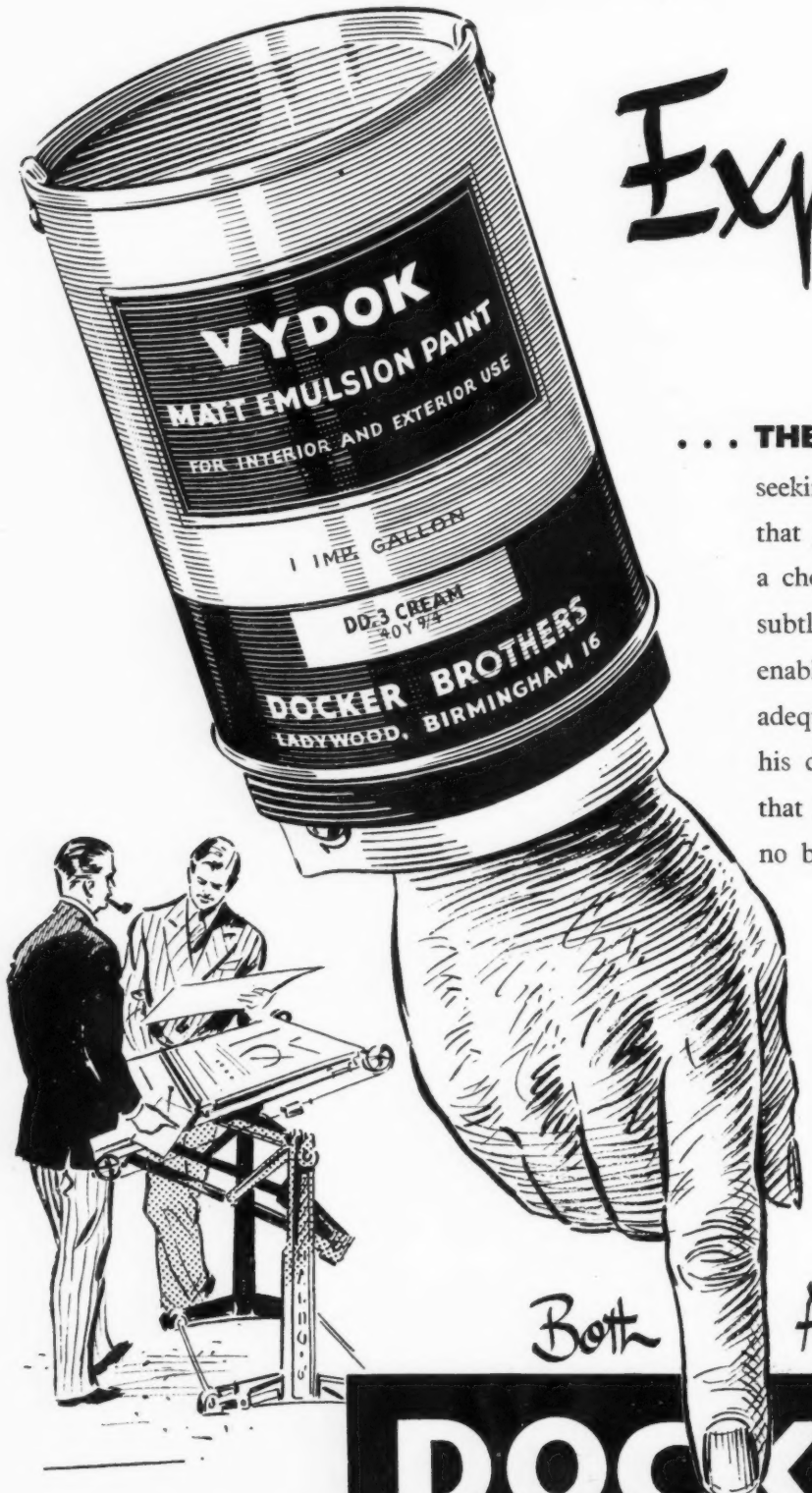

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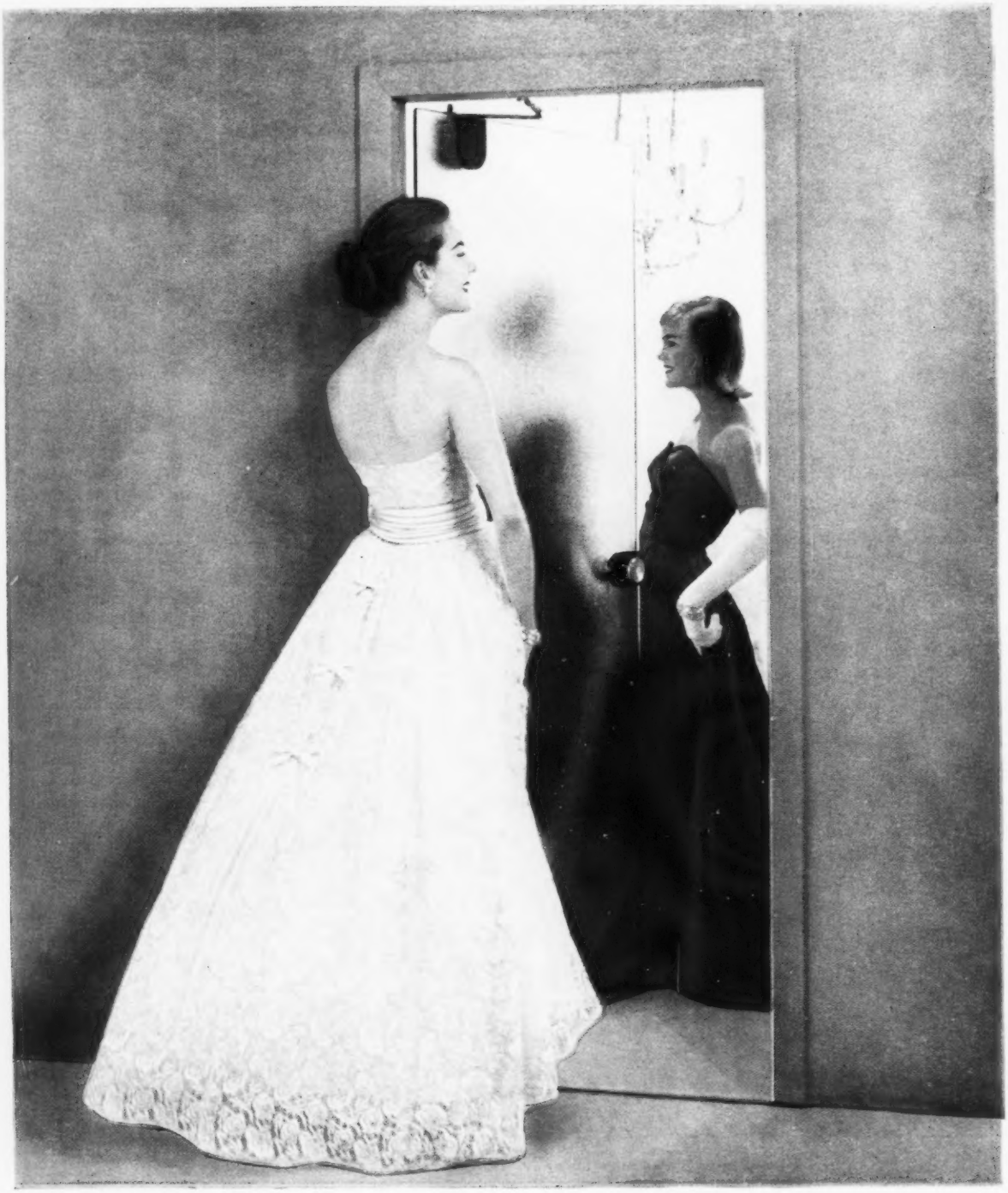

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NOT QUITE ARCHITECTURE

THE RANGOON SHOW

It is over now. The Burmese have used up their Sterling. They started on their Sterling when American aid was cut and, later, U Nu went to the Russians when they could not sell their rice. The Russians agreed to barter technical colleges for rice, their architects moved into Rangoon and Raglan Squire* packed. Someone has calculated that one Russian architect for one year is worth 20 tons of rice.

*

Squire's work for the Burmese comprised an Engineering College for Rangoon University, a Polytechnic, and a number of technical colleges in Rangoon. He had cabinet backing and a free hand and the general contractors Taylor Woodrow worked fast. He took offices in Rangoon, with Messrs. Taylor Woodrow on the floor above. Architecture, engineering and quantities were rolled into one and materials obtained at the cheapest world prices. The work was completed in the scheduled three years to the day and came out at ten per cent. under estimate. "Teamwork accounted for this," he says. "And the enthusiasm of the Burmese Government."

*

The man he dealt with was U Tin Pe, Secretary of the Special Projects Implementation Board, a man of great charm and intrinsic good taste in modern architecture. He knew on the instant if what he was shown was what he wanted, and his full support could usually be counted on. He liked the English. On first coming to England shortly after the last war he

*Meaning, of course, Raglan Squire and Partners.

Houses or Hostels for the Aged?

There are two ways of catering for old people: by providing nursing and domestic help in their own homes, or by caring for them in hospitals and hostels. A survey by the National Corporation for the Care of Old People suggests that the latter course may be as much as twice as costly as the former. Nevertheless, it is generally considered better for the health and well-being of old people to allow them to live in their own houses. The tragedy is that the nation has nothing like enough small houses and flats suitable for them. The National Corporation believes that 100,000 such dwellings are needed. What is the best method of providing accommodation for the old? Two very different approaches to the problem are shown here: above is a terrace of two-room dwellings, designed by the Coventry City Architect's Department in 1947. The accommodation consists of a living-room, double bedroom, bathroom, kitchen, and hall. Right is a large, multi-storey hostel in Stockholm. This consists of rows of single and double rooms, each with a lavatory, grouped around a central core of stairs, lifts, bathrooms and small communal kitchens. There is a large communal balcony on each floor, and on one floor there is a restaurant. These buildings were shown in a small exhibition at the RICS headquarters in 12, Great George Street, when Dr. Marjory Warren, the deputy medical director of the West Middlesex Hospital, spoke last week on the housing needs of old people. Dr. Warren pointed out that the development of preventive medicine and therapy, amongst other reasons, was resulting in a steadily increasing proportion of old people amongst the nation's population. The characteristics of old age were one or more of the following: a 50% diminishing of visual acuity, a degree of deafness, slow reactions, arterio sclerosis, attacks of giddiness, chronic bronchitis, partial heart failure, bladder weakness and failing memory. Dr. Warren proposed that these conditions could be catered for by designing housing on level sites, with good transport to the town centre. Rooms should be very well lit, face south or west, and have doors large enough for wheel chairs to pass through. All handles, light and power switches and meters should be easy to reach. Taps and handles should be of lever-type, and basins and sinks low enough to be used from a sitting position. Baths and water-closets should have 2-in. thick hand-rails. Seconding the vote of thanks, Miss A. Royalton Kisch, ARICS, who provided the illustrations for the exhibition of foreign homes for old people, described our standards of old people's homes as " the laughing stock " of some people abroad and criticized the poor standard of design of so-called model homes she had visited. Mrs. Gerald Legge described institutions she had seen with over fifty people to the ward, strongly condemned complacency over the problem and advocated more bed-sitting room accommodation with kitchen-cupboards and shared bathrooms as a cheap and simple solution to the rising costs of building full-scale homes.

discovered two types of Englishmen. "Pre-1940 and Post-1940," he said. There was little doubt which type he preferred to work with. We have lost, tragically, a friend in U Tin Pe. He was killed in a recent plane-crash.

*

There were no Burmese draughtsmen in Rangoon but labour was abundant. Raglan Squire's staff from England numbered 20 plus wives. He himself was out there three months in every twelve. He liked Rangoon. "But life is very hard out there now," he says. "They weren't having such a rotten time of it when we started."

*

What did the public think of the new architecture? It was difficult to say. They certainly showed more interest than the British public were ever likely to show in new architecture. The evening of the day it was officially opened the Dome was floodlit and the roads packed solid with people for a mile. But what did they think of it, or for that matter of Benny Goodman's jive session in it last November, when they filled it? It was difficult to say.

*

He liked the Burmese. There was a leisurely courtesy in their dealings that is almost unknown in the hurly-burly of our own industrial life. If, for instance, they happen to be in your debt, then you go in and discuss urbane general topics for half an hour or so, only mentioning the required payment casually as you come out. A cheque will be put in the next post for you. But to go in and ask for your money outright would be a terrible mistake.

*

An amusing thing happened towards the end. The Russians rang up his office in Rangoon. He was back in London at the time. First they wanted to see over the site of the new Polytechnic in Nautmauk Road that was so near completion. Then to see the plans. Then to have a copy of the plans. And finally to have prints taken of the plans. His office cabled him about it. He cabled back: YES FOR FIVE PER CENT!

*

It is a mystery why the Russians wanted them. Maybe all they had really needed was a street-guide, because their alleged comments on first setting eyes on the Polytechnic were peremptory and final. They believed in solid, traditional buildings. Corbusier had come to Moscow in his early days and they had tried this modern stuff. "It falls to bits," they said.

ROBIN MUDIE

The Editors

THAT GUARANTEE

LAST August we commented on the decision of the asphalt and felt roofing contractors to reduce their customary 20-year guarantee to 12 months. It seems that their chief reason for taking this step was that they felt it derogatory to a material to make it the subject of a guarantee which was so much longer than that applying to other building materials. A subsidiary reason was that such failures as have been recorded were more often than not the responsibility of unreliable firms who go out of business long before the guarantee has expired, leaving the building owner with no redress. The moral the Association wish the architect to infer from the reduction of the guarantee is that he should be more careful about which firms he asks to tender.

The 20-year guarantee, an exceptional one for the building industry, was originally introduced by asphalters. Certainly the existence of the asphalt guarantee must have had a strong influence on the decision of the promoters of bituminous felt—which is, after all, a material with a far shorter expectation of life—to give a similar guarantee. This 20-year period was doubtless introduced for a good reason: namely, that this is the order of guarantee which the careful building owner is going to require before departing from a traditional, pitched roof. Though it may well be argued that asphalt has now passed the test of time, the fact remains that, since the effectiveness of an asphalt roof depends so much on the skill with which it is laid, it cannot be said to possess the "built-in" guarantee of a material like tile or slate. Even the well-instructed architect cannot tell the soundness of an asphalt roof by merely looking at it. Further, since the roof represents a sizeable proportion of the total building cost, the building owner is justified in calling for a guarantee, the period of which bears some relation to that of his interest in the building. For him, the 12 month guarantee has little meaning: in a large building it may well have expired before he obtains possession, and it could even be argued that in this context it is worse than none at all, for the existence of a guarantee of any kind implies that the guarantor's liabilities are well and truly at an end when it expires.

The second point is that there are signs that the promoters of other, newer roofing materials do not think it unreasonable (*because* their materials are new) to give twenty-year guarantees. Can asphalt and bituminous roofing really afford to give competitors so great a trading advantage?

Marjory Warren, the deputy medical director of the West Middlesex Hospital, spoke last week on the housing needs of old people. Dr. Warren pointed out that the

FUN WITH HANSARD

Thumbing through *Hansard* the other day, in search of morsels of intelligible information for JOURNAL readers, ASTRAGAL lighted on the following passage:—

"Mr. Ross: If this goes through unchanged tonight, it means that Kilmarnock will never get any more under the Bill than £24 per house.

"Mr. Emrys Hughes: May I point out that there is a further anomaly? Moscow will get only £36 compared with Kilmarnock.

"Mr. Ross: Yes, they will only get £36 in Moscow, provided that the housing is for an agricultural worker. That is another anomaly."

*

If one is to gather from this that the Government is discriminating against the burgh of Kilmarnock, by giving a more favourable subsidy for the housing of agricultural workers in Moscow, ASTRAGAL feels inclined to put himself down on the waiting list for subsidized rehousing as an agricultural worker in Cannes. Or can it be that the infallible *Hansard* reporter gets a bit hard of hearing when Scottish accents assail his ears? Unfortunately, even English accents seem to trouble him too. How else to account for Gresham Cooke enquiring whether only seven per cent. of the members of a branch of the Amalgamated Engineering Union had voted in a "secret ballet"?

Let no one think from these frivolous remarks that *Hansard* has ceased to be a source of genuine and important information. What architect can fail to have his curiosity, and possibly even his hopes, aroused by this item:

"Mr. J. Johnson asked the Minister of Works whether he has yet made a final decision regarding the rehabilitation of the British Embassy in Monrovia.

"Mr. Molson: Yes. I intend that, subject to the approval of Parliament, a new embassy should be built at Monrovia, starting in 1958."

*

ASTRAGAL, confessing in his ignorance that he had never heard of the country of Monrovia, tried this one out on his acquaintances. One thought it must be in the Balkans, and would probably turn out to be the flashpoint of the next war; another said Mr. Johnson was pulling the Minister's leg; a third suggested that Arthur Miller and his wife lived there, and a fourth was sure he had come across it in a Marx Brothers' comedy, with the anthem "Hail, Monrovia." Any more ideas? Or am I just being ignorant?

PEVSNER ON MORRIS

Nearly a quarter of a century ago Dr. Nikolaus Pevsner wrote *Pioneers of the Modern Movement—from William Morris to Walter Gropius*. This remains the most perceptive and scholarly book on the development of modern design and architecture. And ASTRAGAL was delighted to have the chance, last week, of hearing Dr. Pevsner reassessing Morris's ideas about architecture.

*

Dr. Pevsner, who gave his talk at the RIBA—under the aegis of the William Morris Society—said that he had virtually nothing new to say on the subject. But he assembled and interpreted Morris's writings and thoughts in that extraordinary clear way which we have come to admire and, with his guidance, we saw Morris much more clearly. However, Dr. Pevsner is too good an historian to try and read into facts more than there is, and one came away with the feeling that Morris was himself far from specific as to what he really did think about living architecture, except perhaps that "it should be a work of co-operation."

*

Morris appears as both an eminent Victorian and an eminent pioneer, but his lack of enthusiasm for any of the buildings of his own times—with the possible exception of the works of Philip Webb—remains an exasperating mystery. Somehow one feels that in his utter rejection of the machine as a human benison and indeed as the only means of achieving his "art for all" lies the root of his failure to make the sort of contribution to the art which he considers "as specially the Art of Civilization" one would have expected from such a Titan.

HOW HARD-UP ARE YOU?

Architects and other professional men must know very well how much worse off they are than men similarly placed would have been before the war, but there is always a masochistic satisfaction to be had from seeing the thing proved in print and hard statistics. This was done by Enoch Powell, the Economic Secretary to the Treasury, in a couple of answers to inquisitive M.P.s in the Commons the other day. For a married man with two children a gross salary of about £620 in 1938-9 would have given about the same purchasing power, after tax, as a salary of £2,000 at the present time.

*

A chief executive officer in the civil service had a commencing salary, in 1939, of £900, and his net income, if he was married with one child, was £794. To compensate for the increased cost of living, the equivalent net income would now be £2,080, for which a gross income of £3,180 would be needed at today's rates of taxation. The commencing salary for this grade is now £1,635, yielding a net income of £1,299, which, as one M.P. said, is a reduction in the standard of living of about 40 per cent. Would the salaries of architects, whether in private or public practice, not show a similar fall in value? The doctors, through the British Medical Association, are at the moment putting up a vigorous fight in support of their claim for salaries superior in real value to those earned before the war. These figures suggest that architects also need to run more vigorously in the fees and salaries stakes.

BANK BANKRUPT IN DESIGN

One expects the value of money to depreciate steadily, but ASTRAGAL is not yet reconciled to seeing the appear-

ance of coins and bank notes become poorer. The new £5 note is a case in point. The old "fiver" is a splendidly respectable, dignified affair—not a great design, perhaps, but serviceable and eminently sound—never mind that it is only worth . . . well, you know how to work it out now. But, of course, someone has to decide to introduce a new design—and the outcome of this decision was issued last Thursday.

*

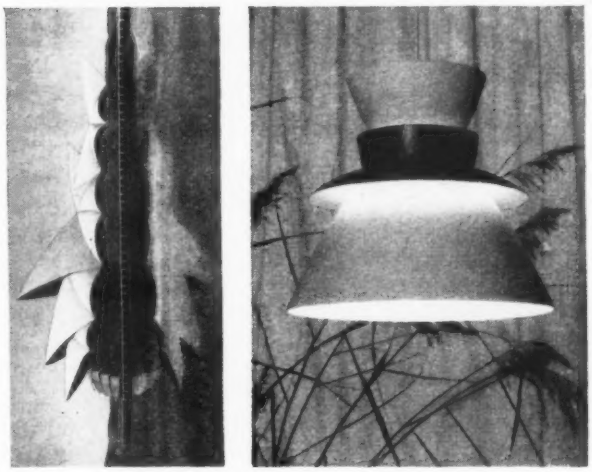
It is hard to imagine anything worse. There is a large prettified head of Britannia (?) on the left, contained in a geometric frame garnished with what looks like tangles of knitting. Part of the border and background consists of tudor roses tinted in two shades of green, mauve and brown—for all the world like a cheap Edwardian wall paper for a doll's house. The words "five pounds" appear twice, and the figure "£5" three times, but the repetition barely counter-balances their comparative illegibility. The main text, "I promise to pay," etc., is arranged symmetrically above a picture of St. George killing a three-legged dragon, but all this is arranged very slightly, and apparently needlessly, to the right of the centre line of the note. The back of the note is not quite so bad: it consists of a vaguely Lombardic lion carrying a key and chain.

*

The present pound and ten shilling notes are nothing to be proud of, but this effeminate-looking design by the late Stephen Gooden, R.A., is appalling. ASTRAGAL hopes that all architects will continue to demand from their banks the old black and white "fiver"—which is still to be circulated for a few years—until a decent modern design is produced.

DO-IT-YOURSELF PAYMENTS

Marylebone housing committee, having realized that about half the country does its own decorations, is now recommending the borough council to pay its tenants the cost of materials. About three-quarters of the tenants do a certain amount of decoration themselves, even though it is the council's responsibility, and save the ratepayers some money, so the arrangement seems fair on the whole. But not, of course, to the National Society of Painters, who complain that the tenants' work will be "of poor quality." This is perhaps partly true, but everyone knows that there are plenty of amateurs who do every bit as good a job as a tradesman, and often very much better. (And I speak as one who is still trying to clean up the mess left by a couple of painters who must have worked last in a Christmas pantomime.) Whatever the unions may say, ordinary painting and distempering is *not* a skilled job, but only a matter of taking trouble. And with electric sanders and other handy bits, that's hardly any effort at all nowadays.



Jorn Utzon, who submitted the winning design (extreme left) in the Sydney Opera House Competition, is well known in Denmark for his lamp fittings. The one shown on the left is typical of his work in this field.

BROWN ON CO-ORDINATION

Those who are susceptible to propaganda, and might have got round to believing that the technologically triumphant USA has wholeheartedly adopted the 4-inch module in building, should have listened to William Tatton Brown (Herts deputy architect) reporting to the Modular Society last week on a seventy-day tour of the States which he recently undertook. He visited all the right chaps—Gropius, Wright, Mies, Neutra, Saarinen—and photographed all the right buildings—but hardly a 4-in. module could he find. Or, to be precise, only once in twenty-eight offices. But most of the offices are planned on a grid (16-in., or 4-ft. grids being favourites) and the reasons they gave for not being more fully modular were very similar to those you hear in this country.

*

The talk was well illustrated and presented, and of great general interest, but the impression ASTRAGAL got was that as regards modular co-ordination, or even non-traditional construction, the USA has not a great deal to teach British architects, largely because the Americans have not got the equivalent of our *programmes* of work which enable so much to be done over here by those architects and manufacturers interested in development.

FRENCH LET US DOWN

The RIBA have done their best with the exhibition of French architecture now filling the Henry Florence hall, but the material is too thin to make a really impressive show. One gets the impression that France has been combed for buildings of a high enough standard and there were just too few.

*

The organizers (the *Direction Générale des Affaires Culturelles* of the Ministry of Foreign Affairs) could have improved matters by taking a bit more trouble over providing information. There are no plans, architects' names are given only in the catalogue and the catalogue gives only the most perfunctory account of structure, materials and so on.

Nevertheless, there are several photographs well worth seeing: a good one of the nearly-finished Unesco building in Paris (Breuzer, Zehrfuss and Nervi), a couple of Le Corbusier's *unité* number two at Nantes, one of a skating rink at Boulogne-sur-Seine (about which some more technical information would have been particularly useful) and several of new industrial buildings. Seeing the lack of good material, more might have been made of Perret's reconstruction of Le Havre, which is represented by only one photograph.

ASTRAGAL

CRITICISM

What readers think

Last week H. T. Cadbury Brown replied, in the JOURNAL, to a criticism (published on February 14) of the design of his primary school at Hornsey, N.6. We give space here to readers' comments both on the building criticised and on the criticism itself. Next week we shall print the second in our series of critical articles by J. M. Richards.

SIR,—Your long-awaited first critical article on current architecture has appeared, but oh dear, what a disappointment!

For some time I have been avoiding a well-known architectural monthly because of its restricted viewpoint upon the visual and more superficial aspects of architecture. I prefer the businesslike format and occasional "spot of homely fun" of the AJ. But now, to my horror, I find this dreadful *malaise* appearing in my favourite weekly.

Really now—a critical article on a school, with hardly a passing mention of education, and apparently no attempt at all to find out what the client's requirements were, or whether he got them. Some rather dismal external photographs without a child in sight; some plans (we were promised "at least a sketch plan") that tell one nothing of the activities or life within the school; and no internal views at all. (I suppose your London-bound critic was unable to get the key from the caretaker.)

This kind of restricted visual criticism is all very well provided all the other requirements of a building have been met, but from what we were shown I am far from being convinced that this was the case. I quote Mr. Richards himself: "It is the result as apprehended by the users of the building that matters." Were they in fact asked? I doubt it. Please—you can do better than this!

ALAN MEIKLE, A.R.I.B.A.

Nottingham.

SIR,— May I congratulate the JOURNAL on the excellent idea of having frequent "criticism" articles. I would like in turn to criticise the first article on the Hornsey School.

1. Photographs much too small. Bigger ones, please, even at the expense of the letterpress.
2. Captions should refer to north elevation, south elevation, etc., and not "the school from Hornsey Lane" (the Lane is not marked on plan), or "classroom from back of playground" (playground not marked on plan).
3. Names of rooms should be written on the plan, *please*, instead of room numbers with a key reference at the side. It takes one twice as long to read a plan by this method.
4. Either the building is a very dull one or the photographs are very bad, or both. I do not admire Mr. Richards' first choice, and if he does not admire it either then he should say so in more certain terms.
5. There is practically no mention of landscape planning; why not, when the architect was obviously very concerned about this, keeping existing trees close to the building and so on? The photographs could have done much more justice to this aspect of the design.

I hope Mr. Richards will get tougher with his next building and never mind the architect! I write this from the comparative safety of far-off Norfolk, and well out of the clutches of Mr. Richards!

J. FLETCHER WATSON, A.R.I.B.A.

Norfolk.

SIR,—I was most interested in J. M. Richards' criticism of the new LCC Primary School at Hornsey. It seems a pity, however, that the emphasis in the article should be placed on an assessment of the curtain-wall technique which has been used to clad the building. Without in any way trying to under-estimate the value of this criticism, I suggest that the first point in the criticism of any building should be an assessment of the performance of the building in use. Preferably, it should be related to the client's original briefing of the architect, for this is the standard by which the client judges our work as architecture.

This series seems to be an admirable opportunity to emphasise that architecture can only be developed by technical skill from a careful and detailed consideration of the client's requirements. I feel that the series is in danger of becoming a criticism of architecture as an abstract art which, I think, would be a lost opportunity.

W. D. LACEY, A.R.I.B.A.

London.

SIR,—I cannot help thinking that architectural criticism is meaningless unless it is accompanied by adequate illustrations enabling the reader to see what is being criticised.

In Mr. Richards' first criticism the illustrations are too few, too small and too foggy. The most vital architectural aspects remain obscure, and the following questions unanswered:

How is the linking of the articulated elements handled (a sure test of architectural sensitivity)?

What is the relationship of stanchion to curtain wall?

How is the eaves detail (specially mentioned) achieved?

Is the handling of internal space successful?

Do the various elements compose to make a satisfactory architectural whole?

Surely most of these questions are too basic to be left unanswered.

PETER MORO, F.R.I.B.A.

London.

SIR,—The uselessness of most critical architectural journalism is that it is in the form of "editorial comment" or by "anonymous critics": criticism for which nobody takes any direct responsibility and of which it is impossible to assess the value, as one has no idea of what or whose axe the critic is grinding.

Your new series, at least, starts off with everyone knowing where they stand. But such criticism cannot easily perform the profoundest and most useful critical task (for criticism at its highest level, *i.e.*, when it fully comprehends even for a moment the genuine "needs" of the time) can focus definitely only on one or two buildings in each generation: those buildings where the needs are most-fully satisfied or most-obviously absent. For example, the Unité, Säynätsalo or Lever House—or the City of London.

A "working" critic must criticise everything that comes his way: but *anything*, in theory, can be made into a vehicle for the critic's perception, and should build-up into a critical structure with the great "teaching" buildings at the summit.

If this could be done it would be marvellous.

ALISON and PETER SMITHSON, A.R.I.B.A.

London.

SIR,—The article did not live up to the standard of the foreword to the series. Something more is needed to be said if such articles are to serve the purpose so many expect of them.

However, in describing the interesting curtain walling detailing, the critic stresses that it is the mastering of the problems of detail that civilizes this type of structure. I submit that a quick tour of the building shows many points of detail which have failed and which, no doubt, Mr. Cadbury Brown has noted for the future.

Besides the matters mentioned by the critic are the following:

Between the two halls is a glass screen, with doors, which provides virtually no noise insulation at all and must be a real source of embarrassment.

There is no access from within the building to the kitchen when dinner is not being served, as the roller shutters must be kept down. School staff wishing to give details of numbers to kitchen staff personally must go right outside the building, along the road and then into the kitchen through the yard.

Members of the staff have to eat in their rooms, and this means that, on occasions, the food smells remain.

No ventilation is provided to the cleaning cupboards!

Space for decorative plants on the half-landings of staircases were provided but these are not being used as a step-ladder is needed to reach them.

Flooring generally is of the large flooring-tile variety and of light colouring, which is apparently not sealed, with the result that the rubber soles and heels are the bane of the cleaning and school staff.

At the back of every internal sill (wood) there is an unfortunate 1½ in.-wide recess, because of the junction with the curtain walling, which is going to be extremely troublesome on account of condensation and is not pleasing in appearance. It is hard to keep clean.

The trees on the site were saved but they are surrounded far too closely by brick and concrete pits which will drastically shorten their life.

The drinking fountain is fixed at too high a level.

The letterbox is built into the wall but large-sized envelopes are easily picked out by an adult hand.

The metal light switches in infants' cloakrooms, for example, at a level easily reached by the children.

There are cork pin-up boards directly behind classroom sinks.

Radiators, in some instances, are fitted too low for brooms to be able to go under. Other radiators show above sill level and spoil the lines seen externally.

W.W.P.'s require adjustment in order not to overflow the small pans.

Rainwater comes in under the north entrance doors.

Door furniture is standing up well to use, except for door springs; two, at least, have broken.

Disposal of rainwater from canopies over entrances requires further thought.

HORNSEY ARCHITECT.

J. M. Richards replies

I agree that the pictures illustrating my first article were far too small. They will be bigger in future. As to the article itself, it would require the whole JOURNAL to analyze and discuss every aspect of every building; the critic has to choose for discussion those things about the building he finds interesting—hence my preoccupation, in the case of the Hornsey school, with structure in relation to curtain walling, with certain aspects of the plan and with the use of materials "as found." That is the only answer I can give to Mr. Moro's complaint that I said nothing about the handling of internal space. All articles can't be about everything. If he re-reads my article he will find that the other matters he mentions were in fact dealt with.

In answer to Mr. Lacey and Mr. Meikle, surely they do not seriously expect me to occupy the JOURNAL'S valuable space giving an account of the LCC education programme and explaining what activities go on in an ordinary primary school. If they don't know they can easily find out. Mr. Meikle doesn't make at all clear what is the *malaise* he detects in the *Review* and with which he finds I have now infected the JOURNAL. How is an article almost wholly concerned with problems of structure, planning, and the use of materials guilty of a restricted visual viewpoint? I hope he will explain.

The answer to his question whether I discussed the building with its users is: Yes.

Mr. Watson says that if I do not admire a building I must say so. Quite right. I tried to convey exactly how far I admired Mr. Cadbury Brown's building and what my reservations were. Mr. Watson has the right to disagree, but he should see the building before demanding its condemnation. As to being tough with architects, I have every intention of being so, but would nevertheless remind readers that the purpose of these articles is to discuss buildings that are worth taking seriously, not to abuse those that are not.

Finally, though I welcome criticism of my articles, what I chiefly hope for from future corespondence is contributions from readers to the discussion about the building.

NEWS

RFAC

The Annual Report

The Royal Fine Arts Commission, in its report for 1955 and 1956, says that it has only been able to consider a fraction of the problems affecting public amenity on which advice is urgently needed. It points out that there are limits to what can be done by a Commission of 16 unpaid voluntary members, with a paid staff of only three, and suggests that the Commission may have to be expanded and reorganized if it is to do much more. The report opens with a sweeping condemnation: "Anyone with the smallest interest in such matters must be shocked at the damage being done up and down the country, not only by the continued destruction of buildings of historical interest, but by the low architectural quality of much new work and by unsightly development of all kinds." Much could be done, it suggests, by statutory authorities and the public, for the powers exist in most cases, although they are not always fully used or used to the best advantage.

The problem of high buildings, particularly in London, takes up a considerable part of the report. In the Commission's view any high building that is ill-designed and wrongly sited can have a disastrous effect, overshadowing fine streets or buildings, or destroying a famous skyline, but it considers that in certain positions in London a well-designed high building may have positive æsthetic advantages. To locate high buildings by rule of thumb at railway termini, traffic junctions or civic centres, would be mistaken. Each case should be judged on its merits, and an increase in height should nowhere mean an increase in volume or floor space. The design of buildings of abnormal height, particularly the silhouette, must be carefully considered. The Commission is disturbed by the neglect of silhouettes even in lower buildings, to which roof structures "sometimes embellished with butterfly roofs or other fashionable oddities" are added with little or no relationship to the architecture of the building as a whole. "Although the general quality of design," it concludes on this point, "may be improving slightly, it still falls far short of what we are entitled to expect in a capital city. The responsibility is primarily that of the architect, but the position is made worse by an apparent lack of interest on the part of the building promoter, often an impersonal company whose only concern is with the financial return on its outlay."

In urban areas the Commission considers that perhaps the most serious problem is a proper relation both in siting and design between new buildings and old ones. "A critical appreciation of the merits of existing work is often lacking, particularly of that put up during the past hundred years. Many such buildings of value which should be adapted or modernized are being thoughtlessly swept away. New buildings should not generally be treated as the first instalment of an entirely new piece of civic design, with the implied suggestion that we must put up with the resulting muddle until the whole area has been rebuilt; this may never happen."

Housing.—The standard of design of speculatively built houses has not improved since the war, and planning powers should be used to effect an improvement. Local Authority houses are generally better, thanks to the efforts of the Ministry and the employment of architects.

Power Stations.—The Commission condemns the siting of the first two atomic power stations at Bradwell and Berkeley as "unfortunate," and that of the Newark Power Station as "disastrous." It has asked repeatedly to be consulted in such cases before major decisions on siting have been taken; the Central Electricity Authority have now agreed to seek the Commission's views at an earlier stage.

Roads and Lighting.—The Commission welcomes the appointment of a special standing committee by the Minister of Transport to advise him on landscaping of new roads which, it says, require specialized handling from the outset.

The Ministry's standards of lighting for main traffic routes are too rigid: lanterns at a height of 25 ft. can completely disfigure the small-scale architecture of country towns and villages. Lighting authorities should be obliged to publish their proposals in advance.

Street Furniture.—Much stronger control is required to deal with caravan sites, litter, and the ill-assorted multiplicity of traffic signs, lamp-posts and makeshift paraphernalia scattered along the roads. The Commission considers that the new traffic signs adopted by the Ministry of Transport are below the standard to be expected, and regrets that the draft designs were prepared by a committee on which those interested in the general appearance of street furniture were not represented.

Advertisements.—The Commission understands that the Minister of Housing and Local Government is considering some relaxation of advertisement regulations to overcome this difficulty, but the Commission would prefer that the regulations be strengthened.

Conclusion.—The solution of many problems lies ready to hand in the powers of Ministers and Local Authorities. But a greater responsibility rests on the professional advisers, the architect, the engineer or surveyor who may be completely untrained in visual matters. A fuller appreciation of the effect of new work in its setting should be included in their technical training.

BC

Forum on Lighting Fittings

The JOURNAL'S Specialist Editor (15) Lighting writes:

The problem of finding suitable light fitting designs can often be a difficult task, and occasionally even a quite frustrating one for architects. It was surprising, therefore, that so few of them attended the forum, held last week at the BC, to air their grievances to the manufacturers, who were present in force, and who seemed slightly smug about attacks made on them, chiefly by the architect spokesman, John Eastwick-Field. It was not only, he claimed, that glossy and expensive catalogues gave inadequate information about light distribution, surface brightness and so on. The fittings themselves too often failed to comply in these respects with the needs of visual comfort. Worse still, too many of them were unnecessarily intricate and bogusly ornamented. Was it possible, he queried, that manufacturers were afraid that simple and efficient fittings might disrupt the present price structure of the industry? Costs could be cut, not only by simplification, but by reducing the number of designs, and by avoiding the temptation of making frequent changes in the wake of fashionable whimsy. The principle of using a limited set of components to build up a wide variety of fittings should be further developed.

Replying for the manufacturers, Mr. Deryck Tabraham asserted that lighting was an essential service for which architects too often allowed insufficient funds. He denied that most light fittings did not comply with the principles of comfortable lighting. The industry were well aware of the soundness of all aspects of "good design," and how commercially successful it could be in this country. There were encouraging signs that a better understanding was growing up between lighting engineers and architects of their respective interests in design.

There was rather a let-down at the end of the discussion when Mr. Tabraham said that architects controlled the purchase of only a very small percentage indeed of the fittings produced. True or otherwise, it gave expression to the lack of interest some sections of the industry still have in meeting the architect's requirements. But the discussion showed a more hopeful trend. Although no large manufacturer took up such an architect-designed fitting as the Percon, its subsequent success has led them to produce similar simple and inexpensive general-purpose fittings. Perhaps after all the architect has a greater influence over the industry than Mr. Tabraham's rather chilling remark would suggest.

SCOTLAND

The Development Bill

It seems rather extraordinary that, at a moment when the effectiveness of the Town Development Act is being called in question by nearly every authority on local government, the time of the House of Commons is now being occupied in applying it to Scotland without fundamental changes. When the Housing and Town Development Bill (Scotland) was given a second reading last week no serious attempt was made by the Ministers in charge of the Bill to analyse the unhappy experiences of England in solving the problem of overspill by mutual agreements between exporting and importing authorities. The announcement the other day that the London County Council has made an agreement with Thetford for 5,000 Londoners and some industry to be accommodated there, only serves to emphasize the small scale on which town development procedure has been used. In the Scottish debate Mr. McInnes said, without being contradicted, that the net effect of the Town Development Act in England had been to take 18,000 people out of London in five years, and nobody out of Birmingham, Manchester, Sheffield or Leeds, and a Conservative member agreed with him that the Act had not been a success. The Scottish Bill appears to be in some degree an advance, in that it offers a higher housing subsidy to the receiving authority, and a grant towards preparing sites for factory building. The receiving authorities will also be empowered to build and lease factories, but will get no grant for doing so. It seems hard to believe that even with these modifications the procedure which has failed in England can make a very significant contribution to the solution of the problem of Glasgow, which has an estimated overspill of 300,000 or almost as much as London. The basic objection, to which Derek Senior has drawn attention, remains: that the small receiving authority has to accept heavy obligations without any cast-iron guarantees that it will receive equivalent or greater benefits. Will the Government not sooner or later have to face up to the need to reconsider its reluctance to authorize the construction of new towns under new town corporations?

DIARY

Building in Our Time. Talk by Prof. Konrad Wachsmann (in place of Prof. Max Bill). At the AA, 34, Bedford Square, W.C.1. 8 p.m. FEBRUARY 28

Lighting in Decoration and Architecture. Third Cantor lecture on the contribution of Lighting to modern life. By D. W. Durrant. At the RSA, John Adam Street, W.C.2. 6 p.m. MARCH 4

BATH

Proposed Technical College: Opposition Unlikely

The City of Bath seems likely to be denied the prospect of a tussle with the Georgian Group over Frederick Gibberd's design for the new Technical College, of which the model is illustrated below. We learn that the Georgian Group has wisely decided not to oppose a modern design in principle. Although it has suspended judgment about the scale, texture and composition until it has discussed the plans with the architect, peace seems in fact to have broken out, and the use of Bath stone facings to have gone a long way to allay Georgian anxieties.

Mr. Gibberd himself says that he has tried to extend the character and the scale of the central area. "The environment," he says, "had no strong architectural or landscape forms that needed to be projected into the site. The buildings in the vicinity are of a variety of heights and masses. A tall tower was ruled out, as there was no reason for one: the site is fairly low and does not call for any major silhouette." The two major blocks in the design are 50 and 60 ft. high as this, with the lower buildings, seemed to give an average scale and height of the buildings in the vicinity. The buildings will be constructed of reinforced concrete, Bath stone and glass.

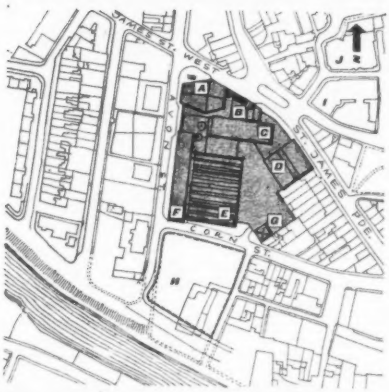
The College has been designed as six separate buildings, each having its own special functions and character. They are grouped as a series of rectangles parallel to Avon Street, and form a series of enclosed spaces in the nature of cloisters or garden courts, in the English collegiate tradition. These courts form an extension of the enclosed spaces of the building, and also link the different functions. The service area is not seen from the street. The major blocks are connected by single-storey accommodation containing common entrance halls, kitchen and dining room.

The General Purpose Building, six storeys high, including penthouse, and a projecting lecture theatre, contains staff and students' accommodation, classrooms, and library. It is sited to be a prominent feature in the street picture.

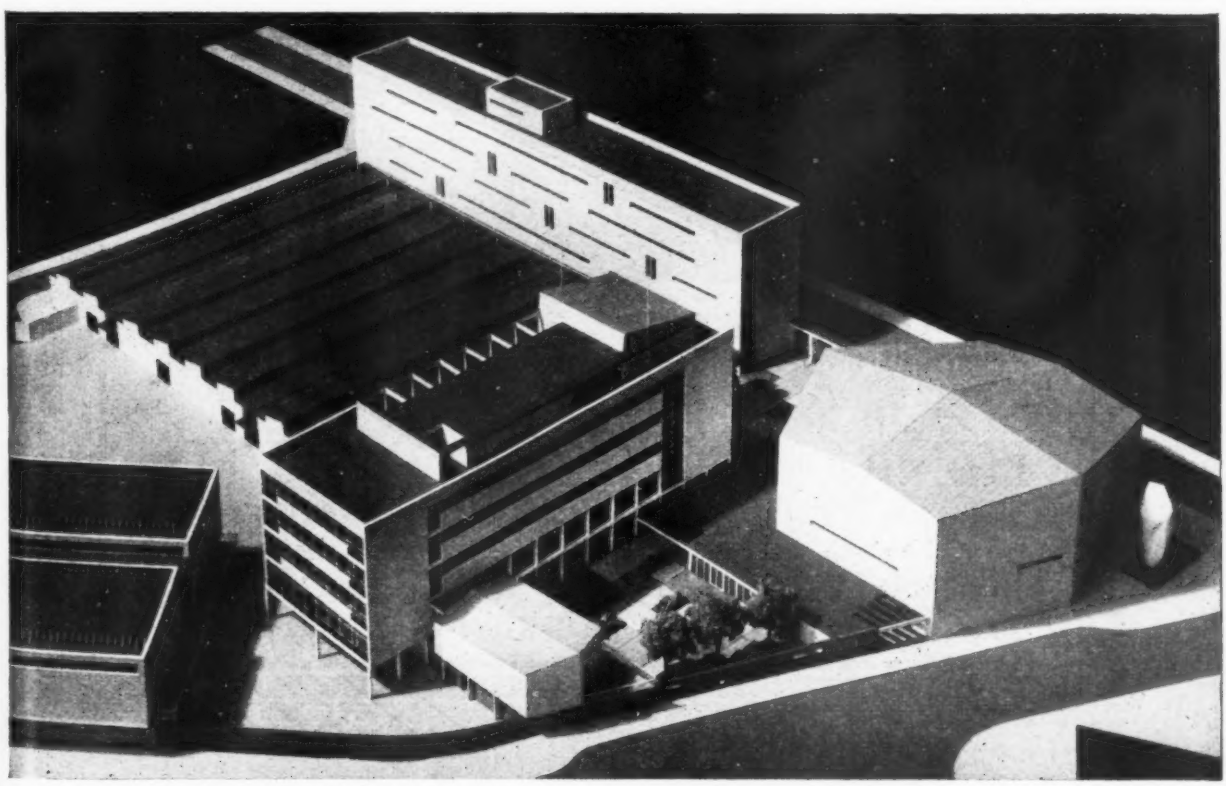
The laboratory block, also of five storeys, with a single-storey workshop block at the rear, is placed on the Avon Street frontage. The two-storey gymnasium block on St. James's Parade is lower in height than the adjoining terrace houses, but of the same scale. It is linked to the irregularly shaped assembly hall by a stone wall, some seven feet high, along St. James's Parade, defining the street character and giving privacy to the site. The wall is pierced to give the pedestrian glimpses of the garden court.

The assembly hall, seating 1,300 people, is much larger than is required for the College itself, for which a hall seating 550 would comply with the Ministry of Education's requirements. But it is hoped to get the Ministry's approval for the larger hall, which would serve the dual purpose of assembly and public hall, and meet Bath's demand for a concert hall. Until the Ministry has made a decision detail designs will not be prepared.

Above: looking north from the site of the new technical college, towards the city centre. Below: looking south towards the river.



KEY
A. Hall
B. Lecture theatre projecting from general purpose block.
C. General purpose block (six storey)
D. Gymnasia
E. Workshops (single storey)
F. Laboratories (six storey)
G. Caretaker's house
H. Site for extensions
I. Existing technical college
J. Royal Baths



Model of the technical college from the north-east.

3 PLANNING: NATIONAL AND REGIONAL

decentralization and overspill

In December last *The Architectural Review* followed up their *Outrage* number of June 1955 with another entitled *Counter-Attack* in which they put forward a visual code for controlling our whole national environment. In the second part of this issue were two articles (entitled "The Machinery of Sprawl" by Walter Manthorpe and "Oversprawl" by Elizabeth Denby) questioning our accepted space standards, and a third entitled "A Plan for Planning," by the editor of the issue, Ian Nairn, proposing a new administrative framework for planning control. In view of the importance of these matters we have asked our Specialist Editor No. 7 (Planning) to set down his comments.

There are a great many faults in our existing planning machinery—some of them very serious. Planners, who have been operating the system for the past ten years and are probably better aware of its shortcomings than anyone else, would be only too glad to see them put right. "Outrage" did a very useful job in showing up some of the worst of these abuses and most planners were in broad agreement with the author's views. "Counter-Attack" attempts—quite rightly—to go much further and tries to show what ought to be done to stop outrages of all kinds for good. Logically this is, of course, the next step. Obviously it would have to be taken sooner or later and the *Architectural Review* deserves credit for making a bold attempt to provide the answers, but it is equally obvious that no one could expect them to be right first time when dealing with problems so complex and on so vast a scale.

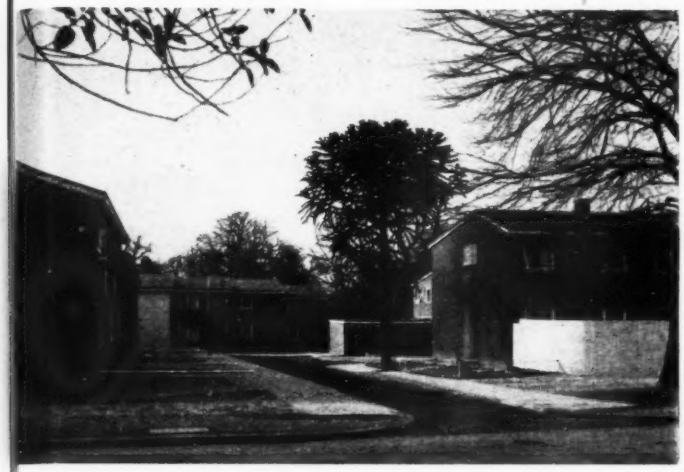
From the planner's point of view the success or failure of their proposals lies not with the basic ideas behind them—there would be broad agreement with nearly all of these—but in the practicability of the solutions proposed as a framework for a workable system. The test is—will it work? This attitude is forced on the planner by the nature of his job, which brings him into contact with ordinary people as developers or members of committees. Whatever his own outlook may be, his actions are inevitably circumscribed by their views. So if planners are doubtful about the proposals—more than doubtful about some of them—this is not because they are complacent or unsympathetic to the basic ideas.

Space standards

In this context, two of the technical articles are of particular significance for they provide some of the reasoning which lies behind the proposals and deal with fundamental problems. The first, "The Machinery of Sprawl," sets out to demonstrate how the existing regulations affecting new building—particularly those dealing with dimensional standards—are such that their combined effect is to make low-density sprawl automatic and "urban" design almost impossible. The author points out that existing regulations are not only grossly over-generous with land but wildly confused and badly in need of rational reform. In his view this means standardization and cutting down space standards all round. To show how this could be done he examines and comments on a number of the existing "barriers to reform" which are inhibiting "urban" design and high density development.

So far as dimensional standards are concerned the arguments are convincing and sound. The case for "rationalizing" and standardizing regulations on matters such as street widths, "privacy distances," road layouts, provision for underground services and the like, is admirable and deserves our whole-hearted support. The only objection here is the familiar one that any general lowering of space standards could pave the way for sub-standard speculative development, so that whilst it may be all right (as the New Towns Committee advised) to revoke the bye-laws "in the special circumstances of a new town," it might produce drastic results elsewhere. Probably too much has been made of this danger—it is the usual excuse for doing nothing at all—but the risk is there and will have to be overcome.

technical section



Figs. 1 and 2: two photographs of Horndean Close, Roehampton, part of the LCC's Alton Estate, which were used in Counter Attack *to make the point that comparatively high densities can be used without loss of traditional amenities if the space round the houses is planned. The density of this part of the site is approximately 70 rooms per residential acre, which can be considered as 70 people per acre. House frontages are 16ft., average garden length 44ft. Left, entry into cul-de-sac (road width 8 ft.). Right, small green within cul-de-sac.*

When he turns from the particular to more general arguments for higher densities the author becomes less convincing. The recommendations of the New Towns Committee are rejected as too wasteful of land. Admittedly the Committee, writing ten years ago, may have been unduly influenced by the "garden city" standards current at the time, particularly for residential areas, but the Ministry's excellent Handbook, *The Density of Residential Areas*, has already convinced most planners that very much tighter layouts ought to be the general rule. The trouble here is to convince, not the planners, but the public and planning committees, that 70-100 persons per acre need not involve any reduction in living conditions. For this reason the examples put forward—although no doubt full of interest to the connoisseur of Georgian and Early Victorian architecture—are little, if any, help. Delightful pictures of Chelsea Squares and Regent's Park are not likely to have any effect; a committee would go for Oxhey every time. Horndean Close (see Figs. 1 and 2) is better, apart from the footpath access, which is always unpopular. The arguments in the text are often not concise enough to be really convincing. For example, the "replies" given to the typical objections to "high" density set out by the Hertfordshire Planning Committee would do nothing to break down their obvious prejudices. Their effect would have been much more telling if the author had set up, clearly and simply, the arguments *for* high density and backed this up with a detailed analysis of good and bad modern examples. These should be deliberately chosen from places away from London altogether, for London is always dismissed as being a "special case."

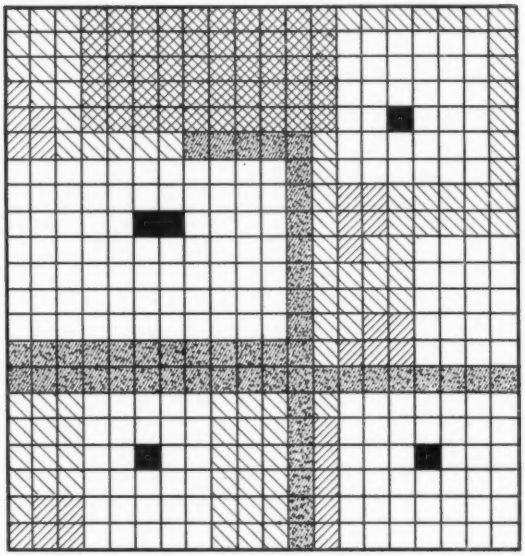
The demonstration of how essential land needs of a new town for 50,000 people could be re-arranged to take up far less space (1,500 acres as against 4,200) is much more positive (see Fig. 3) even if some of the new "rational" standards employed are doubtful. Would it really be advisable to cut down open space to 1 acre per 1,000 on the grounds that the rest could be added in elsewhere later on? Cutting down on land for industry seems more doubtful still. If firms are to be attracted by good conditions (as they will have to be if the new town is to succeed at all), 150 workers per acre seems much too high a gross density, even with a greater proportion of office employment. So far, the 50-60 workers per acre standard (which is very close to the Committee's original recommendation) seems to satisfy the demand in practice.

Overspill

The second article deals with the thorny problem of the great conurbations, and here the author, anxious to make the strongest possible case for "taut planning" and intensive land use seems to have been led badly astray. The title, "Oversprawl," suggests that dispersal inevitably means "sprawl" and the whole is an attempt to expose the idea of decentralization as a dangerous fallacy, particularly when applied to the large industrial cities. This attack starts with a simple review of the statistical evidence for the great migrations of population and industry which have been taking place from the great cities during the past 25 years, and asks how further decentralization can be justified in the face of this existing mass movement away from them. This argument is reinforced by claims that their basic industries are immobile and that they have in fact a low overall density—very low indeed in those areas developed between the wars. Against this background "overspill" and decentralization are denounced as absurd, unnecessary and actively dangerous. As an alternative, we are asked to participate in the "New Deal for Town Dwellers" which seems to involve the re-arrangement both of people

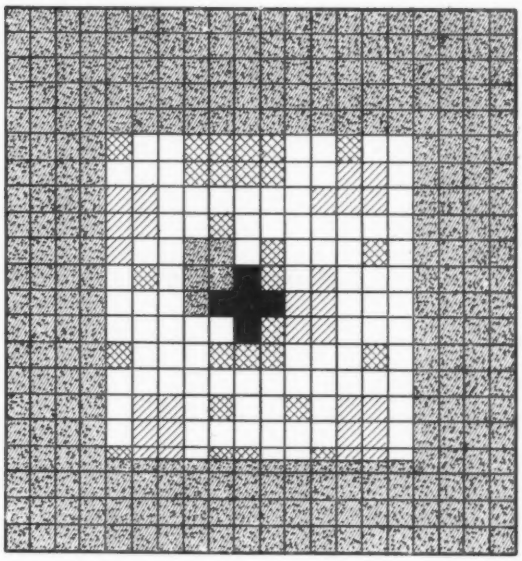
technical section

TOWN A



Town Centre
Industry
Housing

TOWN B



Schools
Countryside
Space left over

A. NEW TOWNS COMMITTEE

		Acres per 10,000 population
Town centre		10
Industry		100
General Urban Zones:		
Housing (25 ppa)	400	
Schools	50	
Open Space	100	
	550	
		660
But the Committee thought this might be extened to which is equivalent to 13 ppa gross density and then, after further consideration, picked on 12 ppa.		760

So for a town of 50,000 persons the land required is 4200 acres.

B. REVISED PROPOSALS

		Acres per 10,000 population
Town Centre		10
Places of Employment		50
General Urban Zones:		
Housing (70 ppa)	140	
Schools	50	
Open Space	10	
	200	
		260
But there may be some unusable land and we may adopt which is equivalent to 33 ppa gross density. (Ebenezer Howard suggested 30 ppa.)		300

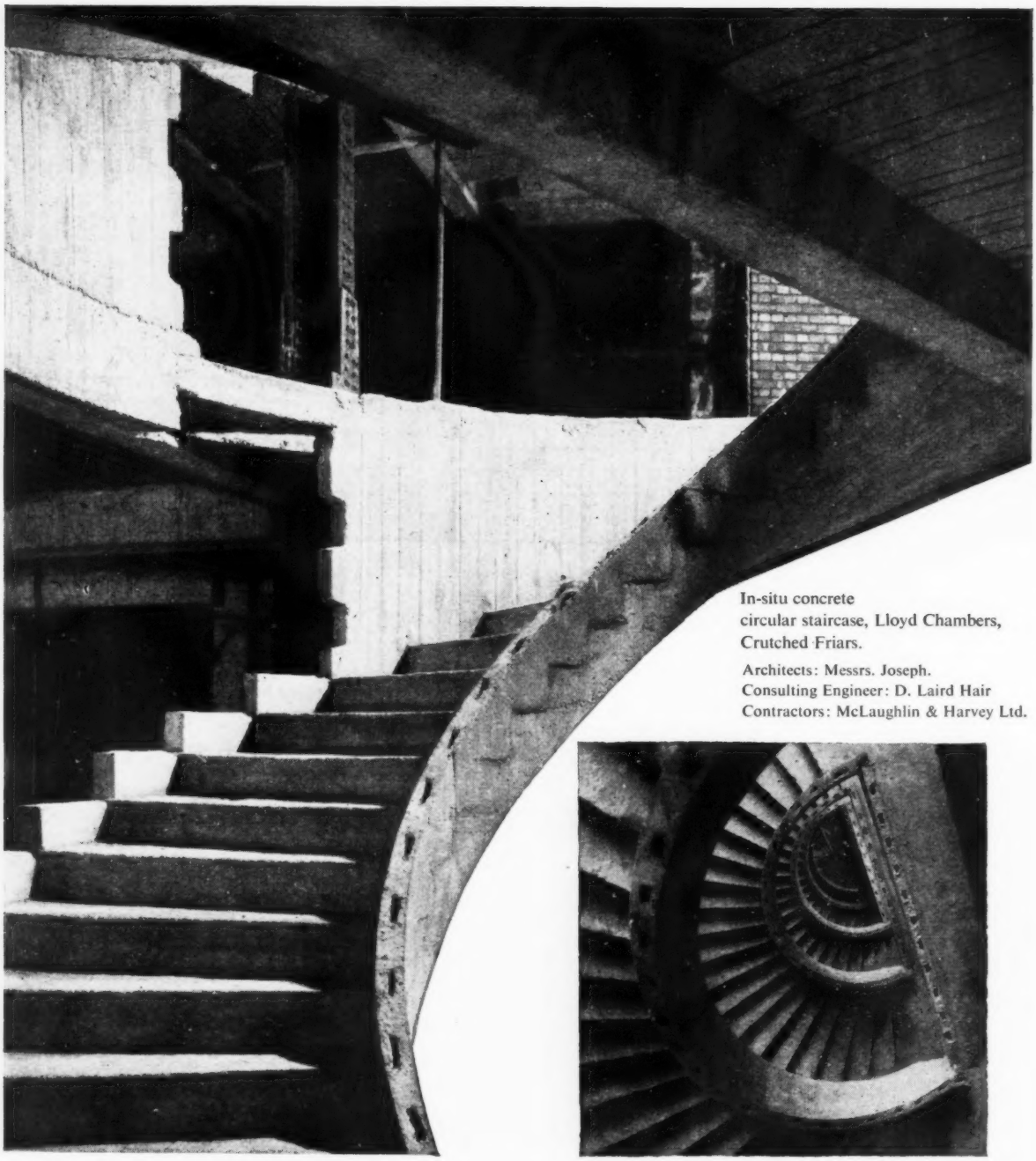
So for a town of 50,000 persons the land required is 1500 acres.

Fig. 3. Two diagrams used in the Architectural Review *article, "The Machinery of Sprawl" comparing land use for two hypothetical towns. Town A is laid out according to the recommendations of the New Towns Committee; Town B according to the revised proposals put forward in "The Machinery of Sprawl." Each square in the grids represents 10 acres.*

and uses within the existing boundaries of the urban area.

If we are concerned with what can in fact be done to clear up the mess in the big cities, this kind of approach is not likely to take us very far, for it seems to be based on a number of serious misconceptions. Decentralization, seen in planning terms, does *not* mean taking large numbers of families from the centre of a town and dumping them in a new low-density housing estate on the other side of a narrow green belt. This would be an act of folly leading nowhere. Instead, it means the removal of *surplus* population, employment and other uses from overcrowded areas to carefully selected locations some distance away, where they can be developed into nearly self-contained entities, is a very different thing. There is no reason at all why these new settlements or extensions to existing towns should not consist of mixed development at " urban " densities; in fact, it would contribute a great deal to the success of the whole operation if they were.

Naturally decentralization presupposes a surplus of uses as well as an overcrowding of families in the great towns. The existence of both of these is vehemently denied. Though it is maintained that " a rearrangement of people within existing boundaries seems logical, humanly desirable and economical." Overall population density figures in existing towns are quoted as " proof " that overcrowding does not exist. There does not seem to be any logic in this, for it is extremely doubtful if this measurement has any meaning at all when used in this context. Certainly it cannot be used to refute the existence of gross congestion of population, industry and other uses. The overall population density in (say) an inner ward of a typical conurbation may give no indication at all of the intensity of land



In-situ concrete
circular staircase, Lloyd Chambers,
Crutched Friars.

Architects: Messrs. Joseph.
Consulting Engineer: D. Laird Hair
Contractors: McLaughlin & Harvey Ltd.

In-situ concrete staircases, canopies, balconies and similar ancillary work executed in conjunction with the constructional floors form part of the Bison Service. Beam and stanchion casing is another Bison service.

BISON PRECAST FLOORS BEAMS AND FRAME STRUCTURES IN PRESTRESSED AND NORMAL REINFORCED CONCRETE

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technical section

use within it, for residential uses may be a low proportion of the total. The realistic comparison which ought to have been made is that of proved need for all classes of use against land availability. If this is done it becomes evident that there is a real land shortage over large parts of the town which could not be met within the built-up area. For, apart from relatively small and scattered pieces in the low-density suburbs, the only means of obtaining land within the town itself would be by redevelopment. As the only places where redevelopment is likely to occur over the next 20 years are congested already and badly deficient in essential features—open spaces and schools, for instance—this will increase the demand for land still further. Higher net housing densities can and should be used to reduce this to a minimum, but a surplus will always remain. It is this surplus that provides the basis for "overspill" and it includes a wide range of uses—offices and factories for example—as well as families.

It is difficult to say whether the author's proposals are "humanly desirable," for the alternative she suggests does not yet exist. Up to now, however, nearly all land users—particularly householders and industrialists—seem to take the opposite view. The steady, outward drift from the crowded central areas is a strong indication that it is the existing congestion which is driving them out, and as their mobility increases more and more of them are moving away. If it is to be our aim to retain as many as possible of these potential migrants within the built-up area, we shall have to meet as many of their demands as we can. This sets a limit to the maximum densities that can be used.

On the question of economics, comparisons are much more difficult. The only thing that is certain is that both dispersal and internal redevelopment will be very expensive. But such evidence as there is at the present time indicates that if "re-arrangement" were attempted in the way suggested the capital cost would be enormous—far too high to make it a practical possibility in spite of the long-term advantages that might follow, because it would necessitate the wholesale demolition and replacement of large areas that would not normally be covered by redevelopment schemes.

It is a great pity that this case is presented in a form unlikely to impress anyone directly concerned with planning for big cities, for it contains some excellent ideas. For instance, a great deal more could and should be done with mixed development at higher densities; no doubt some "overspill" totals have been exaggerated and need cutting down. We ought to explore the possibilities of tightening up overall density in the inter-war estates and revise the very narrow range of house types employed by some authorities. There is a good case for all these things, but the chances of getting something done are not improved by writing off decentralization as a failure or trying to prove that "overspill" is a myth. Urban building at higher densities and decentralization are not, as we are led to believe, incompatible, provided both are intelligently applied.

The impact of this article could have been made much greater if the fact that *some* overspill is justified and inevitable had been accepted, and if the author had concentrated on demonstrating—using a single conurbation as an example—of how this could be kept to sensible proportions by the intensive use of all land now available or likely to be redeveloped. An examination of the family structure of the population in a typical redevelopment area with an analysis of the dwelling types that these would require and some suggestions for a suitable layout for them, would have established the valuable contribution that mixed, high density development can make to the solution of some of our difficulties.

Safeguarding the countryside

The most interesting section is the last, "Plan for Planning," which sets out in some detail the reorganization which the *Review* believes to be necessary for the creation of a positive planning system. The basic idea behind these proposals is commendably simple and straightforward: our primary objective, they maintain, should be to safeguard the ordinary countryside. If we can succeed in doing this effectively it will in itself provide the best guarantee that the towns will be properly redeveloped. So far so good. Two major changes are proposed. First, that all agricultural land should be treated as "green belt" land; second, that every change which will affect the landscape must be subjected to planning control.

It is difficult to accept the first as it stands. If, as the *Review* seems to imply, by "agricultural" land they mean all land not assigned to a particular use in the development plans; then to attempt to apply the rigid controls now operated in "green belt" areas uniformly over every part of the country for which no specific proposals were made at the time the plans were prepared, simply does not make sense. Even looked at purely from the restrictive point of view the "overall green belt" would be ineffective as a basis for development control. The flood of applications—in one form or another—would continue and it would be impossible to prohibit all development everywhere, all the time, except in selected areas. So many exceptions would have to be made that the term "green belt" would cease to have any meaning. Worse still, public opinion—which in the long run determines how much control can be exercised—would be alienated and the whole system howled down.

Much more proper control in the countryside is certainly needed and the *Review* is quite right to emphasise this point. But the way to ensure this is to have properly worked out development plans for the rural areas and a development control policy suited to their particular needs, not to impose a general prohibition. In Britain we have been so preoccupied with urban problems that country planning has been largely neglected. The best way to preserve the countryside is to have a positive plan for it—which might include a great deal of development—and not to freeze it.

technical section

Planning control for all things seen

The second objective—to extend controls so as to cover all changes likely to affect the landscape, is obviously essential if planning is to be effective. But there are dangers even here. Compulsory consultation for "Crown" developers at Ministry level is a splendid suggestion but it implies that the final word over matters of land use rests firmly with the Ministry. There is little chance of this happening so long as it retains its present status in the hierarchy of Government. The first move is surely to re-establish the Ministry on its proper footing as the controller and allocator of land for all purposes. In other words, to make it a Ministry of Planning administering a definite plan—not the governess to the local authorities.

As to the gaps made in the existing system of controls by the exemptions of various kinds, there is no doubt that these are far too wide and that the whole system ought to be revised. A review of the General Development Order of 1950 would be a good way to begin. But we ought not to under-estimate the size of the task. To draw up sensible proposals bearing in mind the wide range of possible "developments" on the one hand and the limited capacity of the planning machine on the other, would certainly involve the formulation of not one, but a number of separate codes related to the needs of different varieties of landscape. No doubt this is what the author had in mind, but it will be a formidable undertaking.

Planning authorities

Surprisingly little change is proposed in the existing arrangement of local planning authorities, considering the criticisms that could be levelled against it. The county borough/county council impasse lies at the root of a great many of our difficulties, but it will never be solved by the ludicrous suggestion that the counties should have the right of veto over basic land use in the county boroughs. On the other hand, the authors' attacks on the delegation system are fully justified, for its effects have been almost wholly bad. Here the admirable principle "No delegation without qualifications" should be uniformly applied. It could easily be enforced by the Minister, who has to approve all delegation schemes.

Need for a national plan

The remedies that the *Review* editors propose for both national and local administration do not go nearly far enough. Much more should have been made of the need for a national plan, for without it we lack the basic framework for positive action. This is a task that the Ministry alone can perform and their failure to do so is lamentable. The independent team of planners and architects who are to "teach the Civil Service to think visually" and "re-word all planning legislation" would be hard put to it if their regulations are to stand up to appeal. They would be better employed in preparing the National Plan. The suggestion that Regional Plans could be administered by the existing local authorities co-ordinated by "one man with a fighting temperament" is decidedly wrong and deserves to be resisted. A far more effective solution would be to establish proper Regional Planning Authorities for all the conurbations with full powers of control and as much independence as possible from Whitehall. These would have the job of preparing Regional Plans within the framework of the National Plan itself. The recent White Paper on local government reform may in fact be helpful here for it could, as Mr. Senior has recently pointed out, be used to provide for the necessary administrative changes, except for London itself where special arrangements would be required. Outside the conurbations the framework of the existing system might be retained, but strong pressure should be exerted to bring about joint planning committees wherever possible, and to revise the whole delegation system.

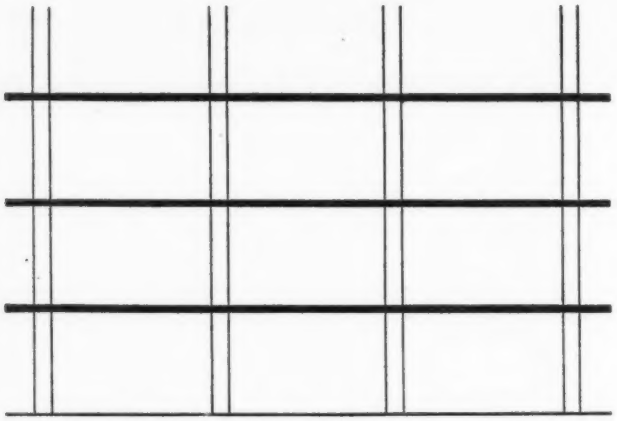
Once this were achieved, most of the detailed proposals for local administration and technique which the authors advocate would be a possibility. Local planning officers could devote more time to the positive task of encouraging development in the right places. The complex job of reshaping the conurbations and decentralizing their overspill should devolve on the Regional Planning Authority, not, as is suggested, on the Ministry, who could not be expected to analyse all the details involved. Close study of local conditions by competent men on the spot with full power to act as circumstances demand is the only way to achieve results. Remote control by the proposed Central Land Exchange in Whitehall would be useless. When, as is almost inevitable, it becomes necessary to move some overspill beyond the zone controlled by the regional planning authority, then the job of building up the new or expanded town should be entrusted to a development team working for the receiving authority who would take over from them when the project was completed.

Filling gaps in villages

The section on "Commuting" which advocates the rehabilitation of decaying villages with voluntary migrants from the town is a good one, though one suspects that outside the Home Counties the level of demand is not likely to be very high. Provision for this kind of "infilling"—suitably controlled—would be an essential feature of the rural development plans.

Conclusions

In a general review it is only possible to cover a portion of the points raised. No doubt "Counter-Attack" will provide material for argument amongst planners, architects and administrators for some time to come. Even if some of the proposals made and the arguments raised to support them appear doubtful or even outrageous to planners, the *Architectural Review* deserves our thanks and our attention for at least attempting the impossible—to set up a planning system that will satisfy everyone.



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COMPREHENSIVE SCHOOLS

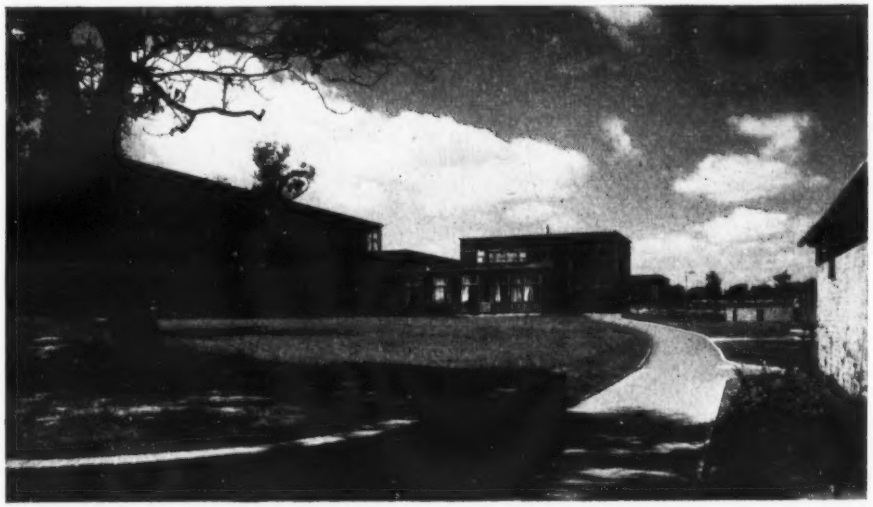
1. at ABBEY ROAD, WHITLEY, COVENTRY; ARTHUR LING, city architect (in succession to D. E. E. GIBSON); divisional architect J. C. BARKER; architect-in-charge W. A. JAMES; assistant architects M. J. BENCH; D. J. CHALK, J. M. VAUSER

2. at LYNG HALL, BLACKBERRY LANE, WYKEN, COVENTRY; chief architect, M.O.E. in collaboration with the city architect; architects-in-charge PETER NEWNHAM and DARGAN BULLIVANT; quantity surveyors J. NISBET and P. F. BOTTLE, M.O.E.

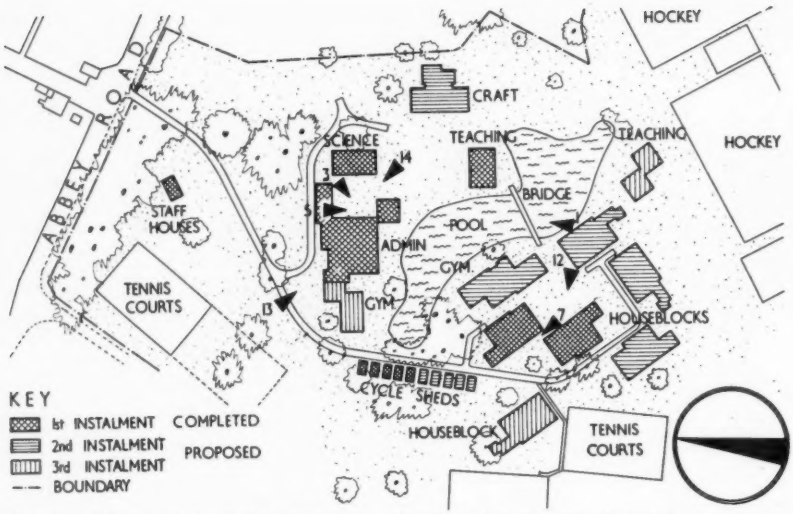
This article describes the first instalments of building at two comprehensive schools at Coventry. Each school is designed as an informal group of separate buildings and each has, consequently, a human quality in contrast to the overwhelming size of the comprehensive schools erected as single buildings. The two schools, which are described here on a comparative basis, were prototypes for the Bristol Aeroplane Co. Mark II system of construction and (except that one is a mixed school and the other a girl's school) the clients requirements were the same.

Viewpoint 1: Whitley Abbey school and the prestressed concrete bridge over the fish pond.

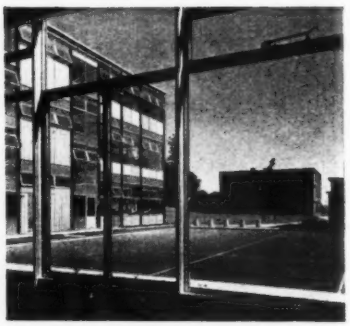
Viewpoint 2: house blocks and the old farm building (right) at Lyng Hall.



building illustrated



Key plan showing photographic viewpoints. Numbers 1, 3, 5, 7, 12, 13, and 14 refer to Whitley Abbey School

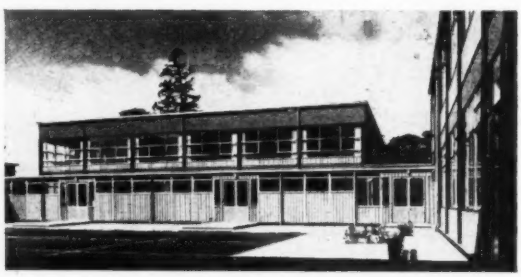


Note: on pages 322-331 *Whitley Abbey school is illustrated on the top half of each page, and Lyng Hall school at the bottom.*

WHITLEY ABBEY SCHOOL

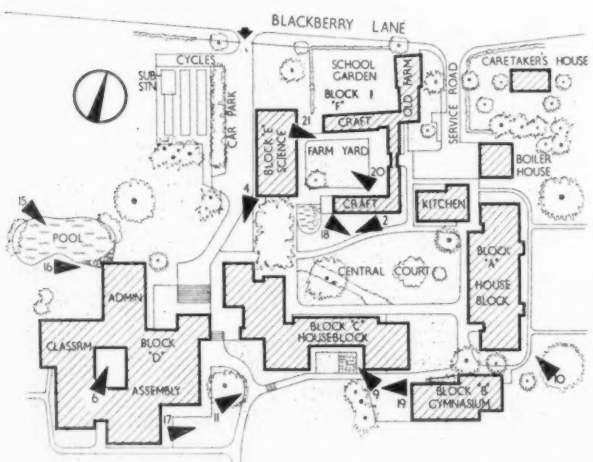
in ABBEY ROAD, COVENTRY

A. G. LING, city architect



Viewpoint 3 (right): assembly hall at Whitley Abbey, seen across central court with library and staff rooms on the right. Viewpoint 5 (above right): the view from the library window.

Viewpoint 4 (opposite page): main entrance to single-storey central blocks at Lyng Hall, with two-storey house block on left. At Lyng Hall the single-storey central block is dominated by the other multi-storey blocks of the school. This illustrates one of the architectural problems of a school with disposed buildings, which is to express internally the importance of this block. At Whitley Abbey the central block is combined with the three-storey science block.

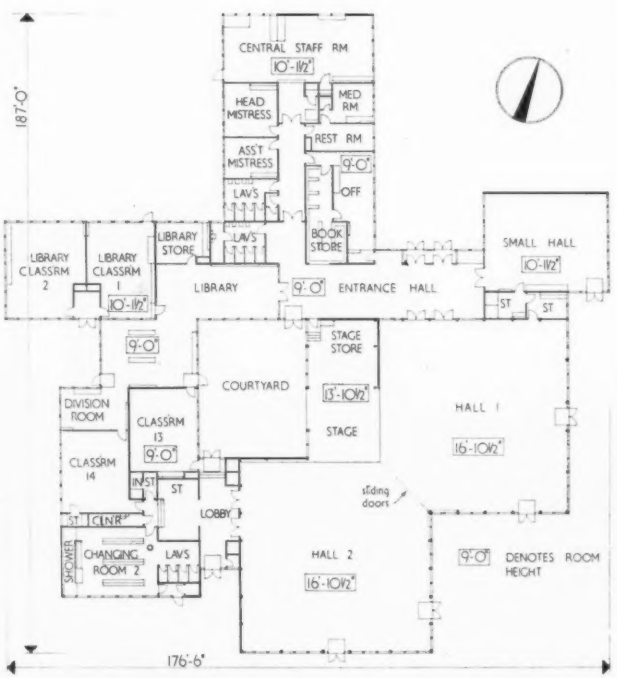


Key plan showing photographic viewpoints. Numbers 2, 4, 6, 9, 10, 11, 15, 16, 17, 18, 19, 20, and 21 refer to Lyng Hall School

LYNG HALL SCHOOL

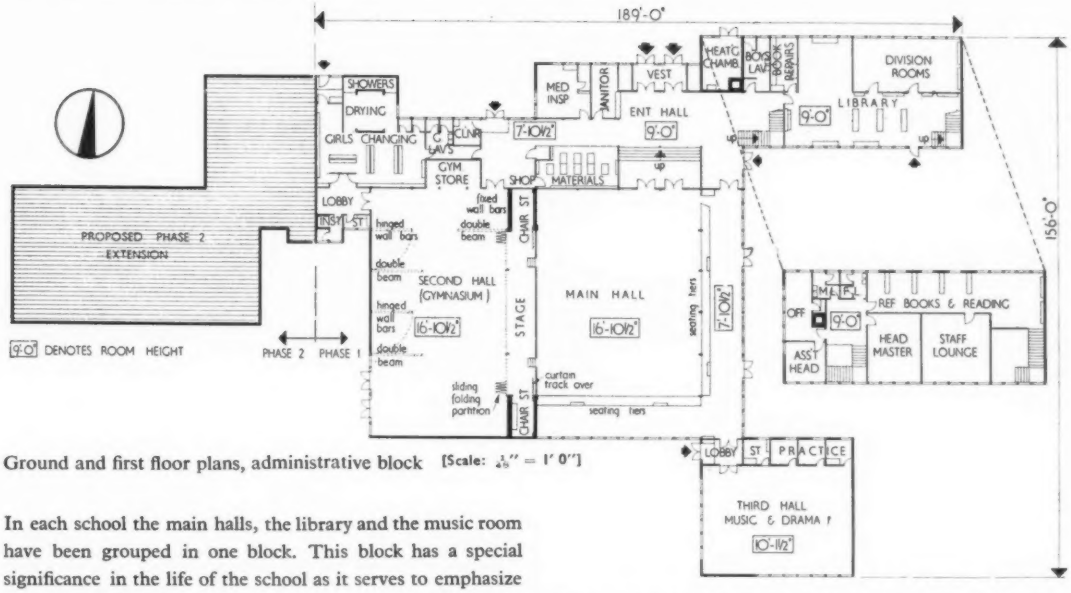
at WYKEN, COVENTRY

chief architect, M.O.E.



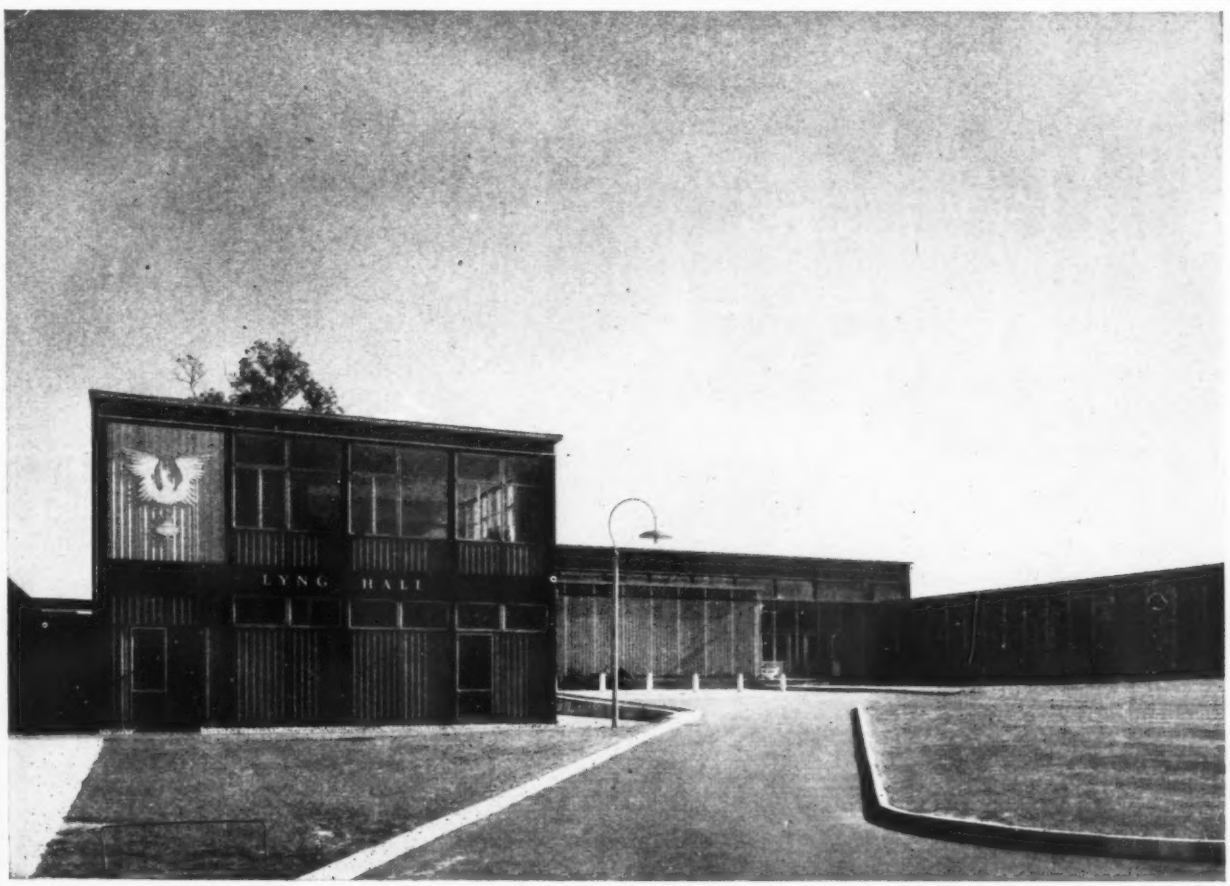
Ground floor plan, administrative block [Scale: 1/16" = 1' 0"]

building illustrated

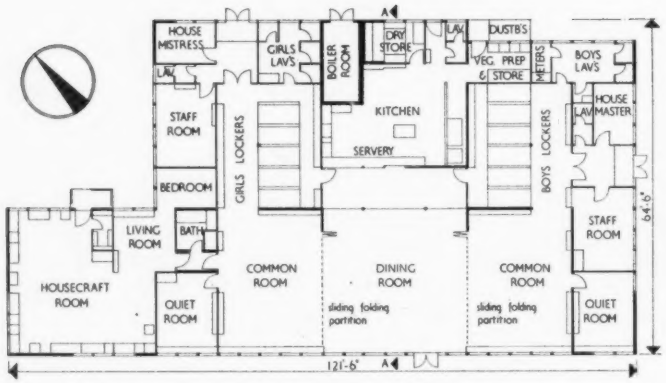


Ground and first floor plans, administrative block [Scale: $\frac{1}{16}$" = 1' 0"]

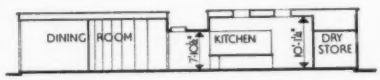
In each school the main halls, the library and the music room have been grouped in one block. This block has a special significance in the life of the school as it serves to emphasize the unity of all the different houses, forms and individuals. The activities which take place here give opportunities for social training and for introducing the children to the atmosphere " of the grand occasion." It is the school's church, theatre and concert hall and should be a gracious and imposing place where any child or visitor might feel welcome. It will be used at times by the whole school, by invited audiences and by forms or small groups for drama, dancing and music. At Lyng Hall this importance has been recognised: the block is sited so that it will eventually be in the centre of the complete school. At Whitley Abbey it is sited close to the science block and the quiet-teaching blocks. In each scheme there was the problem of an enormous hall which could occasionally accommodate the whole school. For all other purposes smaller spaces are preferable. At Whitley Abbey the hall is suitable for normal school use and the additional space required for " the great occasion " has been allowed for by the gymnasium opening on to the stage.



building illustrated



Ground floor plan of house block [Scale: $\frac{1}{32}$" = 1' 0"]

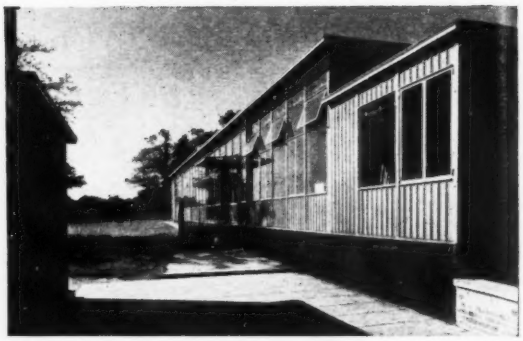


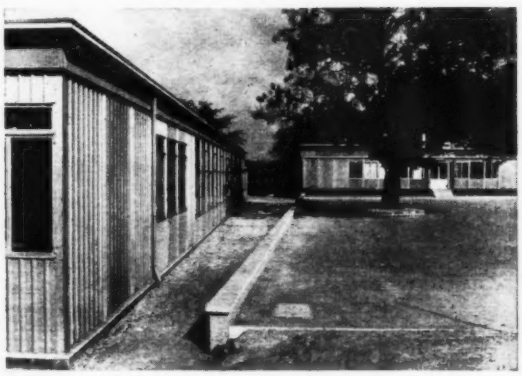
Section A-A [Scale: $\frac{1}{32}$" = 1' 0"]

WHITLEY ABBEY SCHOOL

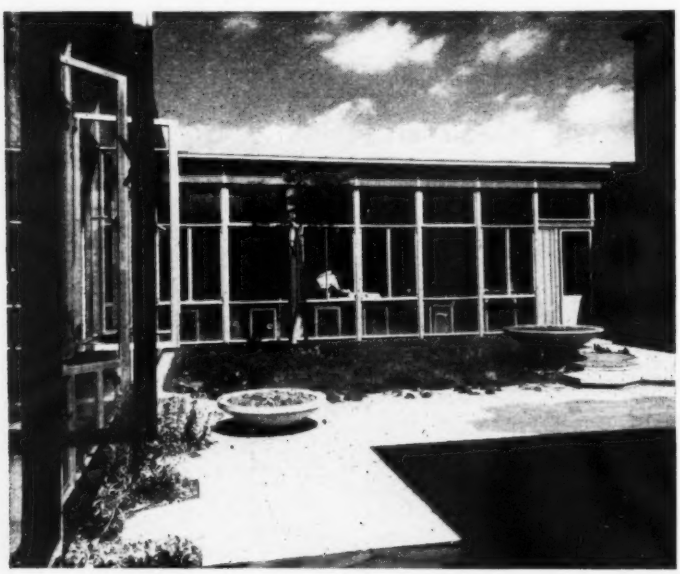
in ABBEY ROAD, COVENTRY

A. G. LING, city architect





Viewpoints 7 (above) and 8 (opposite page): a single-storey house block at Whitley Abbey. Viewpoint 12 (below): a playground adjacent to two house blocks.



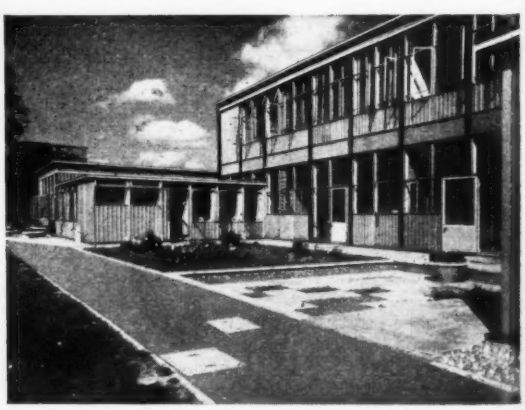
Viewpoint 6 (left) shows the view from the library with the back of the assembly hall on the right. This court illustrates the interesting use of a small fountain as a focal point, with the rough texture of long grass and the smooth surface of the concrete paving forming the simple but dramatic floorscape. The fountain was illustrated as a Working Detail in last week's JOURNAL.

LYNG HALL SCHOOL

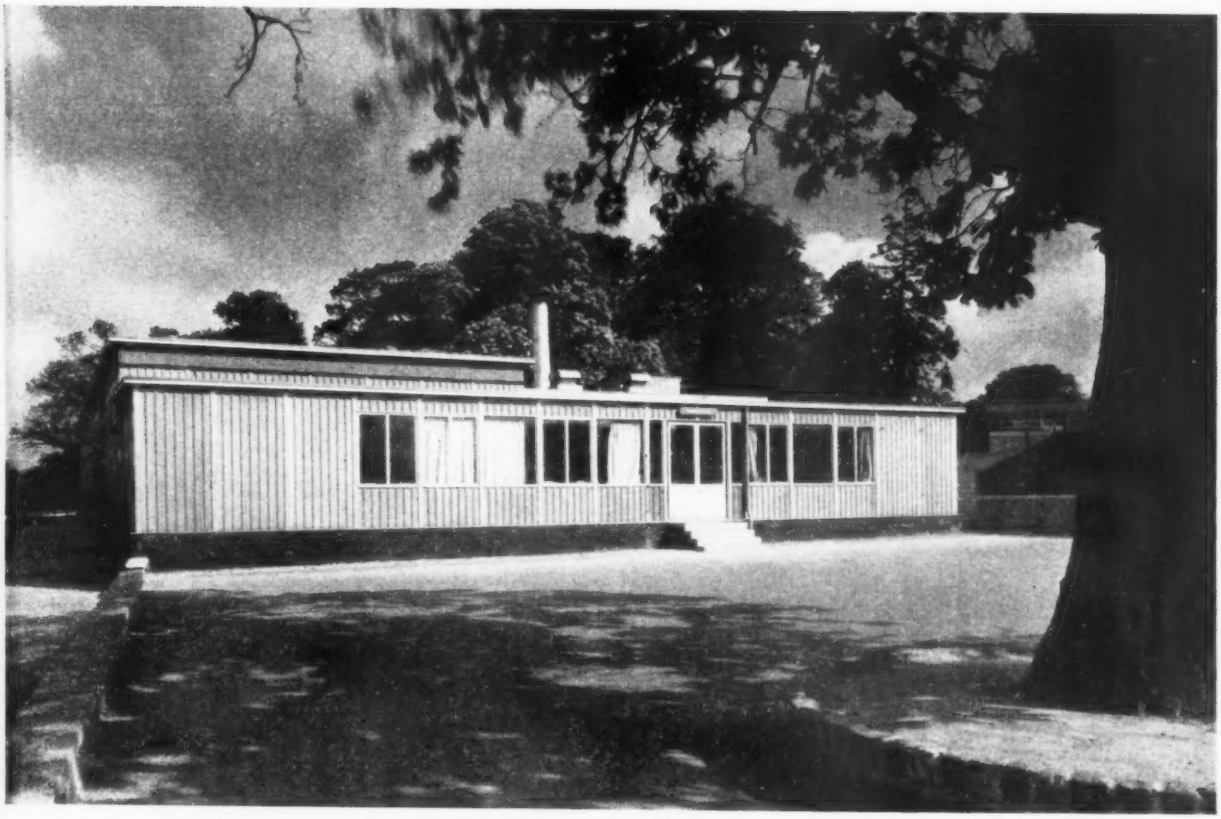
at WYKEN, COVENTRY

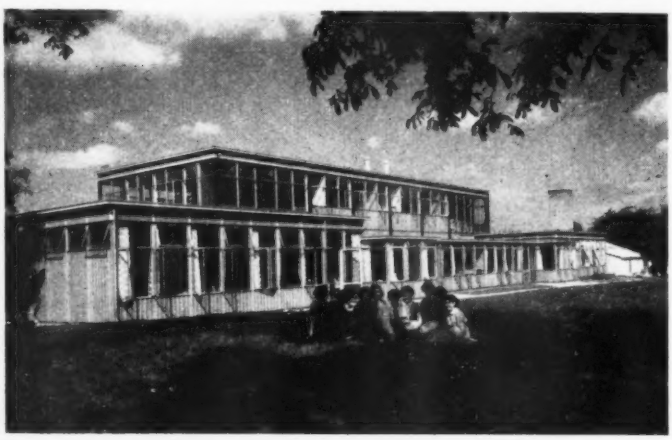
chief architect, M.O E.

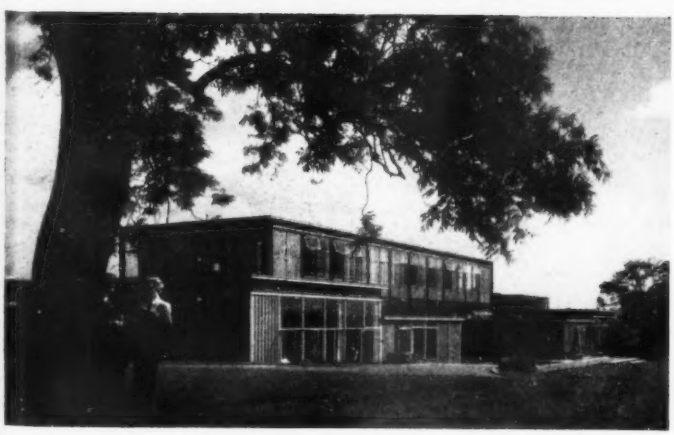
Viewpoints 9 (below) and 10 and 11 (opposite page) show house blocks at Lyng Hall.

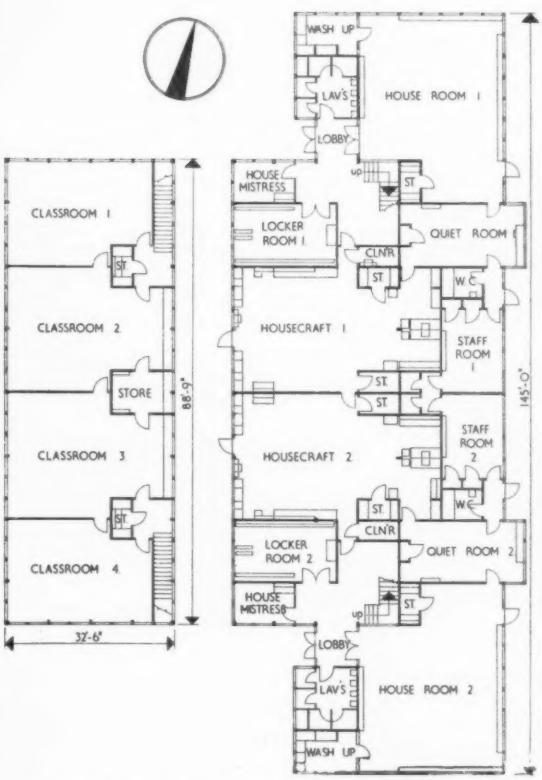


building illustrated









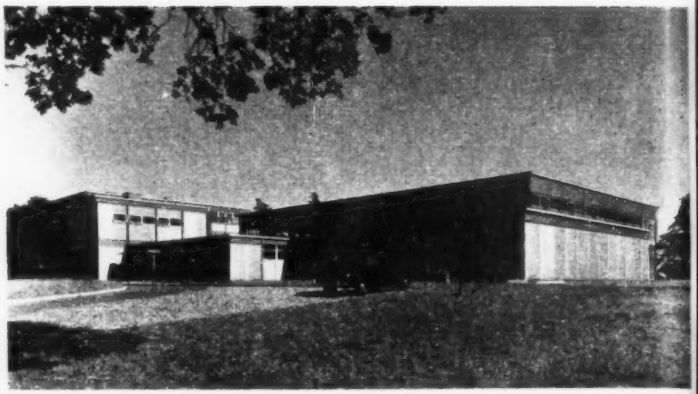
Ground and first floor plans, house blocks A and B
[Scale: $\frac{1}{32}$" = 1' 0"]

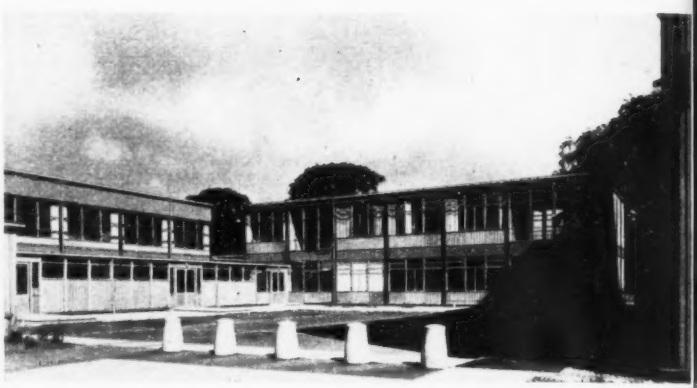
building illustrated

WHITLEY ABBEY SCHOOL

in ABBEY ROAD, COVENTRY

A. G. LING, city architect



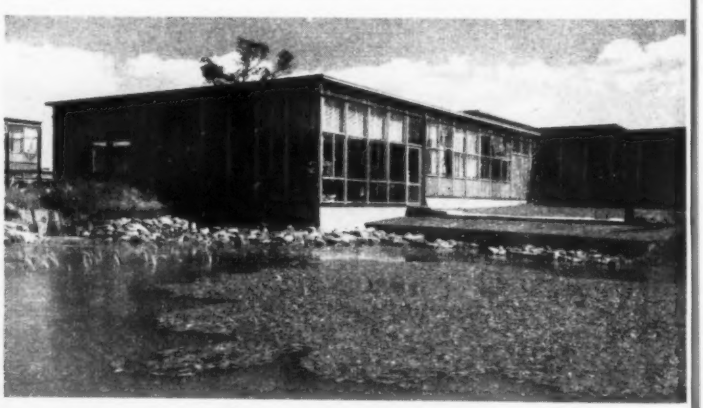


Viewpoint 13 (right): the main entrance drive curving up the hill. Viewpoint 14 (below right): the central courtyard. At Lyng Hall the natural features of the site are more limited. The maximum use has been made of those that exist and a comprehensive landscaping scheme has been carried out. Opposite page (left): a close-up of the three-storey science block at Whitley Abbey indicates the neat detailing and precision of the metal walling. The universal greyness of the all-aluminium facades is relieved only to a small degree by the use of paint applied to window opening lights, multi-storey stanchion cases and fascia. Lyng Hall is fortunate in that new buildings are enhanced by being seen in relation to, and contrasting with the brick and tiles of the converted farm buildings which now accommodate the practical rooms. This is shown in viewpoint 18 (centre, opposite) and is also shown strikingly in viewpoint 20 (opposite, bottom) where the three-storey science block adjoins the converted buildings. Opposite page (right): staircase in entrance hall leading up to administration room.

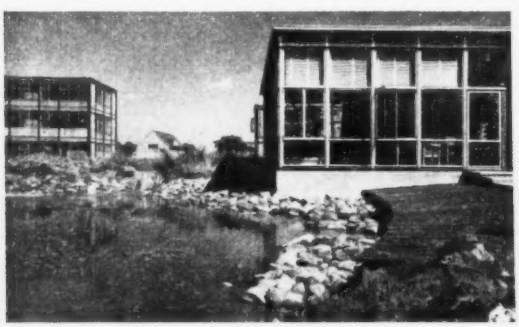
LYNG HALL SCHOOL

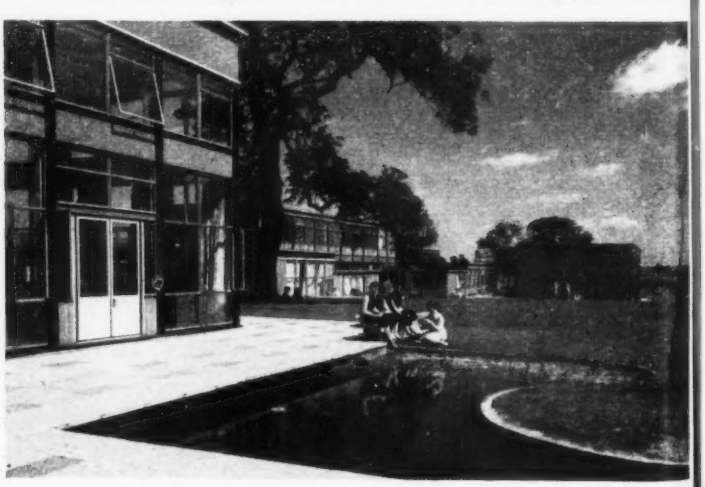
at WYKEN, COVENTRY

chief architect, M.O.E.



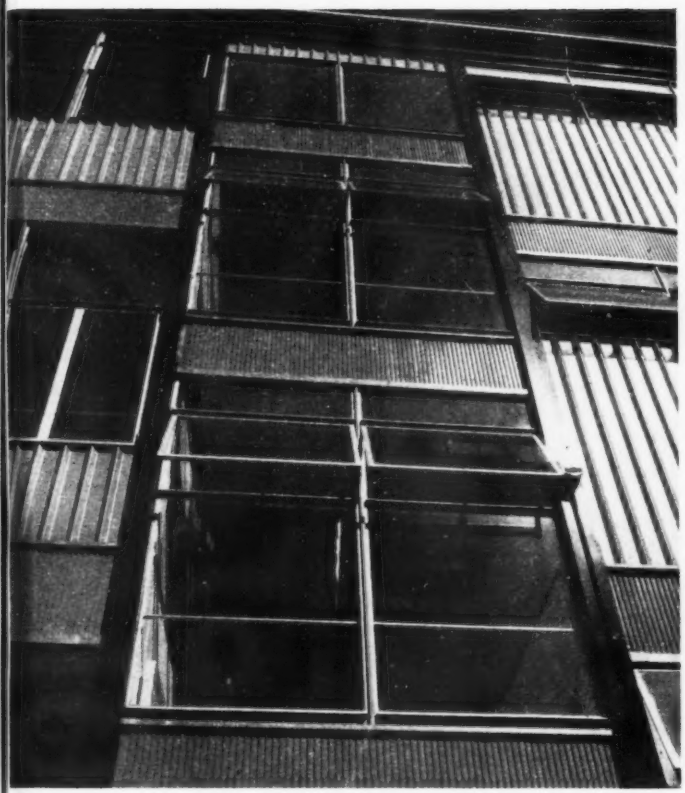
Viewpoints 15 (right) and 16 (below) shows the staff room built into an existing pond, which has been improved by careful planting and detailing. The slatted-timber sun-deck and the old bank of timber are in the canals-and-waterways tradition. Stones have been used to "fuse" the staff room with the water. Their rough texture is seen in dramatic





contrast with both the smooth surface of the pool and the aluminium and glass of the building. There are no paved-playground areas, apart from the tennis courts and a small area near the gymnasium, but the whole site is designed to be made use of by the girls for walking or running about or sitting and relaxing. Viewpoint 17 (right) shows the site being used on a fine day. Sheltered courts and terraces open on to large areas of grass. Attention to site-detailing, such as corners of paths and retaining walls has meant easy maintenance and the absence of worn patches of lawn.

building illustrated



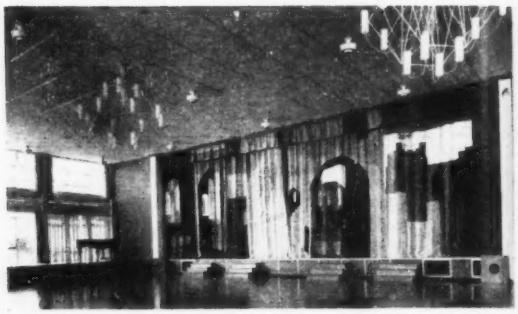
Viewpoint 18 (left) illustrates the site detailing and also shows how skilful grading of banks and dispersed spoil from the excavations has provided a subtle interest to the lawns. Below right (viewpoint 19): the centre block with the housecraft court of house block C on the right. The landscaping and planting contract was run concurrently with the construction of the buildings, as a nominated sub-contract. Bottom right (viewpoint 20): block E from the east.

Second, first and ground floor plans Block E [Scale: $\frac{1}{32}$" = 1' 0"]

building illustrated

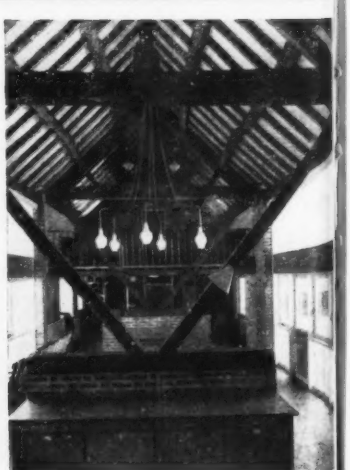
WHITLEY ABBEY SCHOOL

in ABBEY ROAD, COVENTRY
A. G. LING, city architect



Left: the library at Whitley Abbey. Above and opposite page: the assembly hall. The applique curtains, designed by David Holt, are on the theme of the old Whitley Abbey, and dominate the simple rectangle of the hall. The electric chandeliers were designed by Schottlander. Below: the gymnasium which opens on to the stage.

Viewpoint 21 (right): the practical rooms at Lyng Hall (looking down from the science block). To the left of the glass entrance porch are the pottery and modelling rooms and to the right, music rehearsal rooms and the art room. This also shows the successful combination of new and traditional pavings with a grass lawn. Below left: interior of craft room. Below right: the art room. Bottom left: the pottery and modelling room, looking towards the entrance porch.



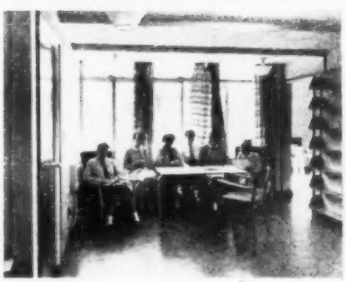
LYNG HALL SCHOOL

at WYKEN, COVENTRY
chief architect M.O.E.

Ground floor plan Block F [Scale: $\frac{1}{32}$" = 1' 0"]

building illustrated

There is a fundamental difference between the treatment of the house blocks at the two schools. At Lyng Hall (right) the classrooms form part of the house blocks, whereas at Whitley Abbey the classrooms are housed in a quiet teaching block. At Lyng Hall, therefore, the house blocks have a greater significance in the educational life of the school. At both schools, dining in the house blocks has avoided the noisy atmosphere of a large dining room. It is interesting to compare the kitchen arrangement at the two schools. At Whitley Abbey the house rooms are in pairs, served by one kitchen. This has presented the architects with the difficulty of siting a number of small blocks so that the kitchen entrances, with their inevitable service yards, are not too prominent. The house rooms, which are separate for boys and girls and linked by a common dining room, are designed to be used only for house activities and dining. The girls' common room may be used in connection with the adjacent housecraft room. At Lyng Hall there is one discreetly-sited kitchen which has a service yard, well screened from the rest of the school. The food is taken in heated trolleys to the house rooms by the kitchen staff. The house rooms at Lyng Hall have been designed to serve as additional teaching accommodation for five periods during the day. Lyng Hall has a human quality which has rarely been previously achieved in schools of this size or indeed in any secondary school. A tutorial room which is also used as a quiet study room by the sixth form (right) is planned adjacent to the house room; this, together with the house staff room and the house mistress's room, helps to create the unity of the house. Extreme right: the advanced chemistry laboratory.

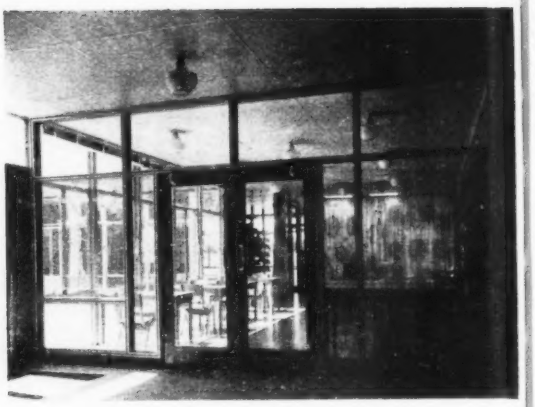


building illustrated

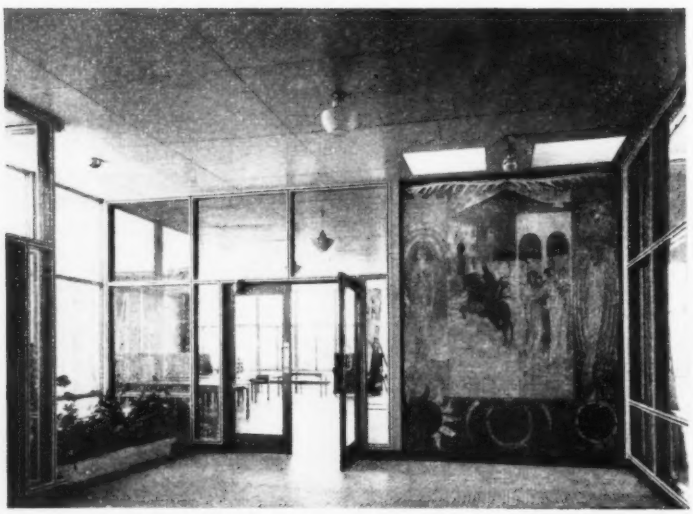
LYNG HALL SCHOOL

at WYKEN, COVENTRY

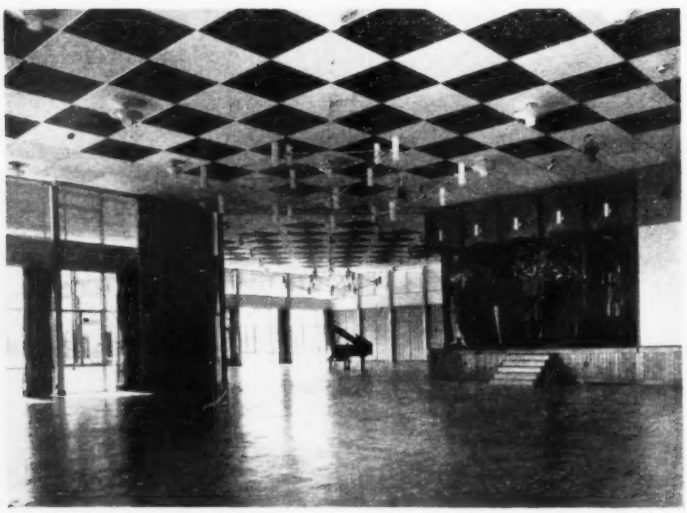
chief architect, M.O.E.

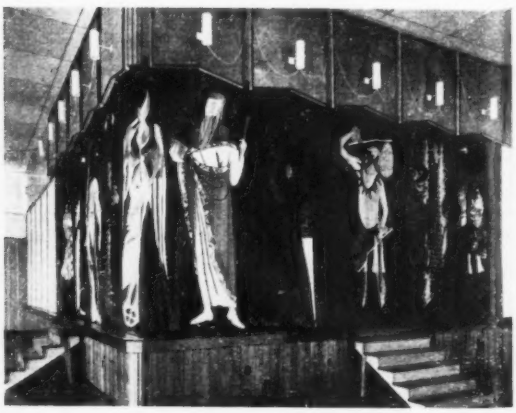


Below left: the entrance, looking towards the music room. Above: the entrance into the library from the entrance hall, with the fountain court on the left. Below: a general view of the library, indicating the use of curtains and wall-paper to create a dignified yet friendly atmosphere. The library is planned around two sides of the fountain court. Bottom left: the assembly hall. A pair of halls have been designed which allow the possible use of a common stage. This arrangement allows for three types of stage performance: firstly, when the diagonal doors are closed, a picture frame proscenium performance to one hall;



secondly, when the doors are open and the audience grouped right around the stage, an arena performance; and thirdly, with the help of demountable stage units, a deep forestage in the Shakespearean tradition (see sketches on page 333). Below: the appliqué curtains on the theme of characters from the Coventry plays, designed by David Holt.





analysis

COMPREHENSIVE SCHOOLS

1. at WHITLEY ABBEY, COVENTRY
A. G. LING, city architect
2. at LYNG HALL, COVENTRY
chief architect, M.O.E.

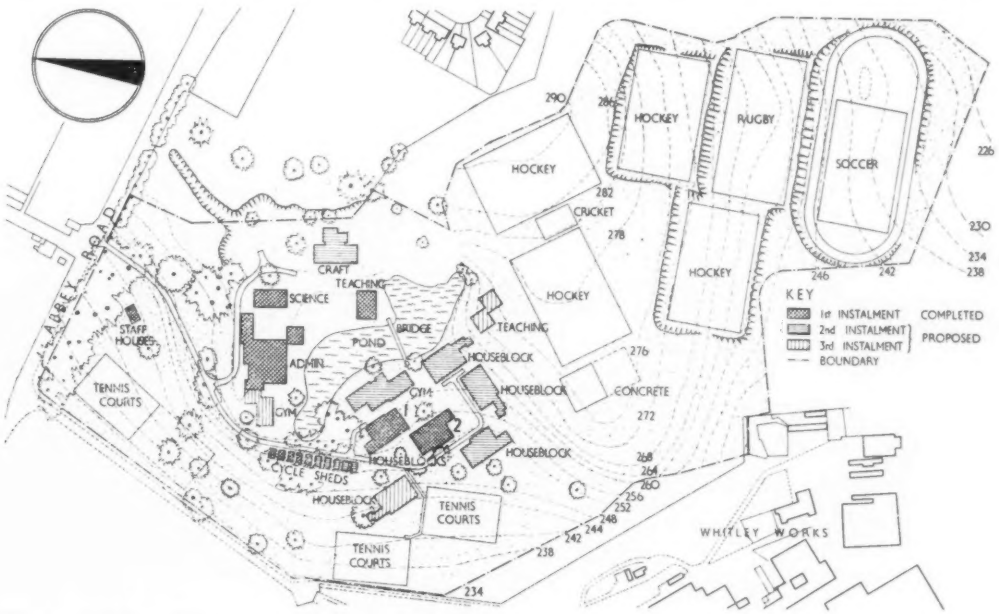
Note: The following information applies in all cases to both schools, except where otherwise stated. (L.H.) refers to work at Lyng Hall only, (W.A.) to work at Whitley Abbey only.

CLIENT'S BRIEF: his stated requirements

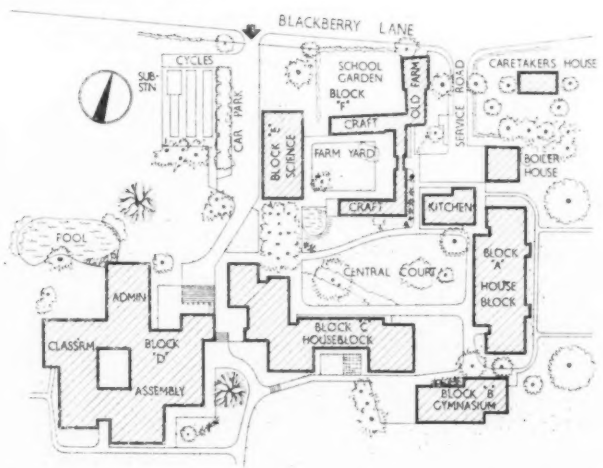
Whitley Abbey is a 10-form entry comprehensive school for 1,650 boys and girls (1,650 girls, L.H.) with a 4-form (5-form L.H.) entry instalment only to be built at first. This was one of the series of schools being built to overcome the shortage of secondary school places in Coventry of which Woodlands School, already illustrated in the JOURNAL for October 13, 1955, was an earlier example. The breaking down of the accommodation into separate blocks related to a house system was again to be used. Whitley Abbey and Lyng Hall were also used as the prototypes of the BAC Mark-2 system of construction developed with the Bristol Aeroplane Co. Ltd., by the Ministry of Education Development Group and Coventry City Architects Department.

SITE: topography, surroundings, access and planting

The Whitley Abbey site, which lies to the south-east of Coventry, near an expanding residential area, was originally a mediaevel Abbey and later a private residence. It has been carefully landscaped over the centuries, although the house itself had practically disappeared, and forest trees remained grouped round a large lake which provided the focal point of the site. The area is steeply contoured and in addition to the specimen forest trees, large areas of the site are thickly wooded. The whole of the planting has been retained except those trees which were in a dangerous condition. The Lyng Hall site lies to the north-east of Coventry near Wyken near an expanding housing area and near the Morris motor factory. It is a hump backed area of 49·5 acres of old stiff clay farm land at the end of a minor ridge. There are views in three directions down the slope of the ground. The old farm building of some character included a farm house, a fine but near derelict barn, stables, cowshed and wagon shed. These have been retained and form a nucleus for the new development. Near the farm is an orchard with walnut trees including one fine specimen. Apart from this and one large ash tree the land was divided by large overgrown hawthorn hedges and has two natural ponds. Many of the old hedges have been retained and the plan related to them, opening up the best views and blocking the others. An extensive planting scheme has been carried out preserving the rural character of the existing land.



Site plan: Whitley Abbey



Site plan: Lyng Hall, further extensions will be built to the west of block D

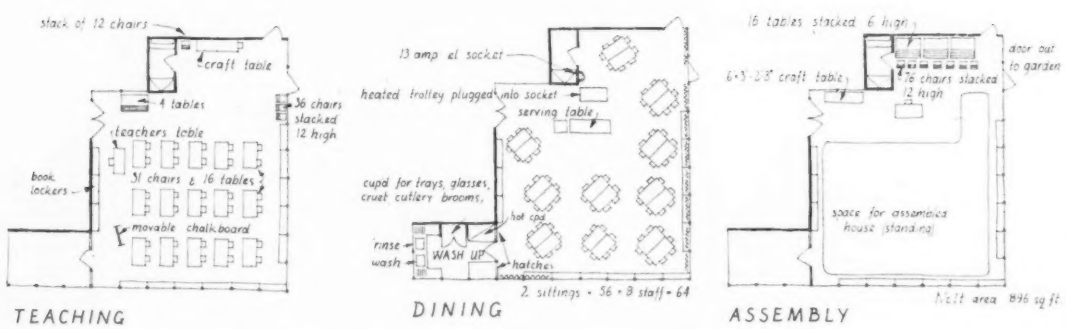
PLAN

The *Whitley Abbey* school has, from the beginning, been conceived on a house system and the deployment of the accommodation in separate blocks has assisted in giving physical expression of the four houses in a way that would not have been possible had the whole of the accommodation been planned as one building. The disadvantage of this form of plan is that a considerable amount of circulation between teaching areas is out of doors. This has been kept to a minimum by association of units in the individual blocks. The house accommodation has been planned in pairs of houses for two reasons. 1, It was decided from the first that food should be cooked as near as possible to its place of consumption, and that for the total school five kitchens would be an economic proposition. Therefore, the houses have to be paired to a kitchen in order that dining can be done by houses. 2, This is a mixed school and whilst it was considered desirable that the children should be able to mix

analysis

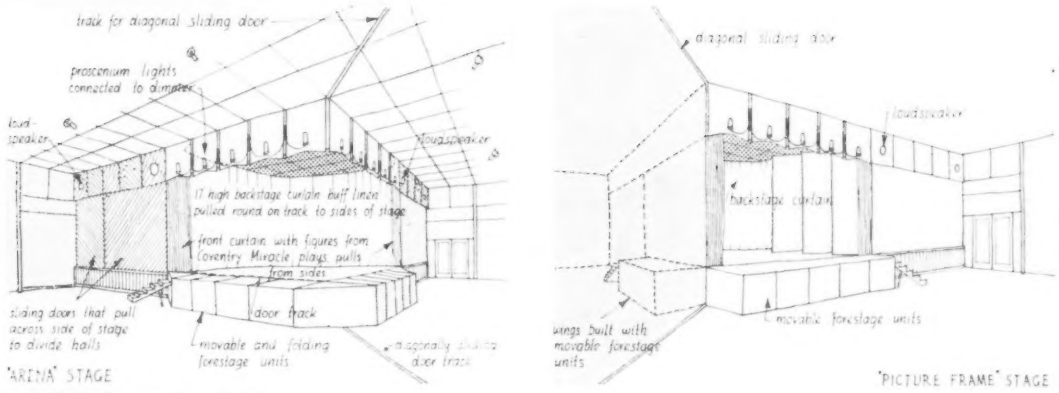
in the house accommodation, it would be advantageous to have separate bases for the boys and girls. House accommodation is, therefore, planned so that both boys and girls have a house room whilst the dining space is common to both. The arrangement of the rooms within the houseblocks has been designed to facilitate the use of the houseblocks for dining, house assemblies, house activities and meetings. The children's book lockers and kit lockers are accommodated in the houses. Some subjects which can be taught by houses will also be done in this accommodation and in addition the housecraft room has been associated with the girls houses to enable practical work to be done in such rooms as the quiet room, house mistress's room, etc. The flat which is associated with the housecraft room has been used as a link between the teaching space and the house common room. The general teaching accommodation and specialist teaching have been kept entirely separate from the house rooms as it was felt that by keeping "foreigners" out of the houseblocks, a more personal and intimate atmosphere will grow in the houseblocks. The general teaching spaces have been planned together in individual blocks, one block containing general teaching spaces and another block science rooms. Some of the science rooms are being temporarily used as craft rooms during the first instalment but will revert to science use as soon as the second instalment, which is now under construction, is completed. The central block has been planned on the site of the original Abbey, overlooking the lake, and contains the main hall and a gymnastic hall which have been planned in juxtaposition for several reasons. It was necessary to be able to assemble the whole school in one place, but, within the cost limits imposed, it was not economic to provide one vast hall for this purpose. A small stage has been provided which serves the main hall for its day-to-day use but which is at the same floor level as the gymnasium behind it and is separated from the gymnasium by sliding folding partitions. When a dramatic performance is put on by the school the whole of the gymnasium becomes part of the stage and is, of course, linked with changing facilities. A movable cyclorama has been provided to define the stage area, the remainder of the gymnasium being used as wings. On a few occasions when it is necessary to assemble the whole school the proscenium curtains and the sliding folding partitions can be opened to their full extent and the head can address the school from the back of the main hall, opposite the stage, using the public address system. The *Lyng Hall* school has from the beginning been conceived as being based on a house system and the deployment of the accommodation in separate blocks has assisted in giving physical expression to the five houses, in a way that would not have been possible had there only been one building. The corollary of this particular solution is that a considerable amount of the circulation is out of doors. The houses, and especially the house rooms within them, are primarily "homes" from which the (150) girls go out to their classes, either to classrooms attached to other houses or to the science blocks, art rooms, etc. It is hoped by this means that even the younger girls will not feel lost in the inevitably large-scale environment that the comprehensive school offers. Meals are taken in the house room to which the food, ready in dishes, is brought in heated trolleys. As a result, there is none of the raucous din normally associated with school meals, but instead the intimate atmosphere of a social occasion. The arrangement of rooms within the house is unusual but permits them to be used in several different ways, which is the only sure basis for experiment. The house room itself is used part of the time for teaching, dining, house assemblies, activities and meetings; it also contains the book lockers. Outdoor clothes are kept in the kit room, with gymnasium kit hung to air on special hangers above. The provision of a house mistress's room and a house staff room is an important factor in building up the life of the house, and ensures that the staff really get to know the children. Sixth form girls have their base in the quiet room which also functions as a tutorial room. It is also possible, as is shown on the plan, to use the quiet room as the nucleus of a housecraft flat; with one corner of the adjacent housecraft room serving as a kitchen, and the small lobby adjacent to the bathroom becoming entrance hall and front door. If, as is possible, the flat were used for week-end instruction, the adjacent staff room (provided with a divan bed) could house a member of the staff. A further possibility for the house, in holiday times for instance when special courses were being run for visiting or foreign children, would be to use the upstairs classrooms as dormitories, the housecraft room for meal cooking, and the house room as a day room. Thus an attempt has been made to make possible, on a small scale, some of the characteristics of a boarding school in accommodation which is still primarily designed for normal teaching. The house room is of course well suited for house teas, and for entertaining visiting teams. The halls in the central block have been juxtaposed in the way shown on the plan for several reasons. It was necessary to be able to assemble the whole school in one place, but thought not the best use of space to provide for this purpose a vast hall for which other uses would be limited; and so the space has been divided as shown; providing two separate halls that can be thrown together for assemblies when the speaker on the stage will be close to all her

Houseroom at Lyng Hall.



Ground floor plan, houseblock B (Lyng Hall), showing uses of houseroom [Scale: $\frac{1}{32}$" = 1'0"]

analysis



Assembly hall stage (Lyng hall)

audience. The arrangement also permits three types of stage performance; firstly, when the diagonal doors are closed, a "picture frame proscenium" performance to one hall; secondly, when the doors are open and the audience grouped right round the stage, an "arena" performance; and thirdly, with the help of demountable units, a deep forestage in the Shakespearian tradition. A fourth possibility, on a summer's evening, is to open the sliding folding doors behind the stage and perform to a small audience gathered in the courtyard outside.

MAIN CONSTRUCTION:

general appreciation

The new buildings (except the caretaker's house) were constructed in the BAC Mark-2 system, the multi-storey parts of which consist of a steel frame supporting aluminium wall panels. The single storey parts consist of aluminium wall panels which themselves support the roof structure. Some large span and high single storey parts are, in fact, built in "multi-storey" construction. (W.A.) The old farm buildings of brick and tile construction were partially retained, reconstructed and used as stated elsewhere. The new buildings (except the caretaker's cottage, boilerhouse, etc.) were constructed in the BAC Mark-2 system, the multi-storey parts of which consist of a steel frame supporting aluminium wall panels. The single storey parts consist of aluminium wall panels which themselves support the roof structure. Some large span and high single storey parts are built in "multi-storey" construction. (L.H.)

	Whitley Abbey		*Lyng Hall*	
cost per sq. ft.	**s**	**d**	**s**	**d**
preliminaries and insurances	**3**	**10**	**3**	**5½**
contingencies	**2**	**0¾**	**1**	**6¾**

STRUCTURAL ELEMENTS

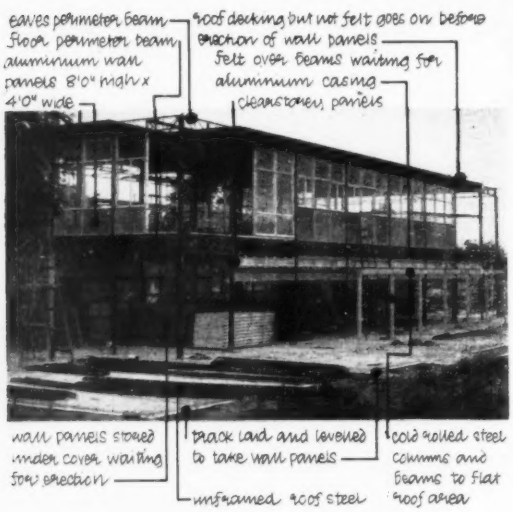
Work below ground floor level: foundation type, basement	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Lightly reinforced slab with edge beam	Single storey	Reinforced concrete		Light wall loading				
Pad foundations with slab and edge beams as before	Multi-storey parts	Reinforced concrete		To support steel framework				
				work below ground floor level	**2**	**11½**	**3**	**0¾**

External walls and facings	*Location*	*Materials*	*Finish*	*Reasons and comments*
Prefabricated aluminium panels with structural edge members	Single-storey parts	Aluminium sections either pressed, rolled or extruded and riveted or bolted together supporting 20-gauge aluminium external skin, glass-silk in-filling and building board lining	Pyluminised aluminium externally	Basic panel type of BAC system
As above with thinner edge members for resisting wind pressure only	Multi-storey buildings	As above	As above	As above

Frame or load bearing element	*Location*	*Materials*	*Beam spans*	*Column grid*	*Reasons and comments*				
Structural steel	Multi-storey buildings	Columns generally reinforced stanchion joists of certain preferred sizes. Beams either reinforced stanchion joists or welded lattice construction	12 ft. to 32 ft. within standard ceiling depth; bigger spans possible with non-standard ceiling depth	Columns set at 8-ft. or 12-ft. centres thus giving planning flexibility of 4 ft.	Conventional steelwork which could be bought in any country but with certain standardised details and sizes where it impinges on the system of prefabricated panels, floors, etc.				
					frame or load bearing element	**8**	**11¼**	**9**	**1**

Upper floor construction	*Location*	*Materials*	*Finish*	*Reasons and comments*
Pre-cast floor beams spanning 8 ft. or 12 ft. resting on fibre-board pads		Reinforced pre-cast concrete	In-situ screed topping	Standard relationship to steel framework. (Widths of beams related to planning grid)

analysis



The Mark II BAC aluminium construction is shown in the progress photograph, left. It was developed by the Ministry of Education Development group and Coventry City Architect's department with the BAC and designed to be rapidly erected using the minimum site labour and to stay within the M O E cost limits. The system is based on a standardized range of prefabricated storey height panels framed and cladded with aluminium. The photograph shows multi-storey construction in which there is a steel frame supporting the roof, floors and panels. For single-storey construction only the panels are used with interlocking edge extrusions of sufficient strength to support the roof. Frames and panels are related to a 4-ft. grid. Right, a view of the staff room at Lyng Hall shows the light single-storey panel construction internally.

					Whitley Abbey s	d	*Lyng Hall* s	d
Staircases	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Steel	All internal stairs	Stringers; m.s. flats. Treads; welded steel pans filled with concrete	Sheet p.v.c. treads	Rapidity of construction of steel staircase coupled with anti-drum characteristic of concrete. No risers, thus permitting good light penetration through staircase flights				
				upper floor construction and staircases	3	2	2	3½
Roof construction	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Galvanised steel decking laid flat on top of steel roof beams	Throughout	Steel	Two layers of mineralised felt on fibreboard	Dry construction lightweight. Minimum depth to fit in with flashing upstands. Sheet sizes relating to planning grid				
				roof construction	3	5½	3	10½
Roof lights	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Standard box light to fit into one grid square	Generally	Pressed aluminium curb fixed to roof construction, with extruded aluminium glazing frame fixed to its top, this frame pivoted in ventilating type and pressed aluminium rain shield fixed to it. Roof light tunnel below through ceiling lined with plasterboard		In order to permit factory production of standardised light it was decided to use simple box light and to use a number of them where a long range of lights were required				
				roof lights		5½		5
Windows	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Extruded aluminium windows, factory-fixed into panels	Throughout	Aluminium	Wire-woolled after extrusion	Standard elements of BAC Mark-2 construction				
External doors	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Aluminium glazed doors	Throughout	Extruded aluminium sections with aluminium sheeting panels. Wood edging fillets provided round all doors and frames to facilitate site fixing		Standard item of BAC Mark-2 construction				
Glazing	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Generally 32-oz. glazing fixed in factory. ¼-in. polished plate wired glass used in all doors	Throughout			All panels delivered to site glazed ready for erection and internal decoration				
				external walls and facings, windows, external doors and glazing	13	3½	13	9½

analysis

PARTITIONING

Internal partitions	*Location*	*Materials*	*Finish*	*Reasons and comments*	*Whitley Abbey* s	d	*Lyng Hall* s	d
Prefabricated plasterboard partitions	All internal partitions excepting certain clerestory positions	¾-in. plasterboard skins stuck to honeycomb core. Total thickness 2¼ in.	Plasterboard generally left exposed and painted with corrugated paper tape masking joint	Cheap, lightweight, easy to handle, rapidly erected with the very minimum of wet work				
Screens	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Glazed wood screens	Entrance halls and certain rooms where visual continuity was desirable	Generally softwood, but hardwood in main hall area	Soft wood painted; hardwood polished	Economy of making structural members in softwood				
				internal partitions and screens	2	7¾	2	2¾
W.C. partitions	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Partitions as general partitioning	Generally	Plasterboard	Painted	This partitioning generally built from off-cuts salvaged from room partitions when holes for doors, etc., were cut in them				
Internal doors	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Flush and glazed	Teaching areas	Frames painted softwood, doors flush—agba-faced ply	Two coats synthetic varnish. Matt finish					
				w.c. partitions and internal doors		9¾	1	6½
Ironmongery to internal doors	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Lever handles, mortice latches and or locks. Kicking plates	General	BMA	Satin chrome finish					
				ironmongery to internal doors		5½		3

FINISHINGS

Floor finishes	*Location*	*Materials*	*Finish*	*Reasons and comments*				
⅛-in. cork tiles, 9 in. × 9 in.	Library, house rooms, headmaster's room, staff common room (W.A.)		2 coats plastic seal	Quietness and durability				
¼-in. cork tiles, 12 in. square	Library (L.H.)		2 coats plastic polish	High quality and quiet. Little maintenance				
1-in. nominal hardwood blocks (opepe)	Main hall, housecraft rooms (W.A.)		2 coats plastic seal	High quality and suitability for purpose				
¼-in. chipboard tiles	Halls, staff rooms (L.H.)		Seal and plastic					
Studded rubber tiles	Main entrance (W.A.)		Self-gloss emulsion polish	Quietness and durability				
Studded rubber tiles	Certain entrances (L.H.)		Self-gloss emulsion polish					
2-mm. p.v.c. sheet	All teaching spaces, entrance to teaching blocks, staircases (W.A.)		Self-gloss emulsion polish	Quietness and durability. Cheaper than rubber				
2-mm. p.v.c. sheet	Teaching areas (L.H.)		Self-gloss emulsion polish					
Quarry tiles	Lavatories, kitchens, changing rooms							
P.v.c. in-situ screeded	Houseblock entrances (W.A.) Stores (L.H.)							
Shot-faced "adamantine"	Showers (W.A.)							
				floor finishes	4	3¼	3	9
				stage				3½
Wall finishes	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Paint	Woodwork generally, sliding partitions in houseblocks and main hall (W.A.)	Oil paint						
Paint	Circulation areas, etc. (L.H.)			Hard wearing				
Paint	Generally	Emulsion paint						
Wallpaper	Library and flats (W.A.)			To give interest and domestic character				
Wallpaper	Staffrooms, library, halls, etc. (L.H.)							
				wall finishes and column casings	1	2		11½
Ceiling finishes	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Plasterboard	Most rooms	Generally ¾-in. plasterboard, plain or perforated. In some areas ½-in. plasterboard used for fire resistance	Decorated direct on to board	A proprietary dry construction suspended ceiling related to planning grid with some areas perforated with glass silk behind for sound absorption				

analysis

Ceiling finishes: continued	*Location*	*Finish*	*Reasons and comments*	*Whitley Abbey* s	d	*Lyng Hall* s	d
Fibre board	Some single-storey areas	Decorated	Provided as part of the system in certain thin flat roofed rooms where conventional suspended ceilings were not used				
			ceiling finishes	2	7	2	11½

Decorations	*Location*	*Paint types*	*Munsell or other reference*	*Colour scheme and comments*			
See above under wall finishes, etc.	Generally		Archrome range used throughout				
				decorations	1	6	1	7¾

FITTINGS

Cloakrooms	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Cloakroom fittings, coat hooks	Entrance to each block. Cloakrooms	Aluminium	Anodized	Each separate block, house-blocks included, needs facilities for coat hanging				
Kit lockers	Cloakrooms	Wire mesh	Galvanized					
				cloakroom fittings		2½		1½

Other fittings	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Book lockers in units of 4 and 16; 160 to each house room	House rooms	Sheet steel (W.A.)	Stove enamel (W.A.)	"Up-and-over" doors (W.A.)				
		Abura carcase, birch buckboard doors with mahogany lipping (L.H.)	Catalyzed lacquer (L.H.)	Doors have moulded finger grip edge, no handles. Good appearance of light wood adds greatly to character of house rooms (L.H.)				
Wall benching	Teaching rooms, science rooms	Softwood framing, teak tops. Mahogany ply-faced doors. Iroko drawer fronts (W.A.)	Raw linseed oil to bench tops. Softwood painted					
Standard shelving: metal brackets fixing to slotted steel channels	Teaching rooms and stores (W.A.)	Beech framing and beech faced ply doors. Tops in softwood or hipboard, lino covered. Abura or Iroko in science laboratories (L.H.) Softwood and hardwood shelves (W.A.)	Softwood front edge painted. Hardwood plastic polish	To store books, housecraft equipment, science equipment				
Library shelving	Library (W.A.)	Iroko (W.A.)	Plastic polish	Book storage				
Standard shelving	Teaching rooms, librar and stores (L.H.)	Softwood shelves, steel and abura (L.H.)	Plastic polish and stove enamel	Storage for books, housecraft and science equipment, etc.				
Pin-up boards	General	Medium hardboard with hardwood surround	Emulsion paint and 2 coats synthetic varnish					
Chalkboards	Teaching spaces	Chalkboard with hardwood surround	2 coats synthetic varnish					
				other fittings	2	6	3	0½

Kitchen equipment	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Standard gas-operated schools equipment								
				kitchen equipment		0½		

Gym. kit lockers	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Gymnasium kit is kept in rooms in houses. Kit is hung on a special hanger	Houseblocks	Galvanized steel		Kit can be kept compactly on hangers and airs freely. Towels are collected in changing room for laundering				
Benches: spaces for 60 in each changing room	Adjacent to gymnasium	African mahogany	Plastic polish					
				gym. kit lockers		0½		11¾

SERVICES

Rain water disposal	*Location*	*Materials*	*Finish*	*Reasons and comments*
3-in. down pipes (W.A.)	External face of building	Aluminium	Painted	
			external plumbing and rainwater disposal included with roof construction	

Plumbing internal: waste disposal	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Sinks and basin wastes	General	Prefabricated copper	Painted (W.A.)					
			Stove enamelled white and chromium plated nuts in lavatories (L.H.)					
Science laboratory sinks	Physics, chemistry	Acid resisting cast iron and polythene (W.A.)	Cast iron painted. Polythene natural (W.A.)	Corrosion resistance, light weight				
		Prefabricated polythene factory welded, moulded, and screwed polythene fittings (L.H.)	Natural block (L.H.)					
				plumbing internal	2	4½	1	4¼

analysis

					Whitley Abbey s	d	*Lyng Hall* s	d
Hot water storage	*Location*	*Materials*	*Capacity*	*Reasons and comments*				
Local calorifiers (W.A.)	Adjacent to points of consumption	Galvanized steel	Total capacity 1,000 gallons (W.A.) Total capacity 1,250 gallons (L.H.)	Economy				
				hot water storage included in heating installation				
Cold water storage	*Location*	*Materials*	*Capacity*	*Reasons and comments*				
Local tanks (W.A.)	Tanks in each block	Galvanized steel	1,250 gallons	All serving as supply tanks to hot water service (other cold supplied direct from mains). Incoming main 4 in.				
				cold water storage included in internal plumbing				
Plumbing: external sanitary fittings	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Lavatory basins, sinks, lavatory sinks, w.c. pans, urinals, drinking fountains	Generally	White glazed fireclay						
				sanitary fittings		8½		9½
Heating installation: heat exchanger type	*Location*	*Criteria temp.*	*Air change rate*	*Reasons and comments*				
Heat exchanger types. Forced warm air cabinets built in plasterboard partition to form a vertical cabinet 4-ft. 2-in. high	One cabinet in most rooms; two in halls and gymnasium	In accordance with the MOE building regulations		As low level outlets to heaters has been shown to save fuel, a vertical cabinet of lower height (4 ft. 2 in.) was designed. A neat metal access door was designed (L.H.)				
Boiler type and capacity	*Location*	*Head load and fuel type*	*Stoking method*	*Reasons and comments*				
A boilerhouse has been located in each separate building block, the fuel being fed round the site in 3-in. main (W.A.)		200 seconds, oil	Fully automatic burners	Economy in capital expenditure As low level outlets to heaters has been shown to save fuel, a vertical cabinet of lower height (4 ft. 2 in.) was designed. A neat metal access door containing louvres was designed (L.H.)				
	Houseblocks 1 and 2	1 cast-iron sectional boiler (79,000 B.Th.U.'s per hour in each)						
	Administration block	1 cast-iron sectional boiler (1,642,000 B.Th.U.'s)						
	Science block	1 cast-iron sectional boiler (1,090,000 B.Th.U.'s)						
	Teaching block	1 cast-iron sectional boiler (904,000 B.Th.U.'s)						
		3 cast-iron sectional boilers. Each 1,812,000 B.Th.U.'s (L.H.)		Two of these boilers heat a main which runs from block to block. These serve heater cabinets and calorifiers for hot water (L.H.)				
Water heater type	*Location*	*Fuel type*	*Stoking method*	*Reasons and comments*				
By indirect cylinders in each block with immersion heaters for summer use								
				heating installation	6	7½	5	1¼
Drainage: type of system	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Separate soil and storm water	General	Soil drains: stoneware "Bests," storm drains: stoneware "Seconds"	Manholes, precast concrete (L.H.)	130-ft. length of pitch fibre soil drain and a short length taking effluent from advanced chemistry laboratory (L.H.)				
				drainage	1	10	1	2½
Kitchen ventilation	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Hood and fan	Over cooking equipment in each houseblock							
Fan and window	Over rinsing sink (L.H.)							
				kitchen ventilation		0½		
Gas installation	*Location*	*Materials*	*Finish*	*Reasons and comments*				
Gas points provided in all science laboratories and for cooking in kitchens	Housecraft rooms, science laboratories	Class "B" black steel tube						
				gas installation		8¾		2½

analysis

					Whitley Abbey s	d	*Lyng Hall* s	d
Electrical installation: source and fitting type	*Location*	*Illumination level*	*Quality*	*Reasons and comments*				
"Tungsten" throughout								
Generally a large number of small white opal glass fittings used—100 to 150 watt	Classrooms	10 lumens sq. ft.		To obtain an even distribution of light and conform with the MOE building regulations				
200-watt recessed reflectors	Gymnasium							
Chandeliers	Main hall (W.A.)							
	Art rooms and halls (L.H.)							
Wiring and switching types	*Location*	*Materials*	*Finish*	*Reasons and comments*				
P.v.c. cable system	Generally	Distribution supported on ceiling bearers and run down inside partitions		Cable installation without conduit used as floor and roof space allows free runs for cables				
Micro-gap type switches								
Power supply type	*Location*	*How distributed*		*Reasons and comments*				
415 240 volt, 3 phase, 4 wire, 50 cycle supply	Main supply brought into science block	Distributed between blocks by underground cable						
				electrical installation	**2**	**9**	**2**	**10**
Paved areas	*Location*	*Materials*		*Reasons and comments*				
8 bituminous paved tennis courts		Patent grading of bitumen macadam		This item covers areas required by building regulations				
				playgrounds and paved areas	**1**	**4**	**1**	**3**
				total net cost per sq. ft.	**70**	**8½**	**68**	**1**
				external works*	**12**	**2**	**10**	**1¾**
				total gross cost per sq. ft.	**82**	**10½**	**78**	**2¾**

* external works = drainage beyond manholes adjacent to buildings, roads, paths and fencing; site layout and planting; playing fields.

THERMAL INSULATION

Type	*Location*	*U-value*	*Reasons and comments*
External pre-fabricated wall panels include glass wall and infill	General	0·20	

SPECIAL ACOUSTICAL TREATMENT

Sound absorption material	*Location*	*Absorption coefficient*	*Reasons and comments*
Perforated gypsum plaster ceiling boards	General		

FIRE

Structural precautions	*Grade of protection apparatus*	*Sprinklers*	*Reasons and comments*
Fibrous plaster to columns and encasement of some beams in plaster board			To conform to MOE fire bulletin

Planning precautions	*Access for fighting*	*Means of escape*	*Reasons and comments*
Planning to conform to MOE fire bulletin			

REFUSE DISPOSAL

Method	*Type of refuse*	*Waste recovery*	*Reasons and comments*
Gas-fired incinerator	All combustible refuse		
Normal refuse collection	All incombustible material		

TIME SCHEDULE

Drawings: sketch plans commenced	*Tender date*	*Work commenced*	*Work completed*	*Type of contract*
August, 1951 (W.A.)	April, 1953 (W.A.) August, 1953 (L.H.)	August, 1953 (W.A.) Autumn, 1953 (L.H.)	September, 1955	RIBA modified for use of local authorities

analysis

RATIOS

Area of enclosing walls / Total floor area	= 0·79 / 1 (W.A.)	Area of windows (including external doors) / Total floor area	= 0·38 / 1 (W.A.)
	0·86 / 1 (L.H.)		0·423 / 1 (L.H.)
Area of solid wall / Total floor area	= 0·41 / 1 (W.A.)	Total roof area / Total floor area	= 0·71 / 1 (W.A.)
	0·441 / 1 (L.H.)		0·76 / 1 (L.H.)

COST ANALYSIS

Readers will have noted that Lyng Hall school includes the rehabilitation of some existing structures. To provide a closer comparison we have published only the cost analysis of those buildings incorporating BAC construction. Below is a table showing the buildings compared, with their floor areas.

WHITLEY ABBEY

	Single storey	Two storey	Three storey	Total area in sq. ft.
Teaching block			9,705	9,705
Science block			11,997	11,997
House block	6,452			6,452
House block	6,452			6,452
Administration block	13,009	4,810		17,819
	25,913	4,810	21,702	52,425

LYNG HALL

	Single storey	Two storey	Three storey	Total area in sq. ft.
Teaching, science and craft block			9,987	9,987
Gymnasium block	3,893			3,893
House block	4,009	5,572		9,581
House block	5,868	8,350		14,218
Administration block	17,551			17,551
	31,321	13,922	9,987	55,230

No. of form entries	First 4 forms of 10 form entry (WA) First 5 forms of 10 form entry (LH)			
No. of cost places	750 (WA) 910 (LH)			
Floor area sq. ft.	52,425 (WA) 61,791 (LH)			
No. of sq. ft. per place	70 (WA) 68 (LH)			

	£ s. d.	
Net cost	185,325 6 10	(WA)
	208,756 1 1	(LH)
Net cost per place	247 2 0	(WA)
	229 8 1	(LH)
External works	31,886 16 0	(WA)
	31,323 2 10	(LH)
Gross cost	217,212 2 10	(WA)
	240,079 3 11	(LH)
Gross cost per place	289 12 3	(WA)
	263 16 6	(LH)

Note: The above figures for Lyng Hall are for the whole 5 form entry, and include the rehabilitated buildings

COST COMMENTS

The most interesting feature of this comparison between the two schools is the influence of design on frame costs. As will be seen from the analysis of the floor areas of the component blocks of each school into storeys, it could be expected that as Lyng hall has a smaller ratio of multi-storey / single-storey than Whitley Abbey, it would show lower frame costs; this is not the case and a closer look at these costs shows that the Lyng Hall gymnasium and administration blocks, although single-storey have multi-storey type frames. The single storey. house blocks although not framed buildings, incorporate stanchions and beams to carry large span roofs, their "frame" costs being much cheaper than those of the multi-storey buildings.

At Lyng Hall the gymnasium block frame is costing more than that of the three storey building; this is influenced mainly by the need of greater storey heights in gymnasia and larger spans, necessitating a multi-storey type frame. This is again reflected in the administration block which contains two large halls of normal gymnasium height, and it therefore follow that the part two storey Whitley Abbey administration block is more expensive still. Examination of the costs of the two houseblocks at Lyng Hall shows a difference between them related to the proportion of two storey they contain. The tables of the analysis, above and below, will clarify this. One might ask why there is a difference of 5½d. between frame costs of the two three-storey teaching blocks. Could this be that the plan shape at Lyng Hall is more economical than that at Whitley Abbey, which has a greater span, or are other (price) factors involved?

The BAC carcass should be slightly less expensive in multi-storey buildings, due to savings in structural edge members, and this expectation is realized when the Whitley Abbey figures are compared with those of Lyng Hall.

It may be noticed that there is an element "stage" in the cost analysis of Lyng Hall; this is a case of an item not fitting conveniently into any of the conventional elements and it was thought best to keep it as an element of its own. The placing of the kitchen in the rehabilitated buildings at Lyng Hall explains the absence of costs for "kitchen equipment and ventilation" and the low cost of gas installation.

COST OF FRAME ELEMENT PER SQ. FT. OF FLOOR AREA

WHITLEY ABBEY

Teaching block	Science block	House block	House block	Admin. block
s d	s d	s d	s d	s d
10 4¾	10 4½	5 8	5 8	9 6½

LYNG HALL

Teaching, science block	Gym.	House block	House block	Admin. block
s d	s d	s d	s d	s d
9 11½	10 2	8 4	9 0½	8 10

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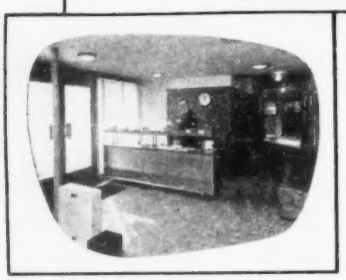
Medical Officer's Suite. Sound proofed and double glazed.



Main foyer and corridor

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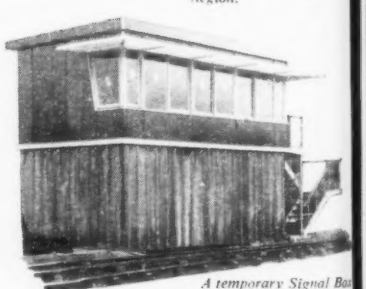

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working detail

FUME CUPBOARD: LABORATORIES AT EGHAM

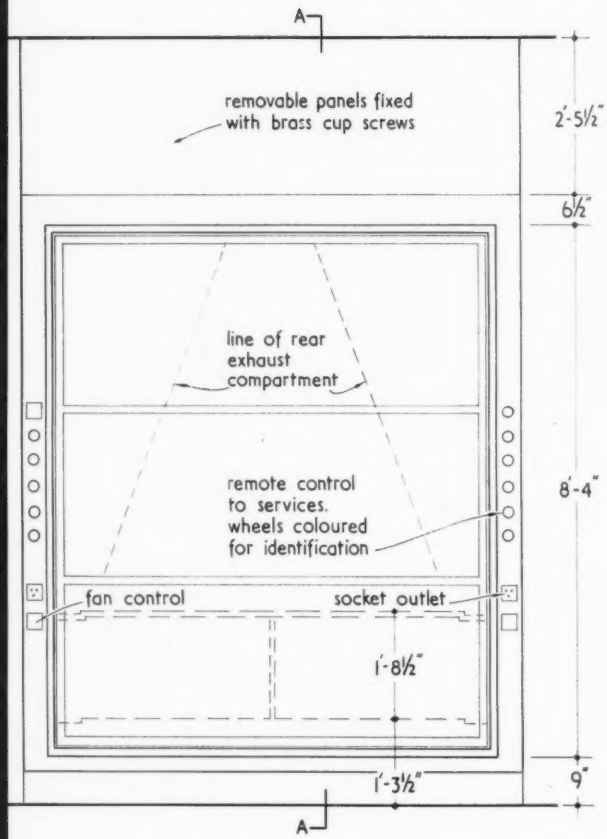
Walker, Harwood and Cranswick, architects; R. A. Cox, architect-in-charge

The service connections in the building are designed to permit fume cupboards to be connected at 10 ft. intervals, as required. The fume cupboards are therefore demountable and are designed to permit easy connection to the services. They are also provided with a double work-top: a removable top at normal bench height and a low level work-top to permit the use of tall equipment.

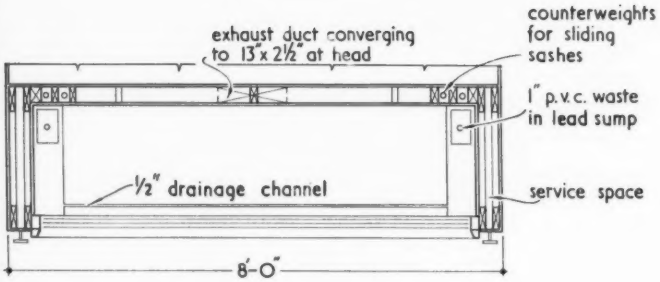
working detail

FUME CUPBOARD: LABORATORIES AT EGHAM

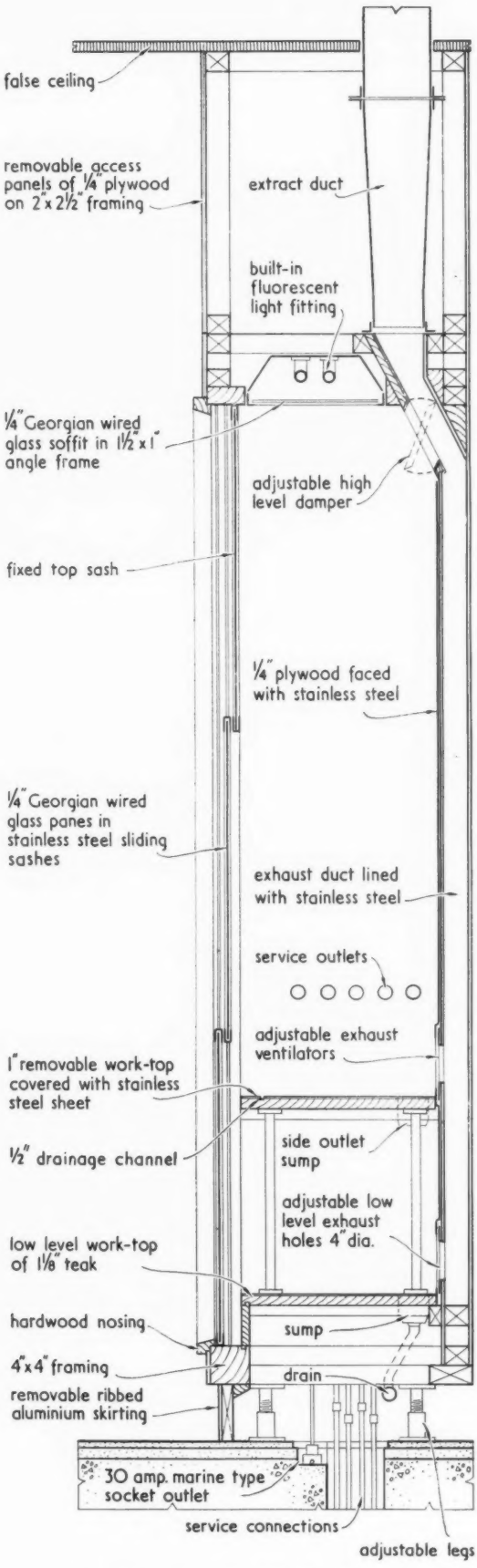
Walker, Harwood and Cranswick, architects; R. A. Cox, architect-in-charge



ELEVATION. scale ⅜" = 1'-0"



PLAN. scale ⅜" = 1'-0"



SECTION A-A. scale ¾" = 1'-0"

Architects' Journal 28.2.57

working detail

ROOFS AND CEILINGS: 34

ROOF: FACTORY AT HEMEL HEMPSTEAD

Ove Arup and Partners, designers; Philip Dowson and Francis Pym, architects-in-charge

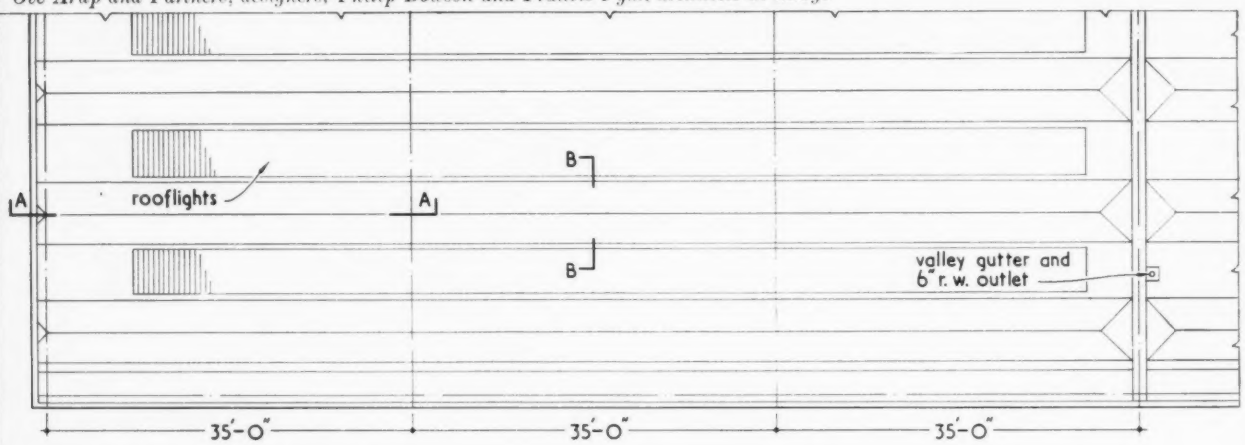
This detail shows one method of freeing the wide span industrial roof from the display of "knitting" (i.e., the multiplicity of small scale engineering parts) which is all too common. The ceiling of ⅜-in. asbestos board conceals a system of composite stressed skin timber and steel triangular space frames. Steel is used for the top and bottom booms to take the main bending stresses of tension and compression. These booms are joined by timber triangulated struts glued and screwed to the steel. The ⅜-in. ply decking, on which the roofing felt is supported, being glued to the timber struts, acts as a flange for the junctions and a web for the two canted sides of the space frame.

working detail

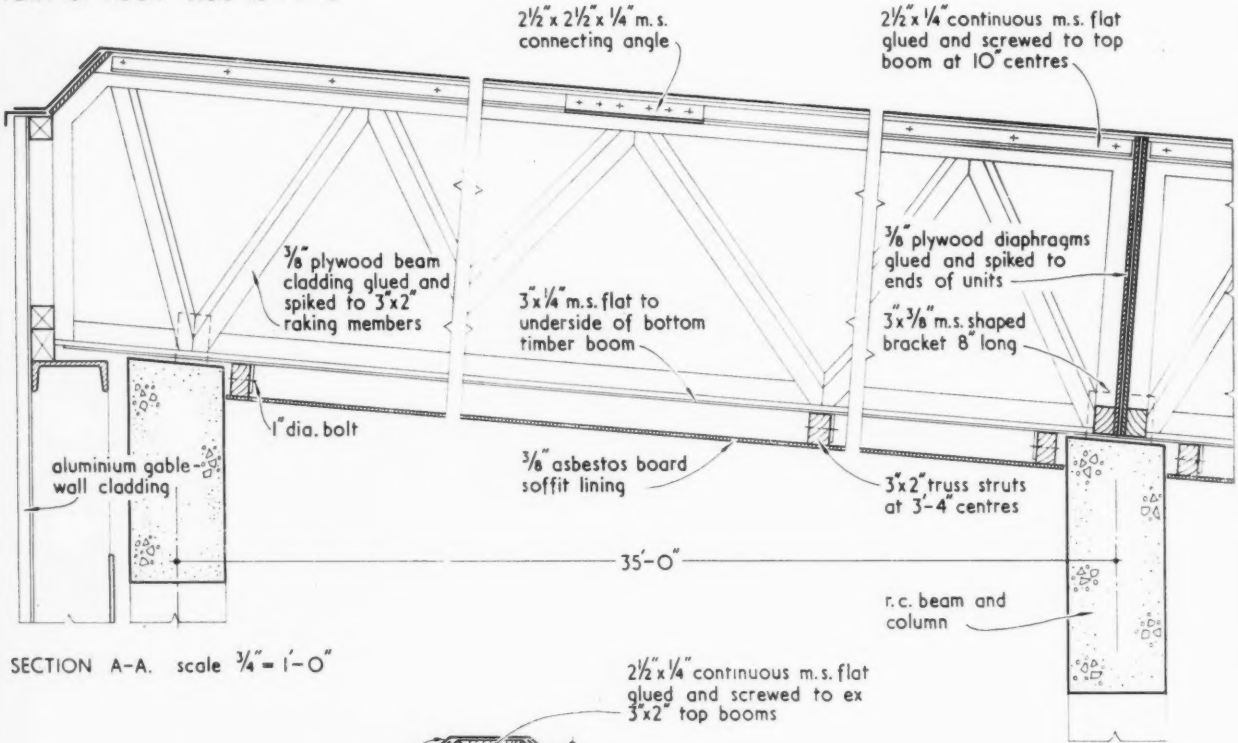
ROOFS AND CEILINGS: 34

ROOF: FACTORY AT HEMEL HEMPSTEAD

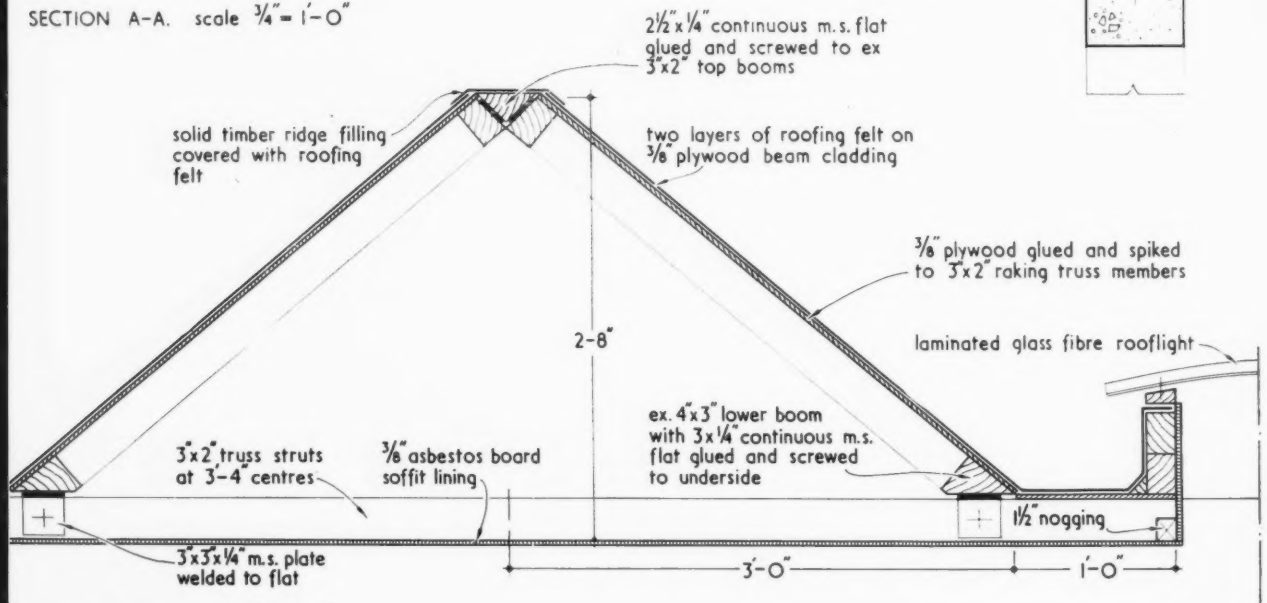
Ove Arup and Partners, designers; Philip Dowson and Francis Pym, architects-in-charge



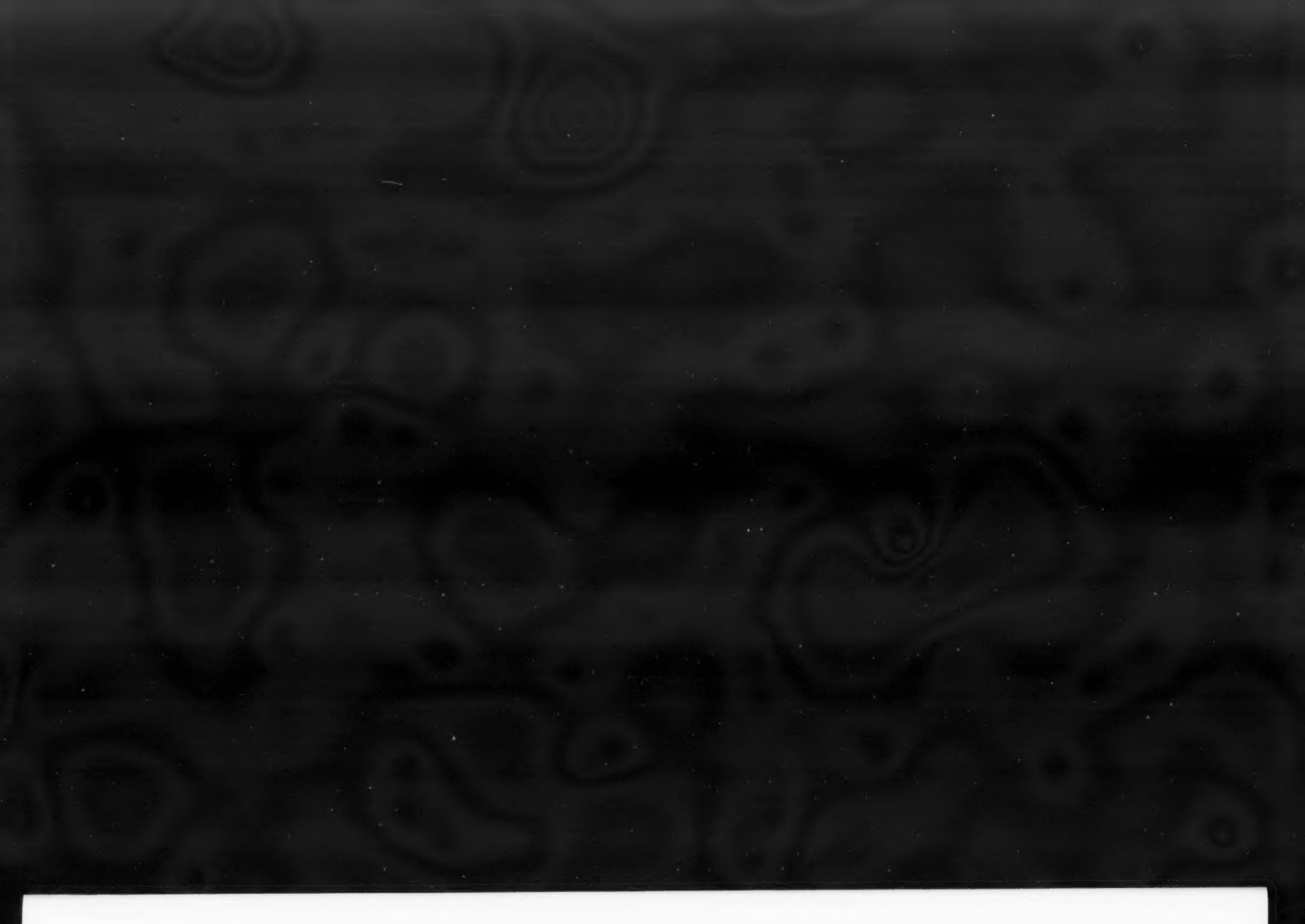
PLAN OF ROOF. scale 1/16" = 1'-0"



SECTION A-A. scale ¾" = 1'-0"



SECTION B-B. scale 1" = 1'-0"



CONTRACTORS

Whitley Abbey Comprehensive School, Coventry, Warwickshire (pages 321-339). *Architect:* City Architect of Coventry, Arthur Ling, B.A. (ARCH.), M.T.P.I., F.R.I.B.A. *Divisional Architect:* J. C. Barker, DIPL.-ARCH., A.M.T.P.I., A.R.I.B.A. *Architect in charge:* W. A. James, DIP.ARCH., A.R.I.B.A. *Assistant Architects:* M. J. Bench, DIP.ARCH., A.R.I.B.A., D. J. Chalk, DIP.ARCH., A.R.I.B.A., Miss J. M. Vauser, B.A. (ARCH.), A.R.I.B.A. *Clerk of Works:* G. W. Cowling. *General Contractors:* Bristol Aeroplane Company Ltd., (Aluminium Buildings) Gilbert Ash Limited. *Sub-contractors—Central heating, gas fitting:* Weatherfoil Heating Systems Ltd. *Electric wiring:* The National Electric & Engineering Co. Ltd. *Electric light fixtures:* Hume Atkins & Co. Ltd., Falk Stadelman & Co. Ltd. *Chandeliers:* Bernard Schottlander. *Metal staircases:* Bigwood Bros. (Birmingham) Ltd. *Plumbing:* J. S. Wright Ltd. *Door furniture:* Walker & Wood Ltd. *Sanitary fittings:* Adamsez Ltd. *Wood block flooring:* Hollis Bros. Ltd. *P.v.c. flooring:* Haskell Robertson & Co. Ltd. *Wood strip flooring, rubber flooring, wall tiling:* Coventry Tile Co. Ltd. *Textiles:* Holbrooks (Coventry) Ltd. *Wallpaper:* John Line & Sons Ltd. *Sunblinds:* Coventry Blind & Shutter Co. Ltd. *Paint:* Docker Bros. Ltd. *Lyng Hall Comprehensive School, Green Farm, Coventry, Warwickshire* (pages 321-339). *Architect:* Chief Architect MOE, in collaboration with the City Architect, Coventry. *Architects-in-charge:* Peter Newnham, A.R.I.B.A., and Dargan Bullivant, A.R.I.B.A., of the MOE. *Quantity Surveyors:* Quantity Surveyors Dept., MOE. *Mural:* David Holt. *General Contractors:* Gilbert-Ash Ltd. Aluminium construction supplied and erected by Bristol Aeroplane Co. Ltd. *Sub-contractors—ceilings:* Gyproc Products Ltd. *Fibrous plaster:* John Kent Ltd. *Floor slabs:* Bristol Stone & Concrete Co. Ltd. *Flues and chimneys:* True-Flue Ltd. *Partitions:* British Plasterboard (Mfg.) Ltd. *Porches—caretakers' houses:* Bigwood Bros. Ltd. *Roofing—caretakers' houses:* The Ruberoid Co. Ltd. *Staircases:* Maclean & Co., (Metal Windows), Ltd. *Staircase—spiral:* Sebry Staircase and Ironworks Ltd. *Steel framework for BAC Buildings:* Robert Watson (Constructional Engineers) Ltd *Ventilators:* Greenwood and Airvac Ventilating Co. Ltd. *Windows—caretakers' houses:* Kingson (Architectural Craftsmen) Ltd. *Cycle sheds—timber:* H. Newsum, Sons & Co. Ltd. *Door stops—external:* Gardiner, Sons & Co. Ltd. *Fencing:* W. H. Gaze & Sons Ltd., Hill & Smith Ltd. *Flower pots, standpipe casing, bollards:* Mono Concrete Co. Ltd. *Footmats—metal:* Clark, Hunt & Co. Ltd. *Footscrapers—built-in:* Fredk. Braby & Co. Ltd. *Gates—angle iron:* W. H. Gaze & Sons Ltd., Hills (West Bromwich) Ltd., Hill & Smith Ltd. *Grassing around buildings:* Wm. Wood & Son, Ltd. *Chalkboards—revolving:* Wilson & Garden Ltd. *Clocks*—Baume & Co. Ltd. *Gymnasium boom and ropes:* Niels Larsen & Son, Ltd. *"Southampton" apparatus:* Olympic Gymnasium Co. Ltd. *Cold room cooling unit:* J. & E. Hall Ltd. *Cooking range:* Radiation Group Sales Ltd. *Extractor fan:* Vent-Axia Ltd. *Heated trolleys for meals service:* Frank V. Magrini Ltd. *Hot cupboards in kitchen and washup:* Gardiner & Gulland Ltd. *Fume extractor and fume cupboard taps:* A. Gallenkamp & Co. Ltd. *Pottery Kiln:* West Midlands Gas Board, Clarke & Smith Mfg. Co. Ltd. *Sanitary incinerators—electric:* Wandsworth Electrical Mfg. Co. *Water heaters:* Campbell Engineering Co. Ltd., (Ascot) West Midland Gas Board, Falkirk Iron Co. Ltd. *Floor finishes—caretakers' houses:* Coventry Tile Co. *Floor finishes generally:* Haskell, Robertson & Co. Ltd. *Painting and paperhanging:* Daly & Son. *Plastic polish on fittings and furniture:* Floor Treatments Ltd. *Changing room benches, kit racks—framework:* Samuel Elliott & Sons (Reading) Ltd. *Cupboards—display and equipment:* Boulds (Fenton) Ltd. *Demonstration benches:* P. H. Barker & Sons Ltd. *Dilution pots in science labs.:* Doulton & Co. Ltd. *Doors—internal:* Gliksten Doors, Ltd. *Door checks and closers:* Forson Design & Engineering Co. Ltd. *Draught excluders—special:* Woods & Co. *Electric accessories:* Hartley Electromotives Ltd. *Electric fires:* Revo Electrical Co. Ltd. *Ironmongery:* James Gibbons Ltd. *Laboratory benches—island type:* P. H. Barker & Sons Ltd. *Light fittings—chandeliers, stage proscenium, front light, trolleys:* Bernard Schottlander. *Gymnasium floodlights:* British Thomson-Houston Co. Ltd. *Gymnasium recessed ceiling fittings, louvred spot lights, street light standards:* General Electric Co. Ltd. *Wall bracket lights:* Falk, Stadelmann & Co. Ltd. *Sanitary fittings generally:* Adamsez Ltd. *Sliding door gear—diagonal doors:* British Trolley Track Co.

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COST COMMENTS

Shops & Maisonettes at Tile Hill, Coventry, illustrated on pages 293-304 of the JOURNAL for February 21, 1957.

These cost analyses of only part of a larger scheme must be treated with extreme caution, as any costs taken "out of context" are liable to give a false impression especially if the comparative result appears favourable.

The analysis shown gives a cost of 39s. 9d. per ft. super of floor area which in itself appears unusually low for this kind of construction and finish.

Points to note :

1. Negotiated contract with schedule of rates enabled the architects to know in advance what costs were likely to be incurred for any specific construction and finish and so he could plan accordingly.
2. The overall cost summary shows an unspecified saving of £4,125 5s. 3d. for which apparently no adjustment has been made in the analyses of a typical block.
3. The cost analyses as shown in two sections are not for comparative purposes but should be examined individually.
4. The costs of shop fittings, shop fronts and hot water installation to the shops are not included in the analyses.
5. Floor finishes at 1s. 2d. per ft. super are only applicable to the floor tiles used in maisonettes, the screed costs being included with upper floor construction and flooring costs to the shops not shown in the analyses.
6. The external screen walling included various types and special glass infilling panels are shown at a cost of 3s. 3d. per ft. super of floor area. The actual screen area of 3,900 ft. super applied as a ratio to floor area cost, *i.e.*, 3s. 3d. $\times \frac{9288}{3900}$ produces 7s. 9d. per ft. super exclusive of decorations. Considering the expensive glass types used, the timber framing and fixings must have provided a cheap form of construction and one worth investigating in more detail.

A 6% saving in battens

Architect:
H. M. McMordie, Esq., A.R.I.B.A.

Builders:
Messrs. Cooke & Knott,
Newtownards, N. Ireland.

This well planned residence, erected in Maralin Avenue, Bangor, Northern Ireland, illustrates how carefully selected clay tiles can add to the attractions of a building. In this instance, Dignus 11" × 7" dark antique tiles were chosen to blend with the rural background, but whatever the area, there is a Dignus tile to suit the purpose. Their economical size and pleasing appearance, make them a natural choice. May we send you further details?

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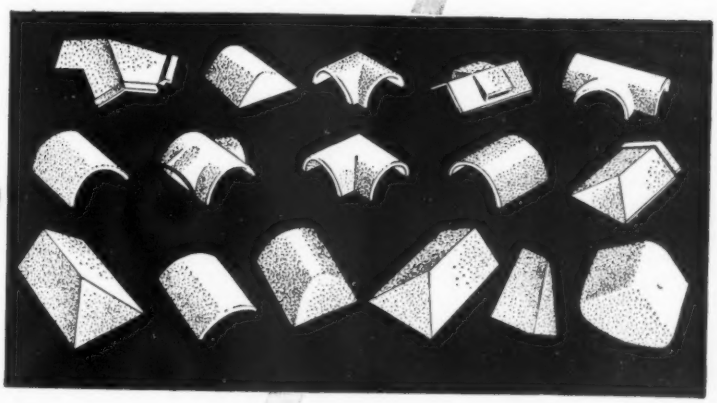

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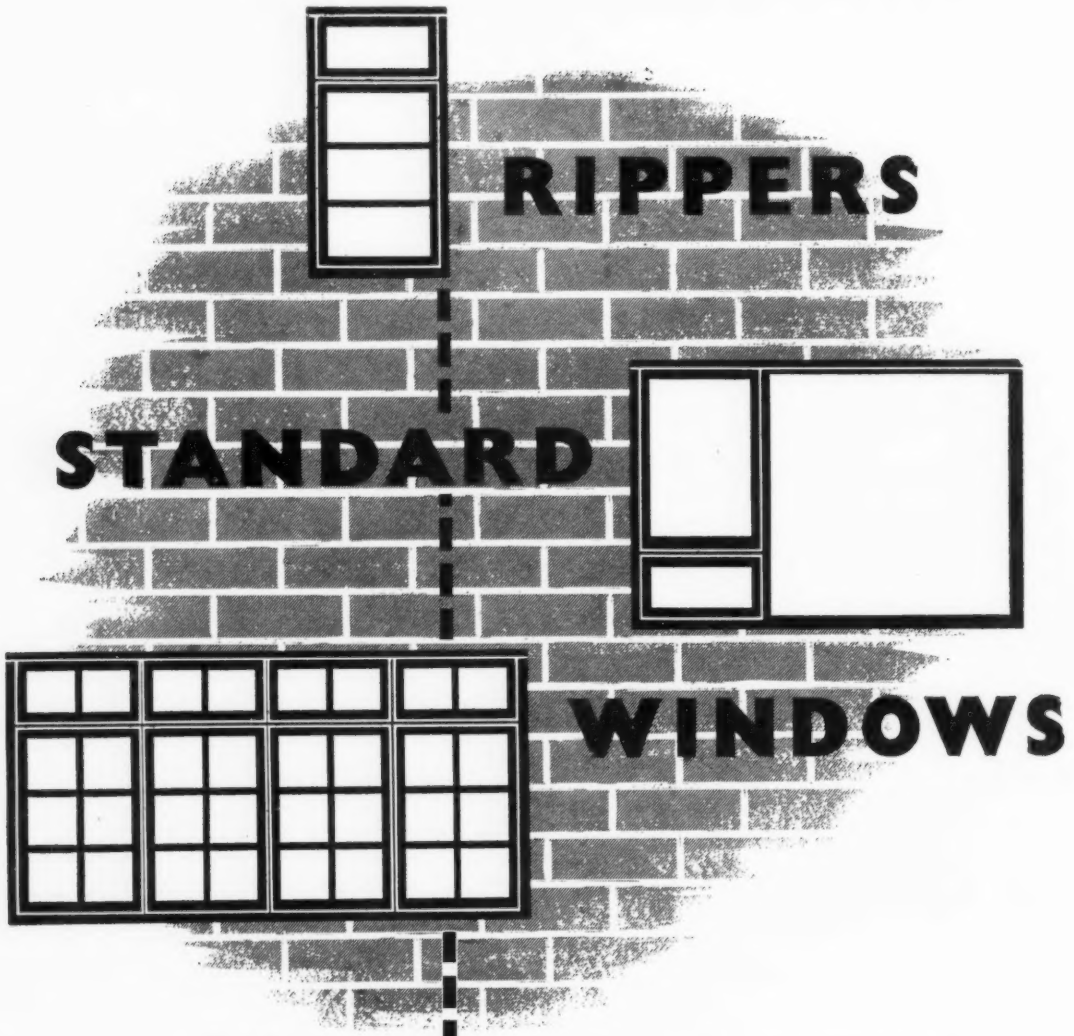

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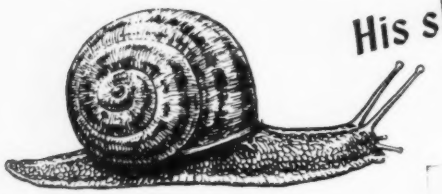

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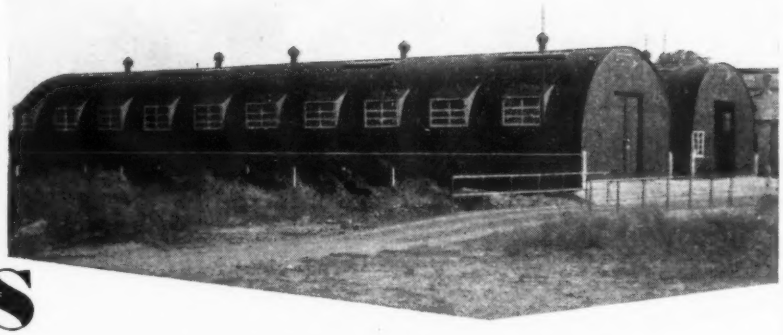

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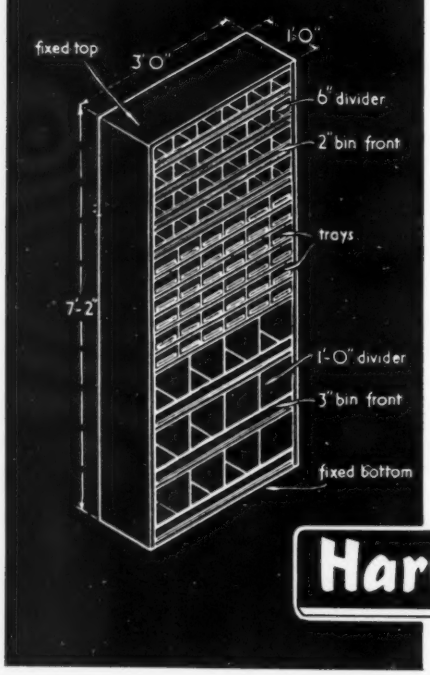
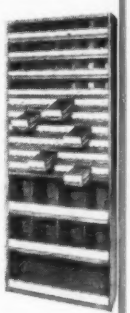


for small articles



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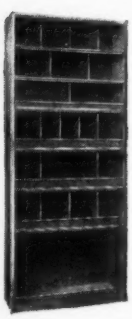

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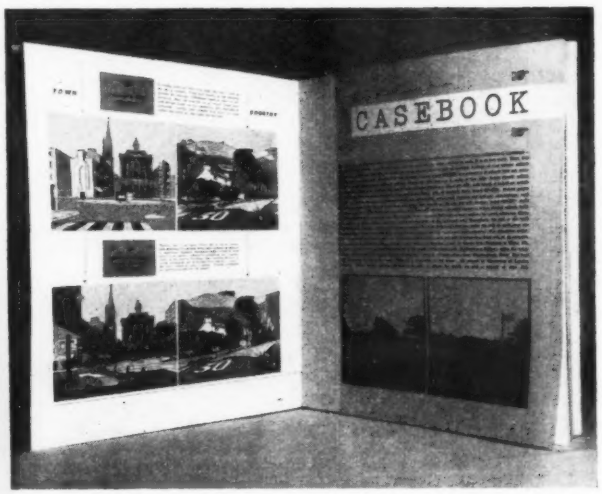
COUNTER-ATTACK
against subtopia

BY IAN NAIRN

THIS BOOK, a reprint of the December 1956 Special Number of the *Architectural Review*, is the sequel to *Outrage*, the book which showed what we are doing to the face of Britain in the name of 'progress', 'amenity' and the 'national interest.' Its revelation of decaying towns, pockmarked countryside and anonymous suburbs shook the press to the extent of 1,100 column inches of special feature and review space, shattered the complacency of many, opened the eyes of many more; the word then coined to describe this squalid mess—subtopia—has become part of everyday speech.



The response to *Outrage* proved that there were plenty of people who recognised the mess and who were prepared to do something about it. What they lacked was ammunition: examples of the right way to do things; arguments to refute theories tossed about by the apostles of inertia to save themselves from the necessity of thinking; a common-sense vocabulary for things which are either dismissed as intangible or served up in woolly abstractions. This book provides all these; it is not a set of pious resolutions but a true counter-attack. If your worry is tree lopping, look at page 381; if badly designed lamp-posts, turn to the designs on page 393; if your housing estate looks like a desert, the reasons are given on page 409; if you want to know why planning doesn't stop subtopia, and how it could be reformed, see page 431. There are forty pages of photographs showing well-designed and well sited examples of every kind of object; at the beginning there is a simple four-point common-sense sequence for sane design which can be applied straight away to see what is wrong with any street—the one outside your window, for instance, or the one which contains your office or your pub. This sequence isn't high-flown or obscure; it can be understood in half an hour, and it is described on pages 355-360.

Here is the ammunition: will you finish the job?

Size 12⅜ *in. by* 10 *in.* 84 *pages with over* 350 *illustrations in line and halftone.* 12*s.* 6*d. net, postage* 1*s.* 3*d.*

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CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post on Friday morning for inclusion in the following Thursday's paper.

Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

Public and Official Announcements

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CITY OF SALFORD
CITY ENGINEER AND SURVEYOR'S DEPARTMENT

Applications are invited from persons having appropriate qualifications and experience for the undermentioned posts in the office of the City Engineer and Surveyor (G. A. McWilliam, B.Sc., A.M.I.C.E., A.R.I.C.S., M.I.Mun.E.).

(*a*) ASSISTANT ARCHITECT (Three), Grade A.P.T. VI. £902—£1,107.

(*b*) ARCHITECTURAL ASSISTANT (Two), Grade A.P.T. I-III. £543—£784 2s. 6d.

Applicants should hold at least the minimum qualification appropriate to the grade as set out in the National Scheme of Conditions of Service. Facilities for professional training are given to holders of junior posts and the work of the Department affords experience in a wide variety of municipal engineering and architectural projects carried out for all Committees of the City Council.

Housing accommodation will be provided in approved cases.

Appointments will be subject to the provisions of the Local Government Superannuation Acts, the National Scheme of Conditions of Service and the passing of a medical examination.

Applications stating age qualifications, and details of experience together with the names of two referees, should be sent to the City Engineer and Surveyor, Town Hall, Salford 3, Lancs, to arrive not later than Monday, 11th March, 1957.

Applicants must indicate by reference letter and designation the post for which they are applying.

R. RIBBLESDALE THORNTON,
Town Clerk.

Town Hall,
Salford, 3, Lancs. 5345

DURHAM COUNTY COUNCIL
PLANNING DEPARTMENT

AREA PLANNING OFFICER. Salary £999—£1,230. Applicants must be Members or Associate Members of the Town Planning Institute, and have had wide experience in all aspects of planning work since qualifying, including control of staff. The post gives scope for initiative and the successful applicant will be responsible for all development control and town map work in the North East Durham Area.

ARCHITECTURAL ASSISTANT. Salary £814—£994. Applicants must be Associates of the Royal Institute of British Architects and experienced. The successful applicant will work as a member of a small team dealing with the preparation of housing and redevelopment layouts, central area layouts, village layouts, etc.

FORESTRY OFFICER Salary £727—£907. Applicants must have a degree in forestry from a British University and practical experience in forestry work. Successful applicant will be required for work on schemes for the planting of derelict pit heaps, tree preservation orders, felling licences, park layouts, etc.

RESEARCH ASSISTANT. Salary £609—£691. Applicants must hold an Honours Degree in Geography from a British University and have had research experience preferably in a Planning Office. The work will be concerned mainly with the review of the County Development Plan.

Housing available: Peterlee, 12½ miles, Newton Aycliffe 12 miles from Durham. Forms and particulars from County Planning Officer, 10, Church Street, Durham. Closing date 12th March, 1957. Canvassing members of the Council is prohibited.

J. K. HOPE,
Clerk of the County Council.
5415

NATIONAL COAL BOARD
NORTHERN (N. & C.) DIVISION

Applications are invited for the appointment of an Architect Grade II at a salary up to £900 per annum in the Divisional Architect's Branch, Longbenton, Newcastle-upon-Tyne. Applicants must be associates of the R.I.B.A. with two or more years' experience in the preparation of working drawings and details of good class work.

Applications stating age, training, and details of past and present appointments should be submitted to Staff Department, National Coal Board, Northern (N. & C.) Division, Whitley Road, Longbenton, Newcastle-upon-Tyne, 12, by 8th March, 1957. Please quote A2. 5361

ANGLESEY COUNTY COUNCIL
COUNTY PLANNING DEPARTMENT

Applications invited for the post of PLANNING ASSISTANT, Grade A.P.T. I/II (£530—£675).

Applicants should have had a sound training in a planning office, be competent draughtsmen, and capable of undertaking survey work. Further particulars from the County Planning Officer, Shire Hall, Llangefni.

Applications, giving names and addresses of two referees, to the Clerk of the County Council, Shire Hall, Llangefni, by 18th March, 1957. 5416

BRACKNELL DEVELOPMENT CORPORATION

Applications are invited for the appointment of STRUCTURAL ENGINEER on the staff of the Chief Architect. Salary grade A.P.T. VIII, £1,100 × £55 (4)—£1,320.

Applicants should be Corporate Members of the Institution of Structural Engineers and have had good all-round experience. The successful applicant will be required to advise the Chief Architect on all matters relating to structural work and foundations to buildings, including factories, public buildings, etc., to prepare designs and to supervise all the specialist works.

Superannuation schemes. Medical examination. Housing available in due course. Apply by 18th March, 1957, giving age, education and qualifications; experience and appointments held (with dates and salaries) and two referees, to General Manager, (S.E.) Bracknell Development Corporation, Farley Hall, Bracknell, Berks. 5414

COUNTY BOROUGH OF HUDDERSFIELD
BOROUGH ARCHITECT AND PLANNING OFFICER'S DEPARTMENT

Applications are invited for the following posts:
CHIEF QUANTITY SURVEYOR (Grade A.P.T. VI, £902—£1,107).
ASSISTANT QUANTITY SURVEYOR (Grade A.P.T. II, £609 17s. 6d.—£691 17s. 6d.).

For post (*a*) preference will be given to Associates of the Royal Institute of Chartered Surveyors and for post (b) to applicants who have passed the Intermediate Examination of the Royal Institute of Chartered Surveyors.

The posts are subject to the National Scheme of Conditions of Service, as adopted by the Council, and to medical examination.

Housing accommodation will be provided if required.

Applications with the names of two referees should reach the Borough Architect and Planning Officer, High Street Buildings, Huddersfield, not later than Monday, the 18th March, 1957.

HARRY BANN,
Town Clerk.

Town Hall, Huddersfield. 5410

BOROUGH OF SOLIHULL

Applications are invited for the following appointments in the Department of the Borough Engineer & Surveyor:

1. LANDSCAPE ARCHITECT—A.P.T. Grade VI. Must be a Member of the Institute of Landscape Architects and have considerable experience.
2. SENIOR ASSISTANT ARCHITECT—A.P.T. Grade VI. Must be qualified and have good general experience.
3. ASSISTANT ARCHITECT—A.P.T. Grade IV. Must be qualified and have reasonable practical experience.
4. ASSISTANT ARCHITECT—A.P.T. Grade II. Must have passed the R.I.B.A. Intermediate examination or equivalent.

Solihull is a rapidly expanding town and these appointments arise from the large programme of varied capital works which are necessary.

No application forms will be issued, but specific questions will be answered by the Borough Engineer & Surveyor.

The appointments are subject to N.J.C. Conditions, one month's notice on either side and Local Government Superannuation Acts. Where applicable housing accommodation will be made available as soon as possible, and half removal expenses paid.

Applications, including names of two referees, should be sent to the undersigned by 11th March, 1957.

W. MAURICE MELL, *Town Clerk.*

Council House,
Solihull. 5438

COUNTY BOROUGH OF WEST HAM
BOROUGH ARCHITECT AND PLANNING OFFICER'S DEPARTMENT
RE-ADVERTISEMENT

Applications are invited from ARCHITECTS and PLANNERS for permanent appointments at salaries shown (including maximum London Allowance):—

DEPUTY GROUP ARCHITECT (3 posts), Grade V, £844 17s. 6d.—£1,024 5s. p.a.
ASSISTANT ARCHITECT (2 posts), Grade IV, £757 15s.—£937 2s. 6d. p.a.
ASSISTANT PLANNING OFFICER, Grade V, £844 17s. 6d.—£1,024 5s. p.a.
ARCHITECTURAL ASSISTANT, Grades I/II, £573 5s.—£721 17s. 6d. p.a.
PLANNING ASSISTANT (2 posts), Grades I/II, £573 5s.—£721 17s. 6d. p.a.

The County Borough has an extensive reconstruction and slum clearance programme, and offers varied and interesting work.

Application forms and details from the Borough Architect and Planning Officer, Thomas E. North, O.B.E., F.R.I.B.A., Dist.T.P., M.T.P.I., 70, West Ham Lane, Stratford, E.15, returnable by 19th March, 1957. 5400

BOROUGH OF BARKING
QUANTITY SURVEYING ASSISTANT

Applications are invited for the above appointment on Grade A.P.T. II, £609 17s. 6d. by £20 10s. to £691 17s. 6d. per annum, plus London weighting (£10—£30 per annum according to age).

Applications on forms obtainable from the Borough Architect, Town Hall, Barking, should reach the undersigned not later than 9 a.m., 8th March, 1957.

E. R. FARR.
Town Clerk.

Town Hall,
Barking, Essex. 5396

NATIONAL COAL BOARD
NORTH-EASTERN DIVISION

Applications are invited for the following appointments in the Department of the Divisional Chief Architect at Conisbrough, nr. Doncaster:—

QUANTITY SURVEYORS GRADE II (Salary scale: £700 × £30 to £1,000 per annum). Qualification: A.R.I.C.S.

QUANTITY SURVEYING ASSISTANT GRADE I (Salary scale: £625 × £25 to £750 and up to £900 per annum in certain circumstances). Qualification: Preferably Intermediate R.I.C.S. or considerable practical experience.

QUANTITY SURVEYING ASSISTANT GRADE II (Salary scale: £520 × £20 to £615 per annum). Qualification: Preferably Intermediate R.I.C.S. or studying for such examination.

JUNIOR QUANTITY SURVEYING ASSISTANT (Salary scale: According to age—£4 5s. per week at 18 to £8 15s. per week at age 25). Qualification: G.C.E. in five subjects including English, Mathematics, History or Geography.

ARCHITECTURAL ASSISTANT GRADE II (Salary scale: £520 × £20 to £615 per annum). Qualification: Preferably Intermediate R.I.B.A. or studying for such examination.

Full details and application forms obtainable from Hugh Smith, F.R.I.B.A., Divisional Chief Architect, National Coal Board, P.O. Box No. 4, Denaby, nr. Doncaster. 5430

CITY OF BIRMINGHAM
CITY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments at commencing salaries according to capabilities and experience:—

(*a*) SENIOR ASSISTANT ARCHITECT, Grade APT.VI (£902/£1,107 per annum), to act as Group Leader in the Housing Design Section, which is carrying out a large Housing programme for Redevelopment and Suburban Areas, including Multi-storey Flats, Shopping Centres and ancillary buildings.

(*b*) ASSISTANT ARCHITECT, Grade APT.V (£814 17s. 6d.—£994 5s. 0d. per annum).

Applicants for both posts should be Associate Members of the R.I.B.A. or hold equivalent qualifications.

The posts are permanent, superannuable, subject to a medical examination and to one month's notice on either side.

Applications, endorsed with the heading of the post, giving full details of age, qualifications and experience, together with the names of two referees, to reach the undersigned by 15th March, 1957.

Canvassing disqualifies.

A. G. SHEPPARD FIDLER,
City Architect.

Civic Centre,
Birmingham, 1. 5437

THE NORTH WESTERN ELECTRICITY BOARD
SENIOR DRAUGHTSMAN (BUILDING AND CIVIL ENGINEERING)
SUB-AREA ENGINEER'S DEPARTMENT, OLDHAM

Applicants should have had a good general and technical education and have had experience in general building construction, design and lay-out of industrial type buildings, including site works. Possession of appropriate qualifications will be an advantage.

Salary within range: £700 × £20—£800 p.a. Schedule D, Grade 5. N.J.B. Conditions.

Applications, naming three referees, to Sub-Area Manager, No. 3 Sub-Area, The North Western Electricity Board, Union Street, Oldham, by 9th March, 1957. 5422

BOROUGH OF BARKING
ARCHITECTURAL ASSISTANT

Applications are invited from persons who have passed the Intermediate examination of the R.I.B.A. for the appointment of an Architectural Assistant on Grade A.P.T. III (£656 × £25 12s. 6d. —£784 2s. 6d. plus London weighting £20 or £30 per annum according to age).

Applications on forms obtainable from the Borough Architect, Town Hall, Barking, should reach the undersigned not later than 9 a.m. on the 8th March, 1957.

E. R. FARR,
Town Clerk.

Town Hall,
Barking, Essex. 5424

COUNTY BOROUGH OF NEWPORT, MON.
BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited for the permanent appointment of an ASSISTANT QUANTITY SURVEYOR at a salary in accordance with Grade V (£814 17s. 6d. to £994 5s.). Housing accommodation will be provided if the circumstances of the successful candidate justify it. Further information and forms of application obtainable from the Borough Architect, Civic Centre, Newport, Mon., to whom they should be returned not later than Monday, 11th March. 5389

SOUTHWICK URBAN DISTRICT COUNCIL

The Council wish to commission an ARCHITECT for the design and supervision of 30 flats in the Fishersgate Redevelopment Area. Qualified Architects having experience in the erection of blocks of flats of three or more storeys who wish to be considered in this connection are invited to write to me giving particulars of such experience by not later than first post on 8th March, 1957.

A. R. SHOTT,
Clerk of the Council.

Town Hall,
Southwick, Sussex.
19th February, 1957. 5399

ARCHITECTURAL ASSISTANTS
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For employment in London and Provinces on design and detailing work on construction and maintenance of all types of public buildings.

Salary range £500 (age 21) to £790 p.a. London (slightly less elsewhere). 5-day week. 3½ weeks' annual leave initially. Starting pay according to age, qualifications and experience. Good prospects of promotion with salaries of £925 p.a. and above. Opportunities for permanent posts leading to pensions (non-contributory). Interviews at Regional Offices where possible. Applicants should be of Intermediate R.I.B.A. standard.

State age, training and experience to Chief Architect, Ministry of Works (H), Abell House, John Islip Street, S.W.1. 5387

GOVERNMENT OF NORTHERN IRELAND
ASSISTANT ARCHITECT

Applications are invited for the unestablished post of Assistant Architect Class II in the Works Directorate, Ministry of Finance.

The consolidated salary scale is £790 × £25—£840 × £30—£990 × £40—£1,190. Minimum of scale is linked to entry at age 26 plus or minus one increment for each year above or below that age. Maximum entry point £1,030.

Candidates must be Registered Architects by examination, and must have had at least two years' experience in an Architect's Office in the preparation of working drawings for new buildings.

Preference will be given to a suitably qualified candidate who served in H.M. Forces during the 1914-1918 or 1939-1945 wars, provided the Ministry is satisfied that such a candidate is, or within a reasonable time will be, able to discharge the duties of the post efficiently.

Application forms may be obtained from the Director of Establishments, Ministry of Finance, Stormont, Belfast, to whom they must be returned, together with copies of two recent testimonials. 5450

COUNTY BOROUGH OF ROCHDALE

Applications are invited from Corporate Members of the R.I.B.A. for the appointment of CHIEF ASSISTANT ARCHITECT as the Head of the General Architectural Section of the Borough Surveyor's Department. The salary will be Grade VII (£999 7s. 6d.—£1,230 per annum × £46 2s. 6d.). The commencing salary will not necessarily be the minimum figure, and will be fixed according to ability and experience.

The appointment will be subject to the National Scheme of Conditions of Service, the Local Government Superannuation Acts, and to passing a medical examination.

Canvassing is prohibited and applicants must disclose whether they are related to any member or senior official of the Council.

Housing accommodation will be provided by the Council in appropriate circumstances.

Applications, stating age, qualifications, training and experience, together with the names and addresses of two persons to whom reference can be made, and endorsed "Chief Assistant Architect," must be delivered to the Borough Surveyor, Town Hall, Rochdale, not later than 9 a.m. on Monday, 25th March, 1957.

K. B. MOORE,
Town Clerk.
5453

COUNTY COUNCIL OF MIDDLESEX
ASSISTANT ARCHITECTS, ARCHITECTURAL ASSISTANTS and JUNIOR ARCHITECTURAL ASSISTANTS required in County Architect's Department in following grades:—

A.P.T. V, £814 17s. 6d.—£994 5s.
A.P.T. IV, £727 15s.—£907 2s. 6d.
A.P.T. III, £656—£784 2s. 6d. plus £35 p.a. Westminster weighting.
A.P.T. II, £609 17s. 6d.—£691 17s. 6d. plus £45 p.a. Westminster weighting.
A.P.T. I, £543 5s.—£625 5s. plus £65 p.a. Westminster weighting.

All salaries plus London weighting of £10 if under 21; £20, 21-25 years; £30 for 26 and over. Commencing salaries according to qualifications and experience. Prescribed conditions. Application forms (stamped addressed foolscap envelope) from County Architect, 1, Queen Anne's Gate Buildings, Dartmouth Street, Westminster, S.W.1, returnable by 21st March. (Quote U.670 AJ.) Canvassing disqualifies.

LONDON COUNTY COUNCIL
TECHNICAL ASSISTANT required to prepare bills of quantities, measure variations and agree final accounts for contracts for new playing fields, etc.

Salary up to £817 according to qualifications and experience.

Write giving brief particulars to Chief Officer, Parks Department, Old County Hall, Spring Gardens, S.W.1 (WHI 3121, Ext. 33) (376). 5447

LONDON COUNTY COUNCIL
(ARCHITECT'S DEPARTMENT)

Vacancy for SURVEYING ASSISTANT (salary up to £817) for preparation of specifications and estimates and supervision of works in connection with maintenance, alterations and minor improvements of Voluntary Schools.

Application forms returnable by 22nd March, from Architect (AR/EK/VS/J), County Hall, S.E.1 (333) 5448

UNIVERSITY OF NOTTINGHAM
BUILDINGS DEPARTMENT

ARCHITECTURAL ASSISTANT required. Candidates must have reached Intermediate R.I.B.A. standard. Commencing salary £650 to £700 per annum. Pension scheme. Form of application and conditions of appointment from the Registrar, Mr. H. Pickbourne. 5390

COUNTY BOROUGH OF OLDHAM
APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment within the salary range of £707 5s.—£861. Experience in the redevelopment of clearance areas will be an advantage.

The National Conditions and Local Government Superannuation Acts apply. Housing accommodation available if required.

Applications suitably endorsed and naming two referees should reach me not later than Thursday, the 14th March, 1957.

A. L. HOBSON,
Borough Engineer and Surveyor.
75, Union Street, Oldham. 5449

BUCKS COUNTY COUNCIL

Applications are invited for the appointment of two ASSISTANT ARCHITECTS in the County Architect's Department, salary A.P.T. Grade IV, £727 15s. p.a. to £907 2s. 6d. p.a.

The appointments are superannuable and subject to medical examination.

A weekly allowance of 25s. and return fare home once every two months may be paid for six months to newly appointed married officers of the Council unable to find accommodation.

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Tenders Invited

6 lines or under, 12s. 6d.: each additional line, 2s.

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BLOCKS 10 & 10A—ERECTION, AND SUB-CONTRACTING

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Closing date for tenders—Noon, Monday, 25th March, 1957.

WILFRED REEVE,
Town Clerk.
5433

Architectural Appointments Vacant

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