The Architects' JOURNAL for April 30, 1959

THE ARCHITECTS' JOURNAL

standard contents

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

No. 3348] [Vol. 129

THE ARCHITECTURAL PRESS

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Registered as a Newspaper.

★ 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 I one week, II to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

ILA	Institute of Landscape Architects. 1, Park Crescent, Portland Place, W.1.	Museum 3473
I of Arb	Institute of Arbitrators. Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197
IQS	Institute of Quantity Surveyors. 98, Gloucester Place, W.1.	Welbeck 1859
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 68, Gloucester Place, W.1.	Welbeck 9966
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
JFRO	Joint Fire Research Organisation (DSIR & Fire Offices' Committee). Fire Research Station, Boreham Wood, Herts.	Elstree 1341/1797
LDA	Lead Development Association. 18, Adam Street, W.C.2.	Whitehall 4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MAFF	Ministry of Agriculture, Fisheries and Food. Whitehall Place, S.W.1.	Trafalgar 7711
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Hyde Park 7070
MOH	Ministry of Health. 23, Savile Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service, 8, St. James's Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, W.C.2.	Gerrard 6933
MOT	Ministry of Transport, Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine Owners and Manufacturers Council. 94/98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 2 Caxton Street, S.W.1.	Abbey 4813
NBR	National Buildings Record, 31, Chester Terrace, Regent's Park, N.W.1.	Welbeck 0619
NCBMP	National Council of Building Material Producers, 10, Storey's Gate, S.W.1.	Abbey 5111
NEFMAI	National Employers Federation of the Mastic Asphalte Industry. 21, John Adam Street, Adelphi, W.C.2.	Trafalgar 3927
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives. Federal house, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 12, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 58, Portland Place, W.1.	Langham 0064/5
NPL	National Physical Laboratory. Head Office, Teddington.	Molesey 1380
NRDB	Natural Rubber Development Board. Market Buildings, Mark Lane, E.C.3.	Mansion House 9383
NSAS	National Smoke Abatement Society. Palace Chambers, Bridge Street, S.W.1.	Trafalgar 6838
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Abbey 4504
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Fountainbridge 7631
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5533
RICS	Royal Institution of Chartered Surveyors. 12, Great George Street, S.W.1	Whitehall 5322/9245
RFAC	Royal Fine Art Commission. 5, Old Palace Yard, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSH	Royal Society of Health. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30 Cornhill, E.C.3.	Mansion House 3921
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984/5
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1.	Langham 7616
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4.	City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4.	City 5040
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1.	Whitehall 4341
ZDA	Zinc Development Association. 34, Berkeley Square, W.1.	Grosvenor 6636

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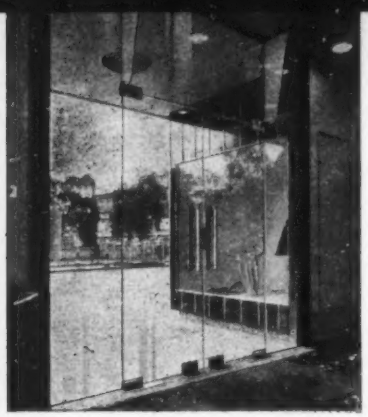
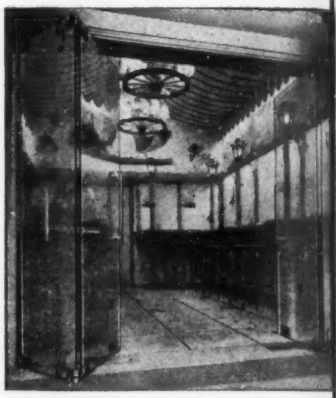


1 Shopfront for the Maryon Fashion Group Ltd., Ealing. Designed and installed by D. Drake & Son Ltd.

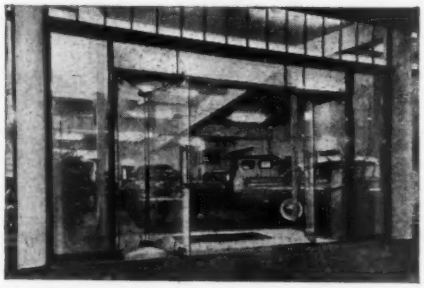
2 Office block entrance, Crosswall Street, London, E.C.3. Architects: Knapton & Deane, F.R.I.B.A., A.M.T.P.I. Shopfitters: F. Sage & Co. Ltd

3 Office entrance for Lloyds Permanent Building Society, Manchester. Designed and installed by Garmack & Co. Ltd.



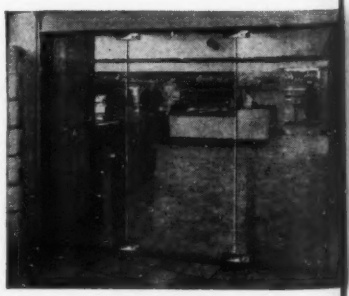
4 Shopfront at Weston-super-Mare. Architects: Fry, Paterson & Jones, F.R.I.B.A. Shopfitters: Parnall & Sons Ltd.

5 Chicken Inns (London) Ltd., Leicester Square, W.C.2. Shopfitters: Garmack & Co. Ltd.



6 Motor-car showroom entrance for Harvey Hudson Ltd., South Woodford, E.18. Architect: V. Fletcher Russell, F.R.I.B.A. Shopfitters: Stewart Fraser Ltd.

7 New store for Messrs. Williams Bros. Direct Supply Stores Ltd., Hatfield. Shopfitting by O. Peterson Ltd.



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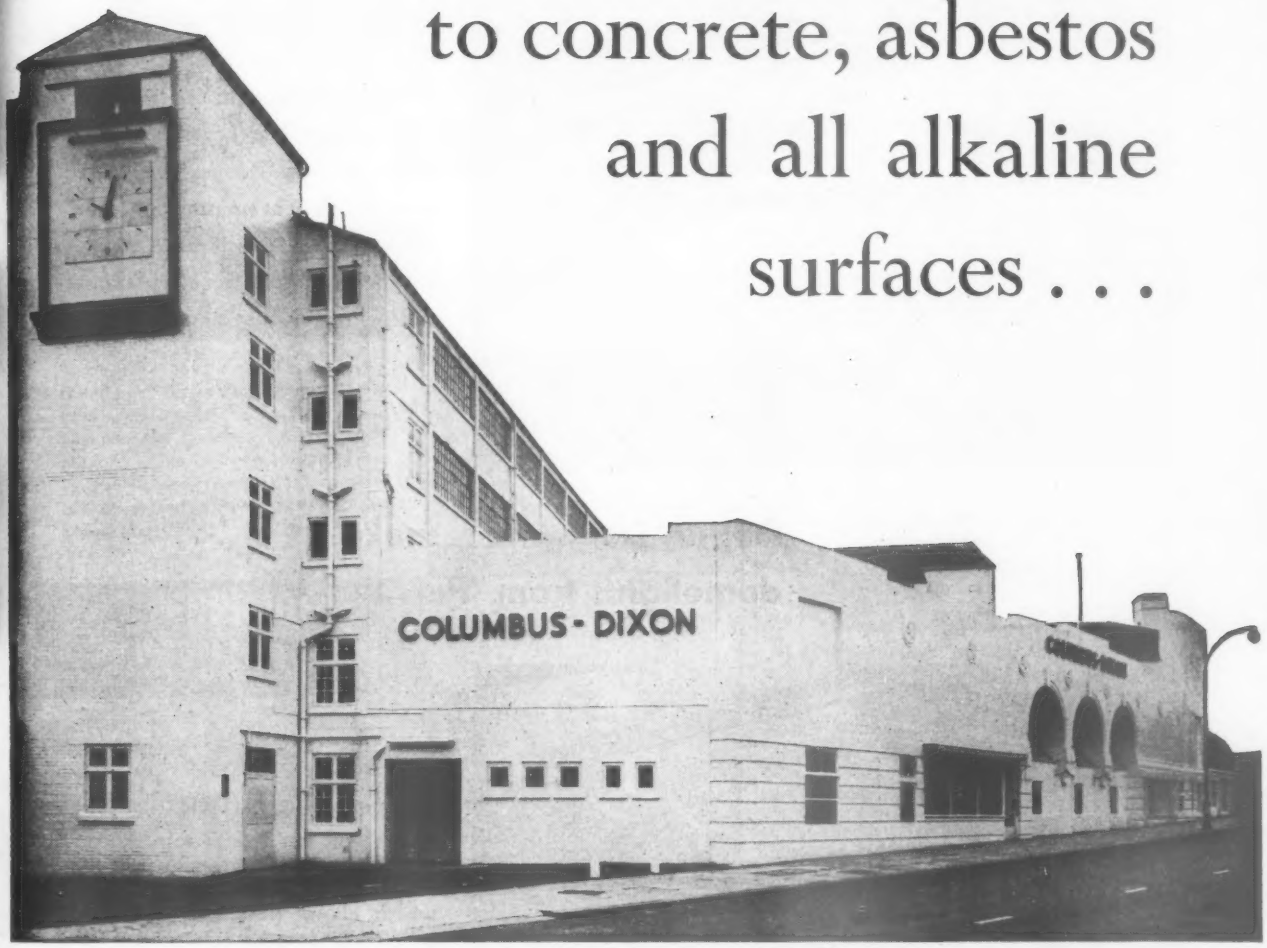

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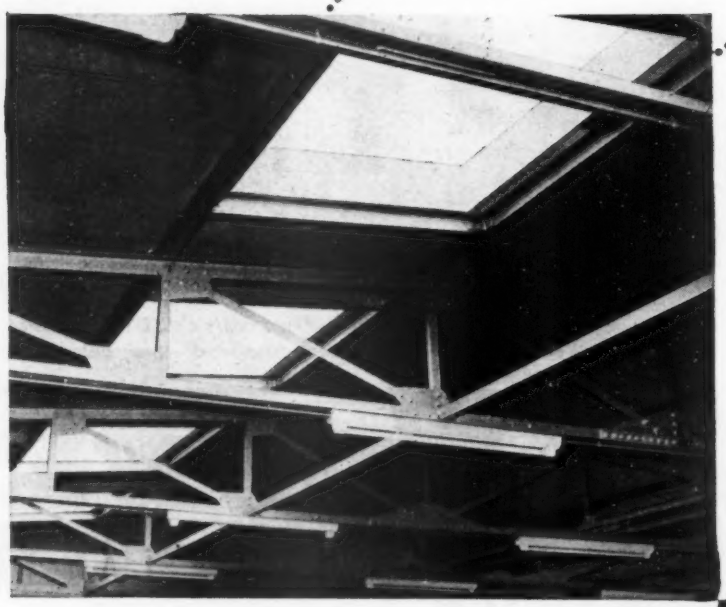

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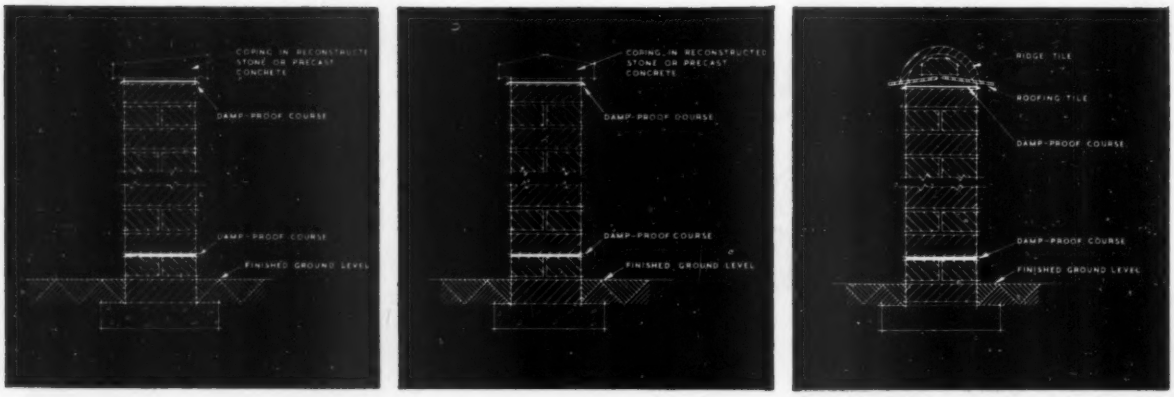

...AND SIX IMPORTANT DETAILS

- The coping units should have a high frost resistance. Dense concrete or reconstructed stone are suitable.
- The coping units should be properly 'weathered' and should be provided with drip channels on both sides of the wall to shed the water clear of the wall faces.
- The drip channels must have sharp edges and be free from mortar or other obstructions. This is most important at joints between the coping units.
- However impervious the coping units may be, the joints between them will not be impervious to the passage of moisture. Hence a damp-proof course should be provided immediately below the coping units.
- To reduce efflorescence to a minimum a damp-proof course should be provided immediately above ground level.
- A mortar mix of 1 part Portland Cement to 1 part Hydrated lime to 6 parts of sand (all by volume) should be used.

'Simplex munditiis', an axiom of Horace, is exemplified today by the portal frame, which provides an unobstructed floor space so essential in such buildings as schools. In the fabrication of portal frames for the Farnham Common County Primary School, Aerolite 300 synthetic resin glue was used throughout by F. & H. Sutcliffe Ltd., specialists in timber buildings. Aerolite glues, and the modern techniques made possible by their use, provide portal frames of immense strength, economical to construct, and light to transport and erect. The glue line, once the most vulnerable part of a structure, is now often more durable than the wood itself, for it is unaffected by changes of humidity and climatic conditions, and entirely resistant to bacterial attack.

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THE ARCHITECTS' JOURNAL
(Supplement) April 30, 1959

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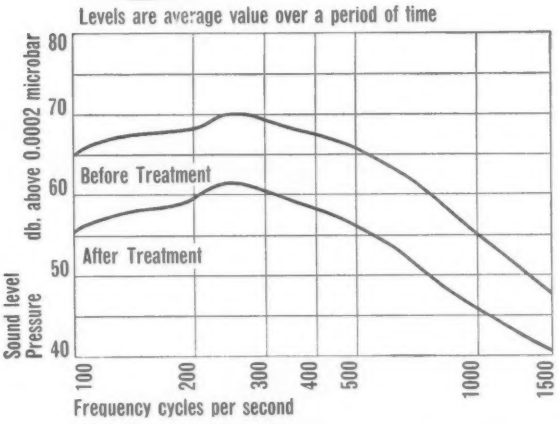

This graph shows the level of noise in a typical office with its typewriters, telephones, and duplicating machinery before and after treatment with Bowater T/A Panels. The room chosen had a 10′ ceiling, an 18′ x 14′ woodblock floor, hard partition walls, a plaster ceiling with windows one end only. In this case, the ceiling alone was treated.

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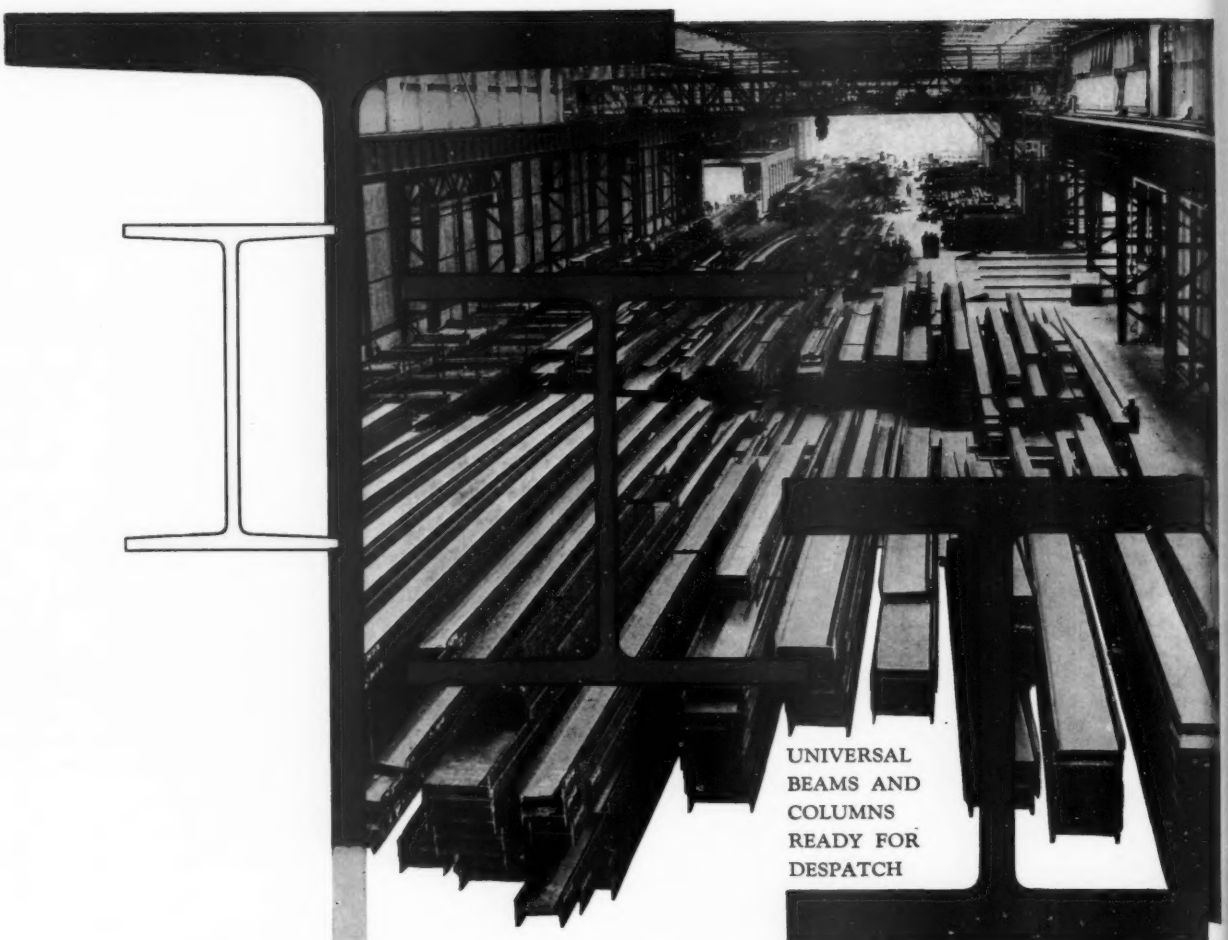

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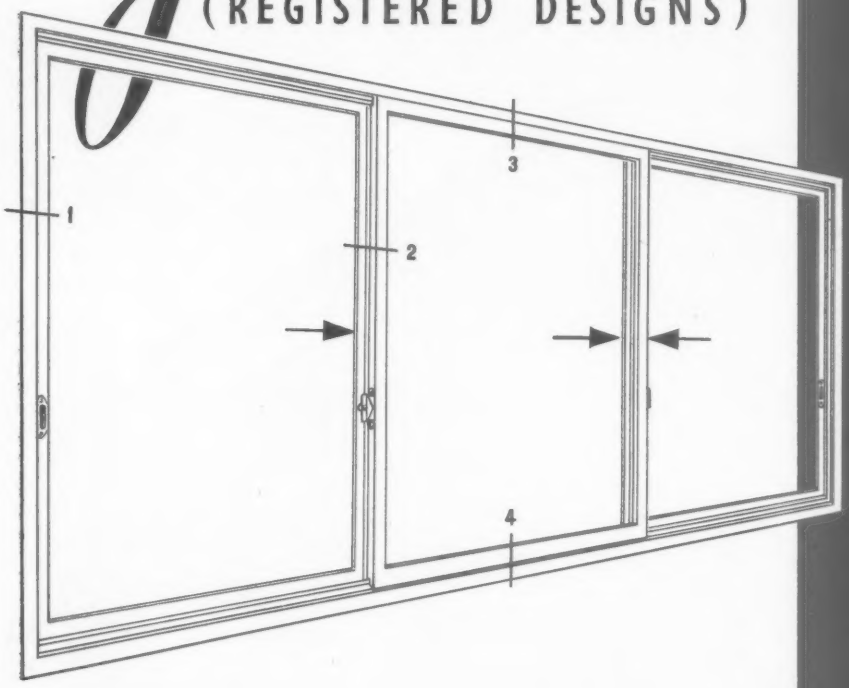
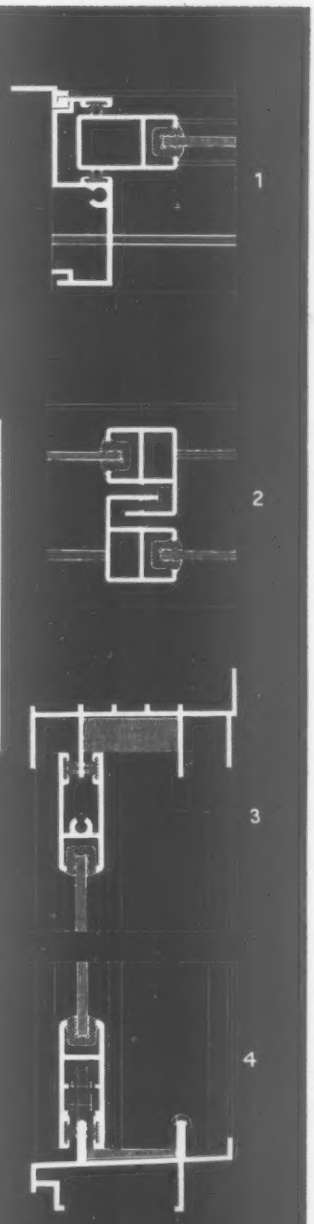
(REGISTERED DESIGNS)





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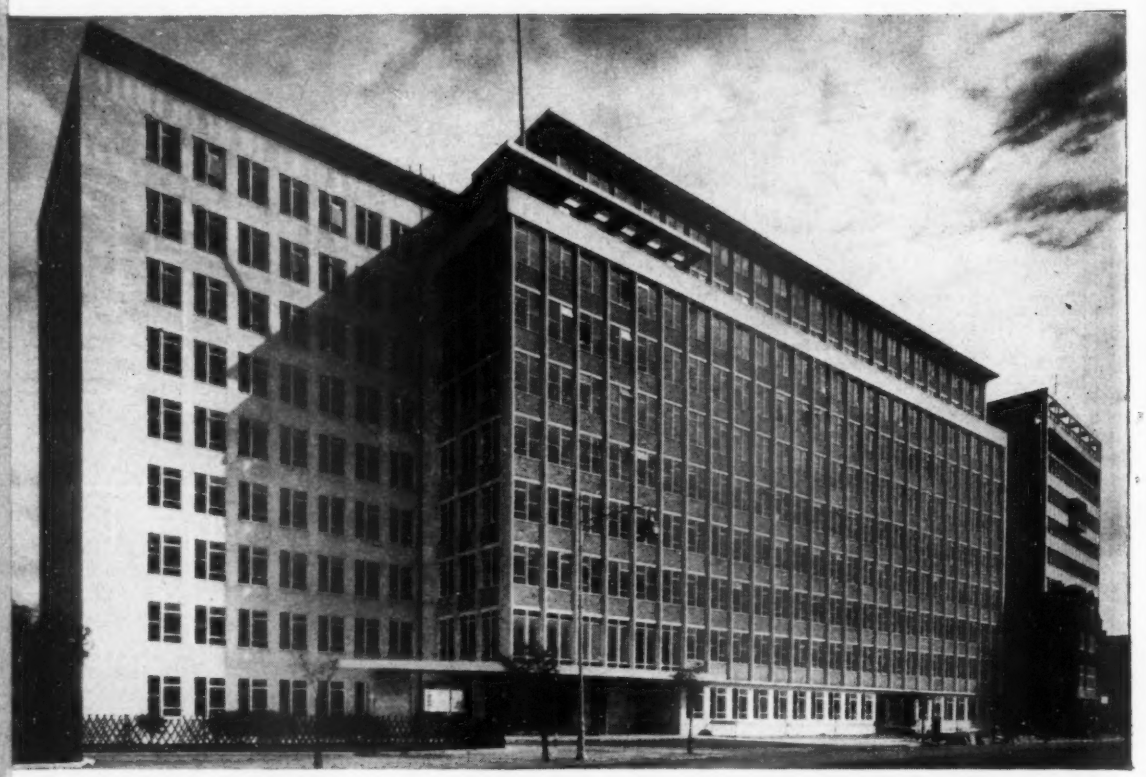

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London Office: Bath House, 82 Piccadilly, London W.1. *Grosvenor 4617/9*

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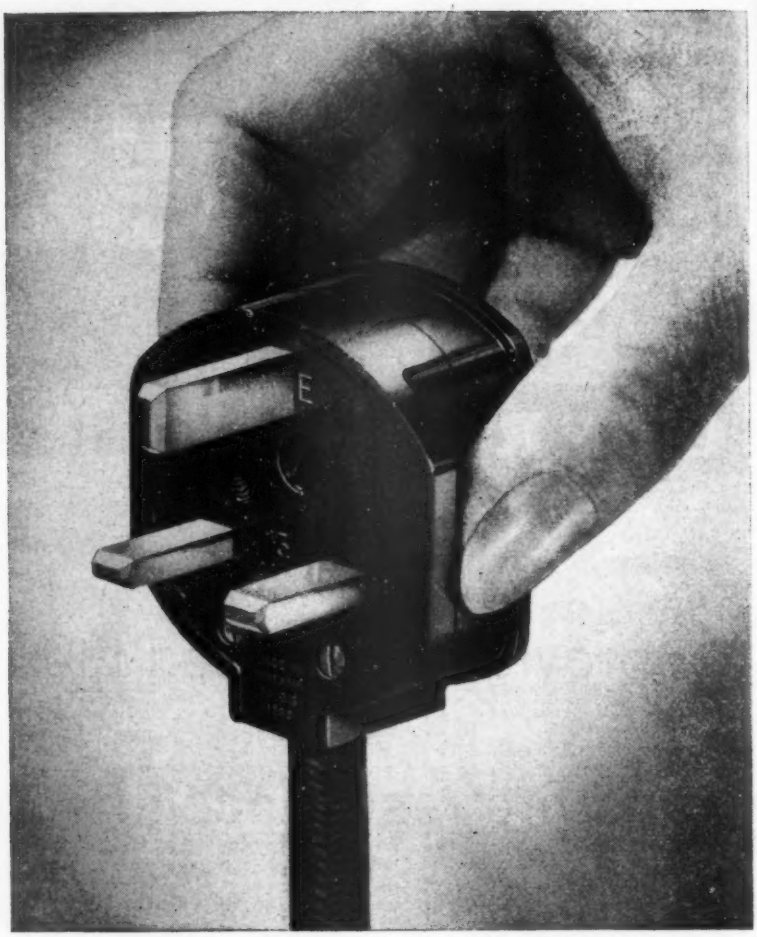

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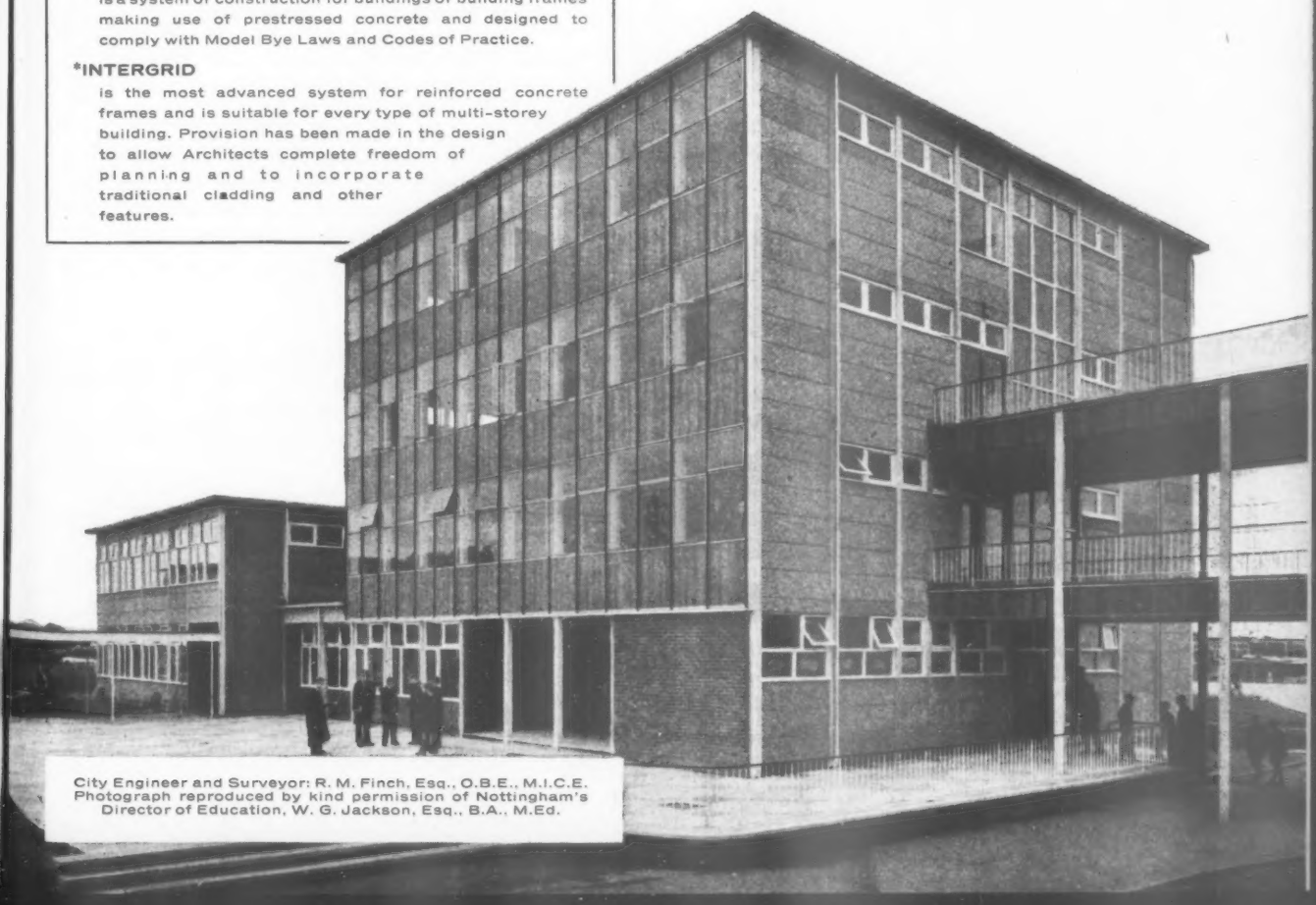

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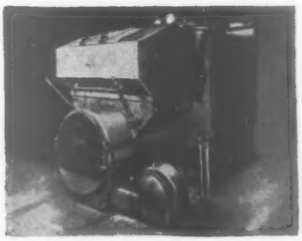
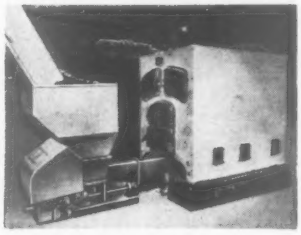
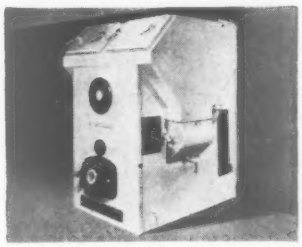
WHAT IS HARD COKE? It is a smokeless fuel made in coke ovens from specially selected coal which is washed and crushed before carbonisation. Users prefer it because it is uniformly sized, consistent in quality and their appliances operate with greater efficiency. Hard coke is made in a full range of sizes from which the exact grade technically suited to the appliance can be supplied by your merchant.



For heating offices, flats, hotels or factories, pre-burner units can be used. A 'SUXE' pre-burner unit is shown here fitted to a sectional boiler.



Hard Coke is highly efficient for sectional, horizontal and vertical boilers. Underfeed stokers and chain grate stokers of special design are available. The illustration shows a 'BIGWOOD' Underfeed stoker fitted to a sectional boiler.



For large-scale heating automatic coke boilers are available in a wide range of sizes, notable for their efficiency and economy. They operate with the minimum of attention. Shown here is a 'WATTS' coke-fired magazine boiler.

HC7

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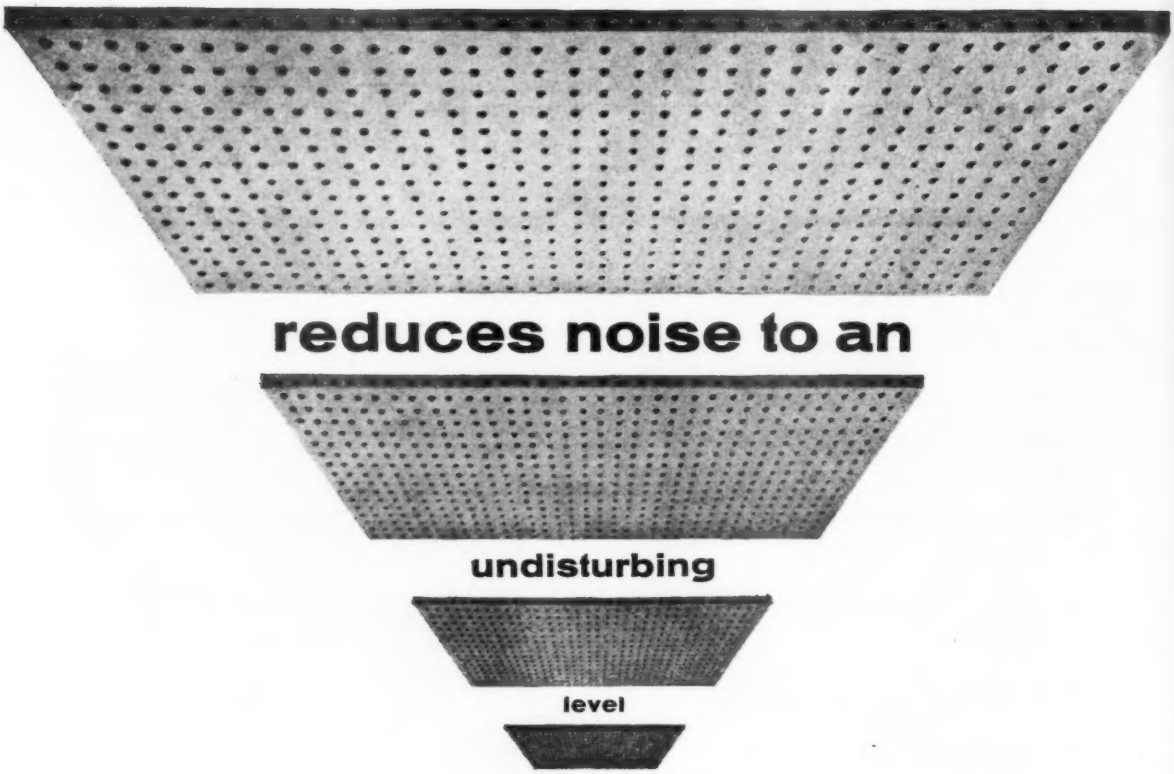
PAXBOARD



Newalls (Reg'd Brand) PAXBOARD presents the architect with a first-class medium for large-area acoustic insulation.

The modern tendency to use large rooms in office blocks results in an artificially increased noise level due to numbers of people working together, and makes acoustic treatment more essential than it would otherwise be. Similarly in factories, the provision of a sound-absorbent ceiling which reduces noise, and simultaneously insulates heat more effectively than any building board, is an attractive proposition, particularly in view of the reasonable cost for an all-asbestos product.

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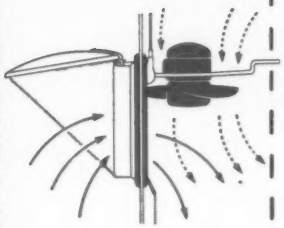
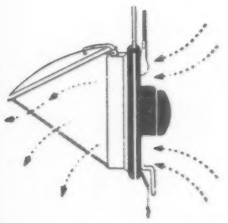
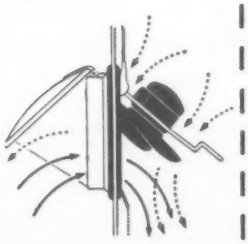


FRESH AIR IN



STALE AIR OUT



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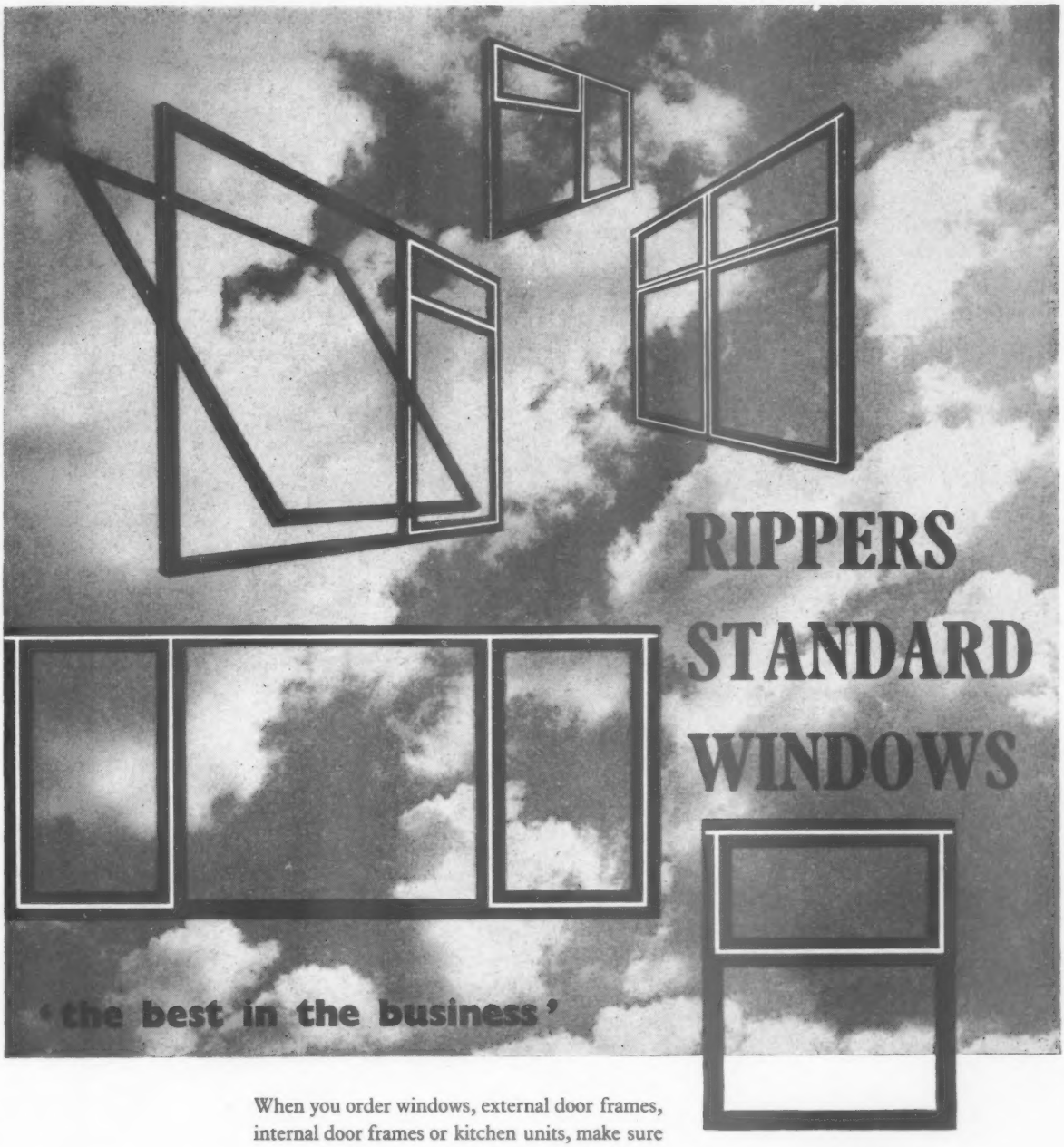

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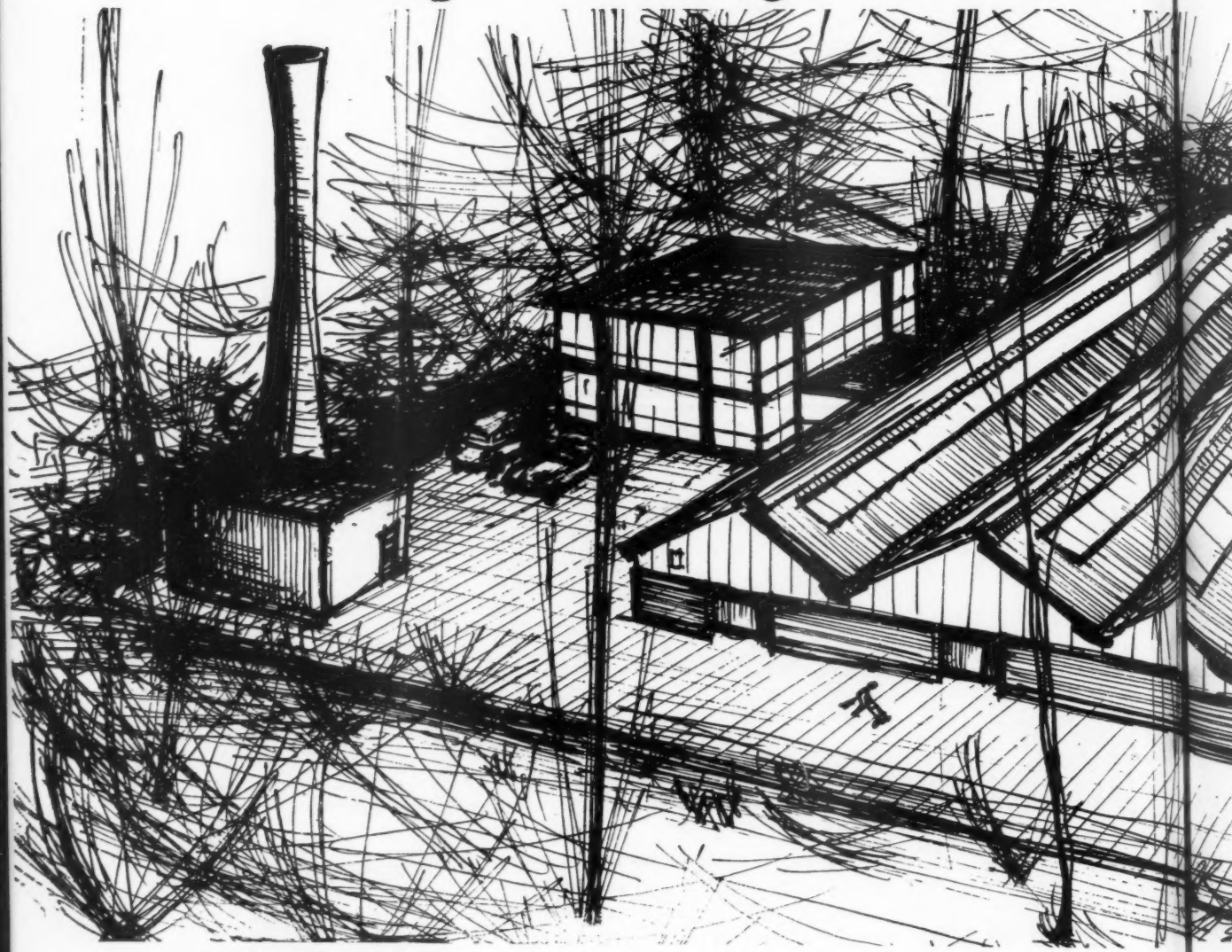

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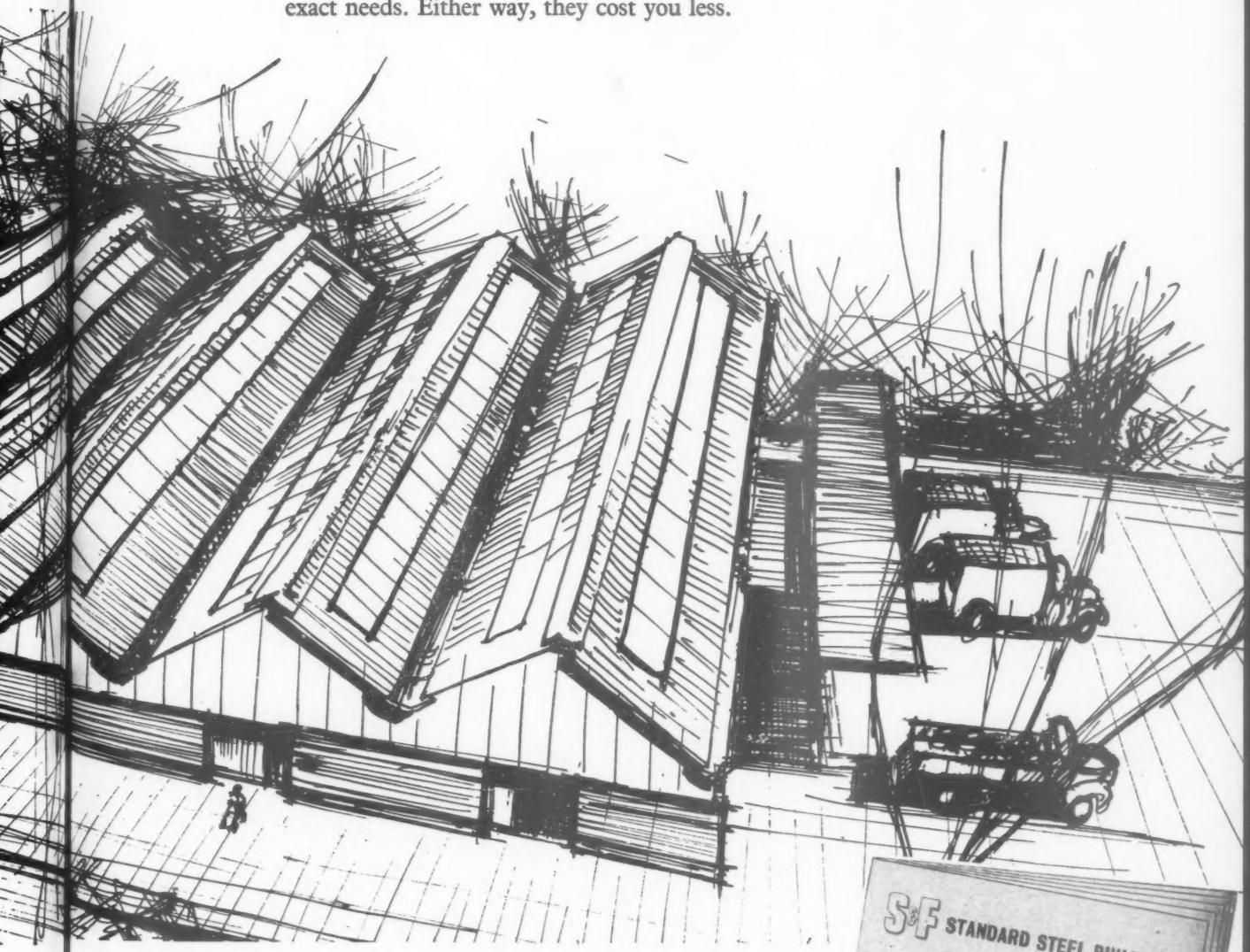

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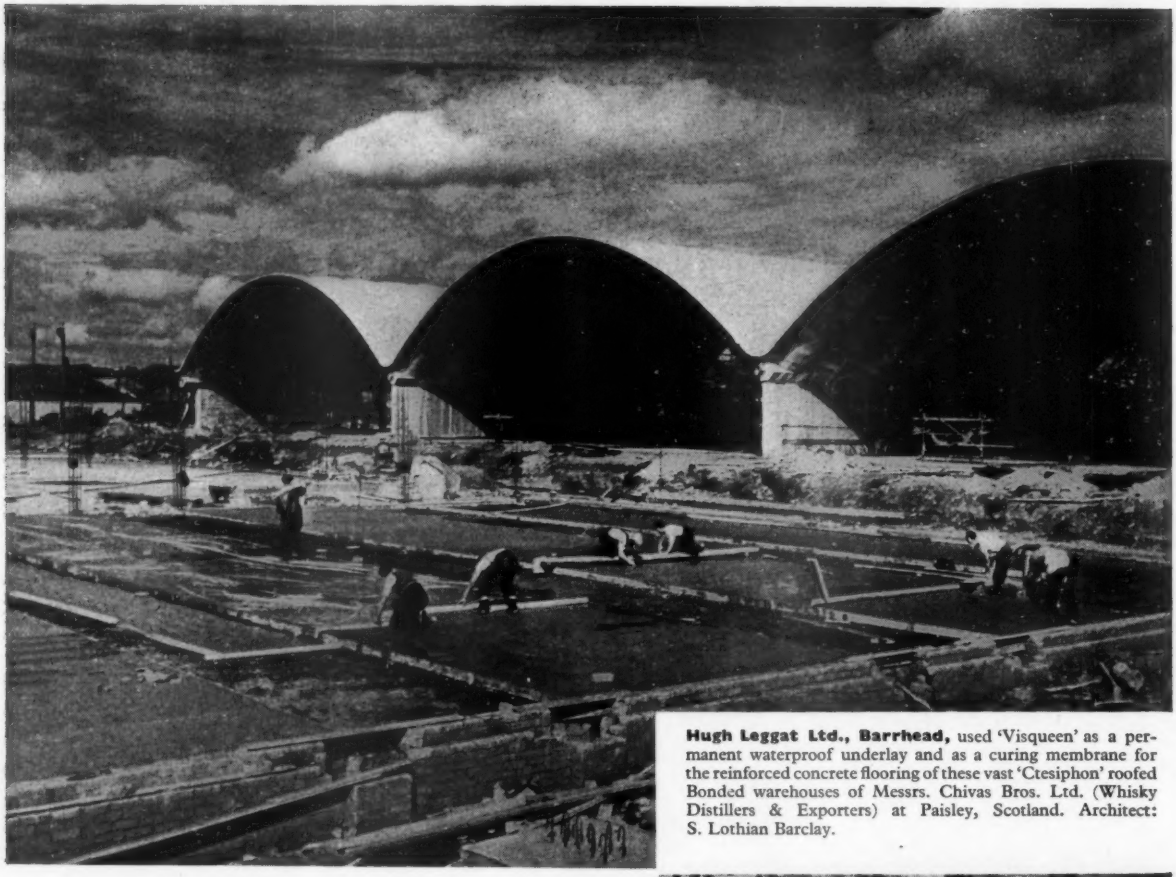

Hugh Leggat Ltd., Barrhead, used 'Visqueen' as a permanent waterproof underlay and as a curing membrane for the reinforced concrete flooring of these vast 'Ctesiphon' roofed Bonded warehouses of Messrs. Chivas Bros. Ltd. (Whisky Distillers & Exporters) at Paisley, Scotland. Architect: S. Lothian Barclay.

Up-to-date builders fight rising damp with **VISQUEEN film**

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'VISQUEEN' building sheet makes an excellent damp-proof membrane under concrete flooring and foundations. It is fully impermeable and acts as a complete barrier to liquids. 'Visqueen' also resists acid subsoils and alkalis. Once laid it will last indefinitely either in or under concrete.

'Visqueen' is inexpensive and easy to handle on site. Its lightness, flexibility, availability in wide widths and various thicknesses makes 'Visqueen' efficient and labour saving.

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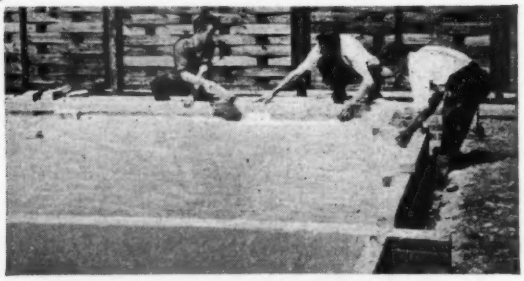

Unity Structures Ltd., London, used 'Visqueen' 500 (heavy weight) as a damp-proof membrane between the hardcore and concrete flooring of these two semi-detached prototype houses built by them at Ruislip. The film was laid at floor level in 12 ft. widths in one continuous strip over the party walls, and built into cavity walls at D.P.C. level

John McLean & Sons Ltd. of Wolverhampton, use 'Visqueen' sheeting as a damp-proof membrane under the ground floor rafts of their "Beverley" houses in the Midlands. Architects: Diamond Hodgkinson & Partners.

BV.127/1

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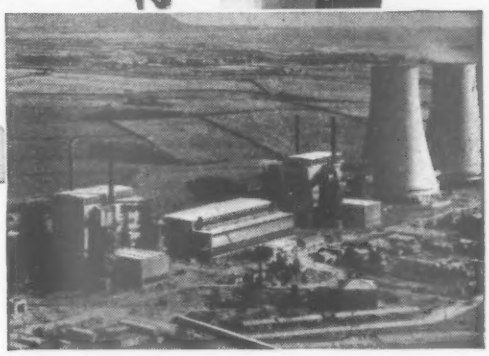

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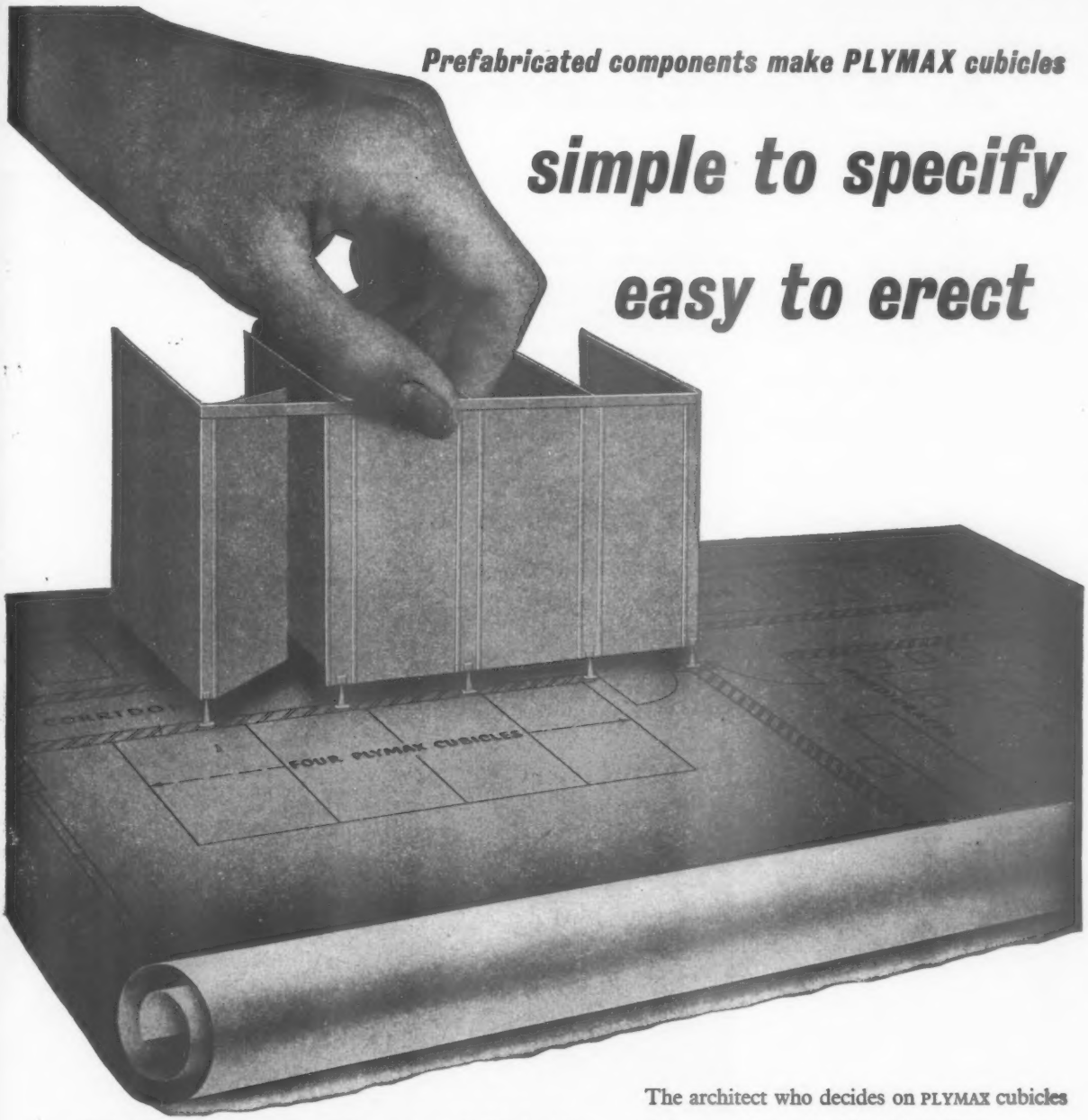

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Today, the picture is very different. Speed is vital because it affects costs. In order to achieve quick completion, architects and builders specify and use new materials that answer their requirements exactly.

To protect life and property against the danger of fire, there are fire-resisting building boards. To reduce fuel costs and ensure greater comfort, there are materials with high thermal insulating properties. To conserve space, there are prefabricated partitions. To mask the junction of walls and ceilings, there are factory-made cornices. The list is virtually endless.

To design and build successfully, speedily and with security, architects and builders need to be aware of the most recent developments.

turn the page for detailed information

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Paramount Plasterboard

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Every sheet of this popular board is, in effect, a factory-made section of a perfect plaster wall or ceiling. It is strong, permanent and rigid and does not expand, contract, warp or buckle.

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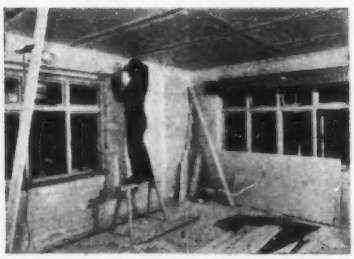
Paramount Water Resisting Plasterboard is also available for use wherever condensation is a problem.

Paramount Plasterboard in use as a dry lining to the external walls of a modern bungalow.

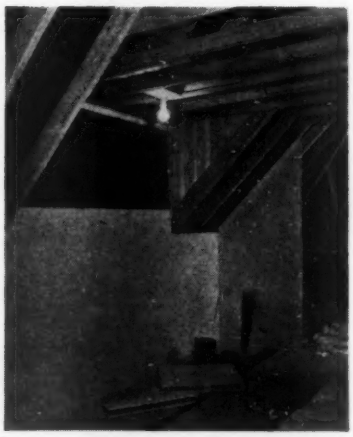


A new house fitted with a Paramount Plasterboard ceiling

Paramount Dry Partition

The perfect ready-made internal dividing wall—light in weight, space-saving, highly fire-resisting and possessing thermal and sound insulating properties. Easy to handle, cut and erect, it is low in cost and saves considerably on site labour. Off-cuts have the same strength as the original panel and are most useful for constructing built-in wardrobes, airing and meter cupboards, decorative alcoves, etc.

Paramount Dry Partition consists of two Paramount Plasterboards enclosing a fibrous, square-celled interior. Being a "dry" product, it can be decorated immediately after erection.



Paramount Dry Partition used in the conversion of an attic.

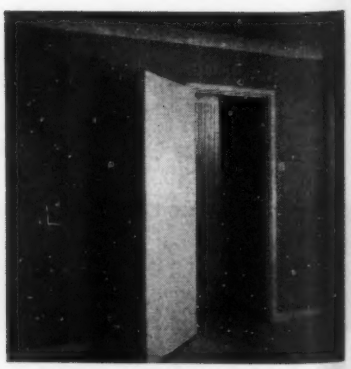
Paramount Dry Partition employed to divide living space in a new house.

Paramount Cove

This is a factory-made cornice that is easy to cut, simple to fix and low in cost. Consisting of a core of Gypsum plaster encased in strong paper liner, it is, in fact, plasterboard moulded into a cove section. As such, it is highly fire-resisting.

Paramount Cove is an excellent means of masking unsightly cracks that often appear at the junctions of walls and ceilings. Its simple but distinctive lines greatly enhance the appearance of any room. Decoration can follow as soon as fixing is completed.

Paramount Cove masks the junctions of walls and ceilings in a new house.



Paramount Cove employed to modernise an interior.

house construction products

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Paramount 2" Solid Partition

An extremely strong, rigid fire-resisting partition constructed from ¾" Paramount Plasterboard erected vertically and anchored at top and bottom with looped box channels and joint clips. It is coated on site with a thickness of ⅝" Gypsum plaster on both sides. Has excellent thermal and sound insulating properties. Paramount 2" Solid Partition occupies less than half the space of most other types of solid partition and weighs only 14 lb. per sq. ft.—less than ⅓ the weight of a 4½" brick partition.

Paramount 2" Solid Partition in position before plastering.

Paramount 2" Solid Partition erected in a private house at Shrewsbury.

Thistle Plaster Lath

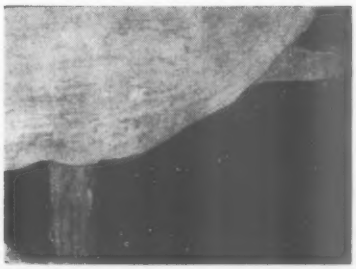
Manufactured specially as a base for Gypsum plaster. Made in convenient, easy-to-handle sizes, its long edges are rounded to enable strong joints to be made without the use of scrim cloth. Resists fire and does not shrink.

Thistle Gypsum Plasters

Manufactured under controlled conditions by the most modern equipment, these retarded hemi-hydrate Gypsum plasters offer the maximum uniformity in setting time and workability. Highly fire-resistant, non-shrinking, time-saving and providing an ideal base for decoration, Thistle Gypsum Plasters possess advantages that reduce costs appreciably.

The range, conforming to B.S.1191, is wide enough to meet all requirements.

Thistle Plasters being applied to plasterboard.



Scrimmed joints and one coat of Thistle Plaster on Thistle Plaster Baseboard.

Blue Hawk Flooring

This modern flooring comes in tiles 9 inches square. Each tile has a hardwood surface with a resin-bonded sand base. Combining the natural beauty of grained wood with the strength and durability of tile, it offers the advantages of a decorative appearance and long service at moderate cost. Laid as easily as a quarry tile, but the surface is hardwood.

The tiles are laid with a cement mortar bed directly on the concrete sub-floor, thus saving the cost of an accurate screed.

Blue Hawk Flooring resists movement, withstands the effects of damp and rising moisture, is totally unaffected by dry rot, mould and other micro-organisms and does not support combustion.

Workmen laying Blue Hawk Flooring in a modernised building.

Blue Hawk Flooring laid in a contemporary house.

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AP 161

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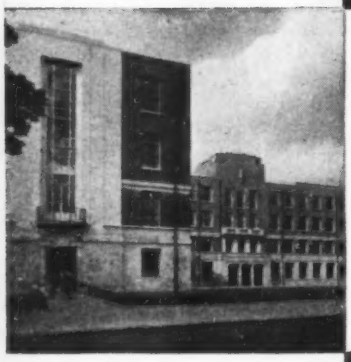

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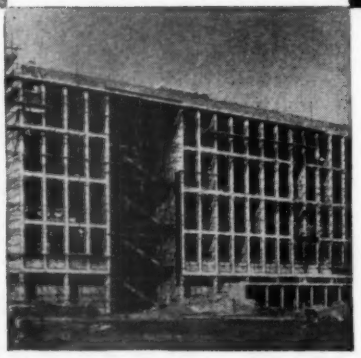

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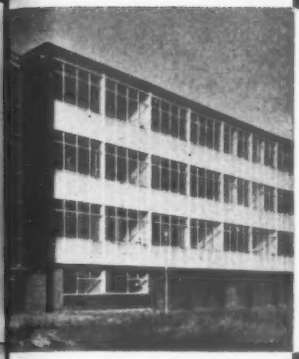
Architect:
Alister MacDonald



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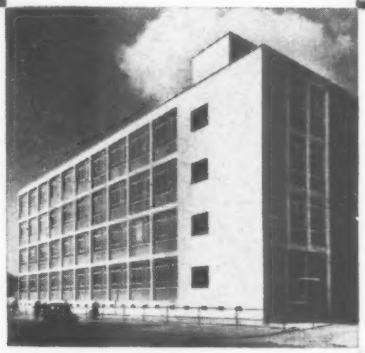

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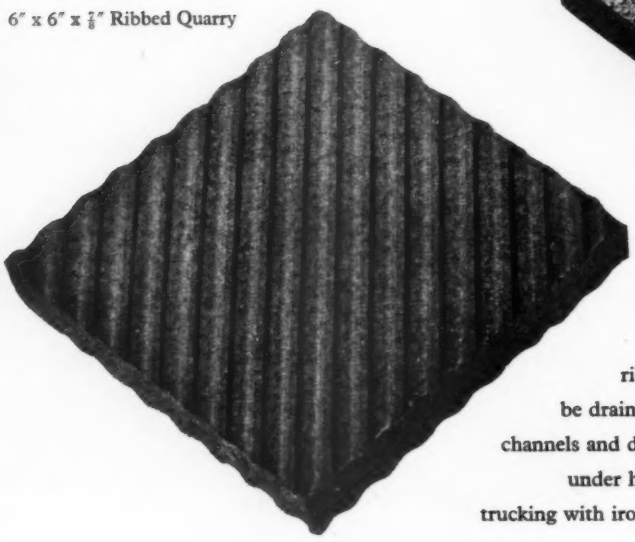

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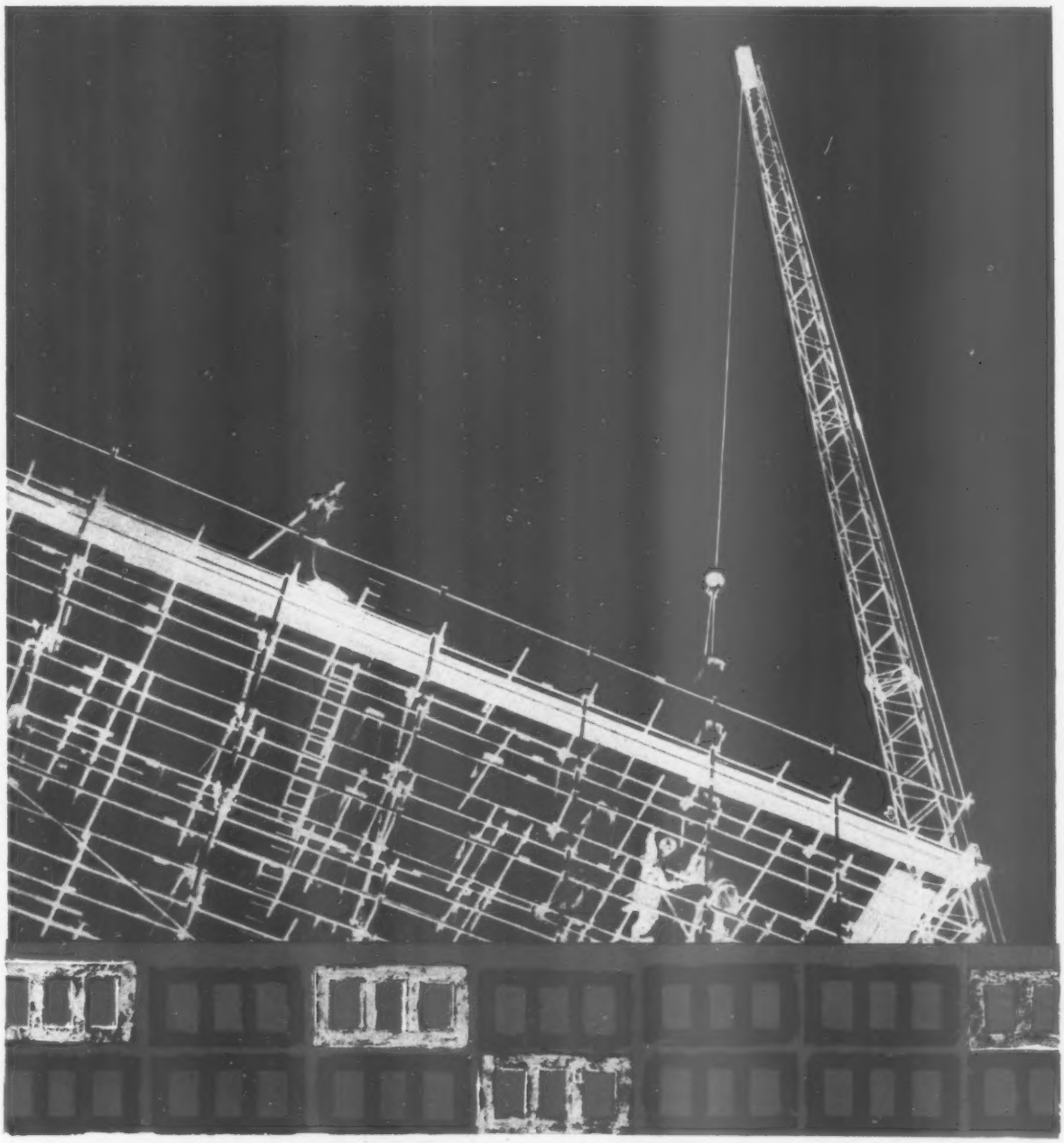

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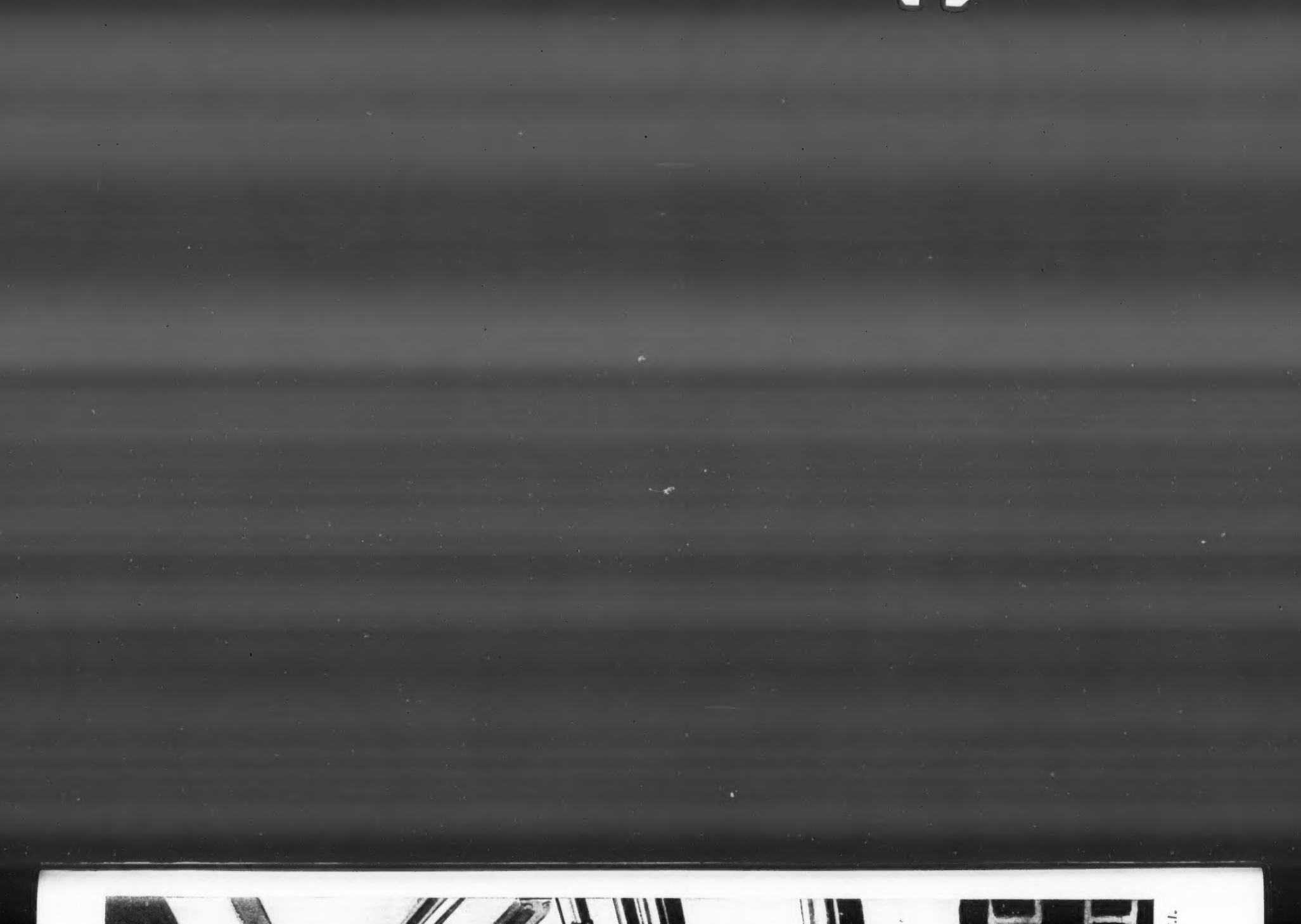

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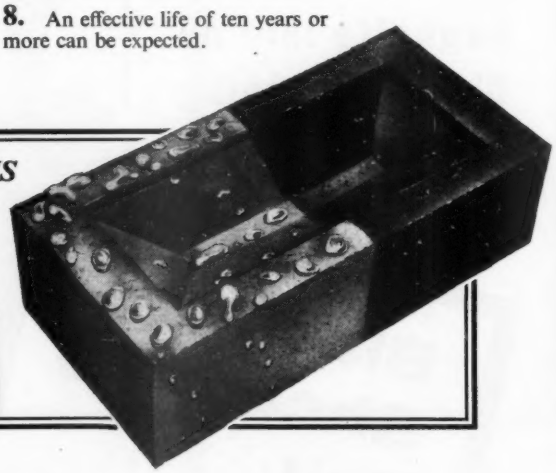

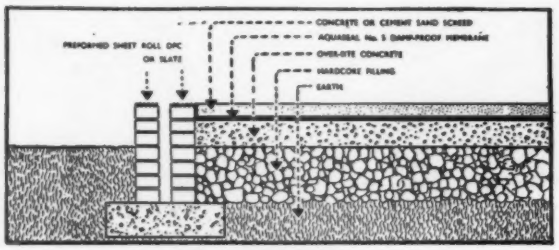

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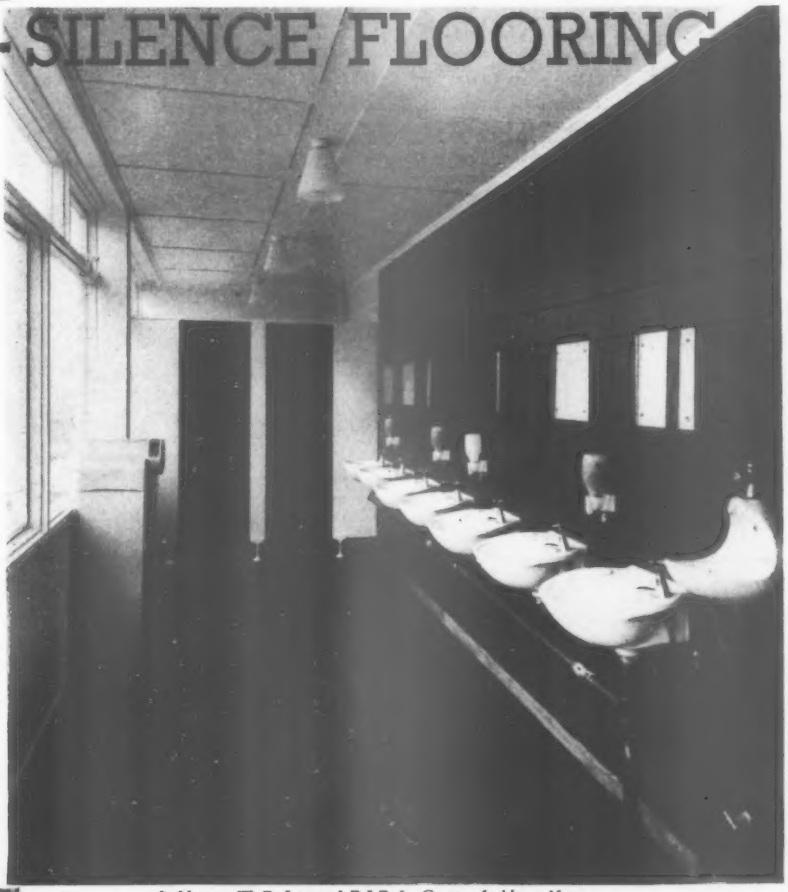
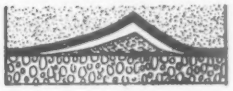


Washroom at the Tuxford Modern School, Notts.

Architects: W. D. Lacey, A.R.I.B.A., County Architect, Notts. Former County Architect, D. E. E. Gibson, C.B.E., A.R.I.B.A.

ABOVE—*Library at Worksop Technical College, Notts.*

BELOW—*Classroom at the Ordsall Modern School, Notts.*



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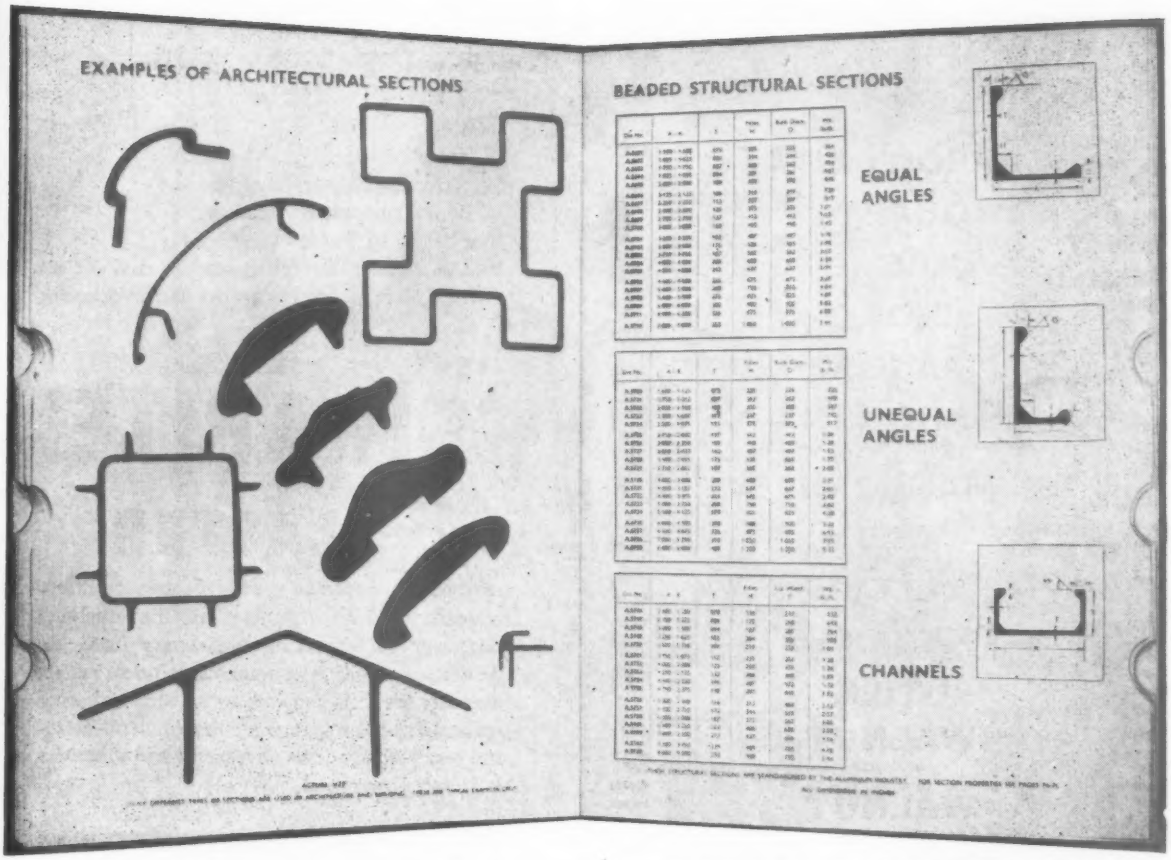

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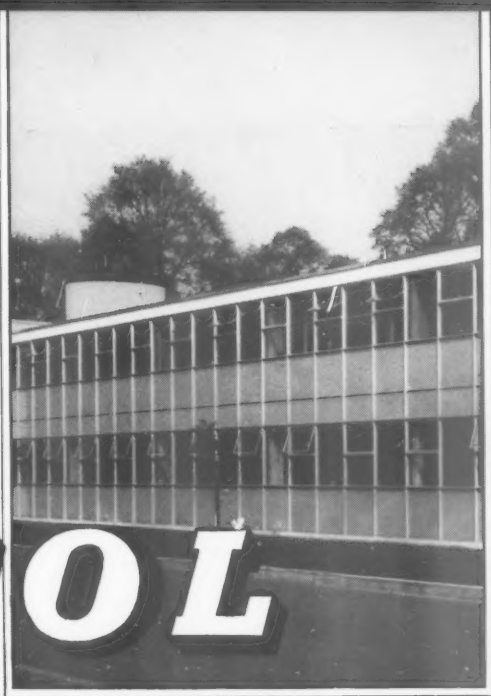
THE ARCHITECTS' JOURNAL
for April 30, 1959

Project for: National Physical Laboratory, Teddington.
Architect: A. S. Reid, A.R.I.B.A., of the Chief Architect's Division, Ministry of Works
Contractor: W. E. Chivers & Son.
ESCOL panels shown are in pale grey (B.S.I. 7-078) and those on the north elevation in brown (B.S.I. 3-039) and yellow (B.S.I. 4-055)



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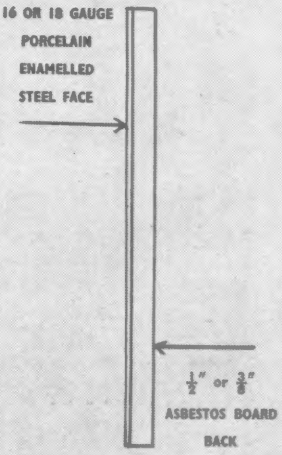

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Both materials (which are supplied ready-mixed) can easily and very rapidly be applied "in situ" on practically any surface—timber, stone, cement, etc.—provided it is free of oil and grease. And they are ideal for prefabrication in tile or sheet form. In either case only a comparatively thin application (say 3/16") is needed.

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This winder tower is about 150 ft. high with columns at 60 ft. by 52 ft. centres.

Welded girders up to 15 tons in weight are used in the winder floor and motor generator floor. High-strength bolting was used for site erection, thus saving time.

The scotch derrick on the left is part of the contractor's erection tackle.

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The Architects' Journal

No. 3348 Vol. 129. April 30, 1959

9-13 Queen Anne's Gate, London, S.W.1. Whitehall 0611

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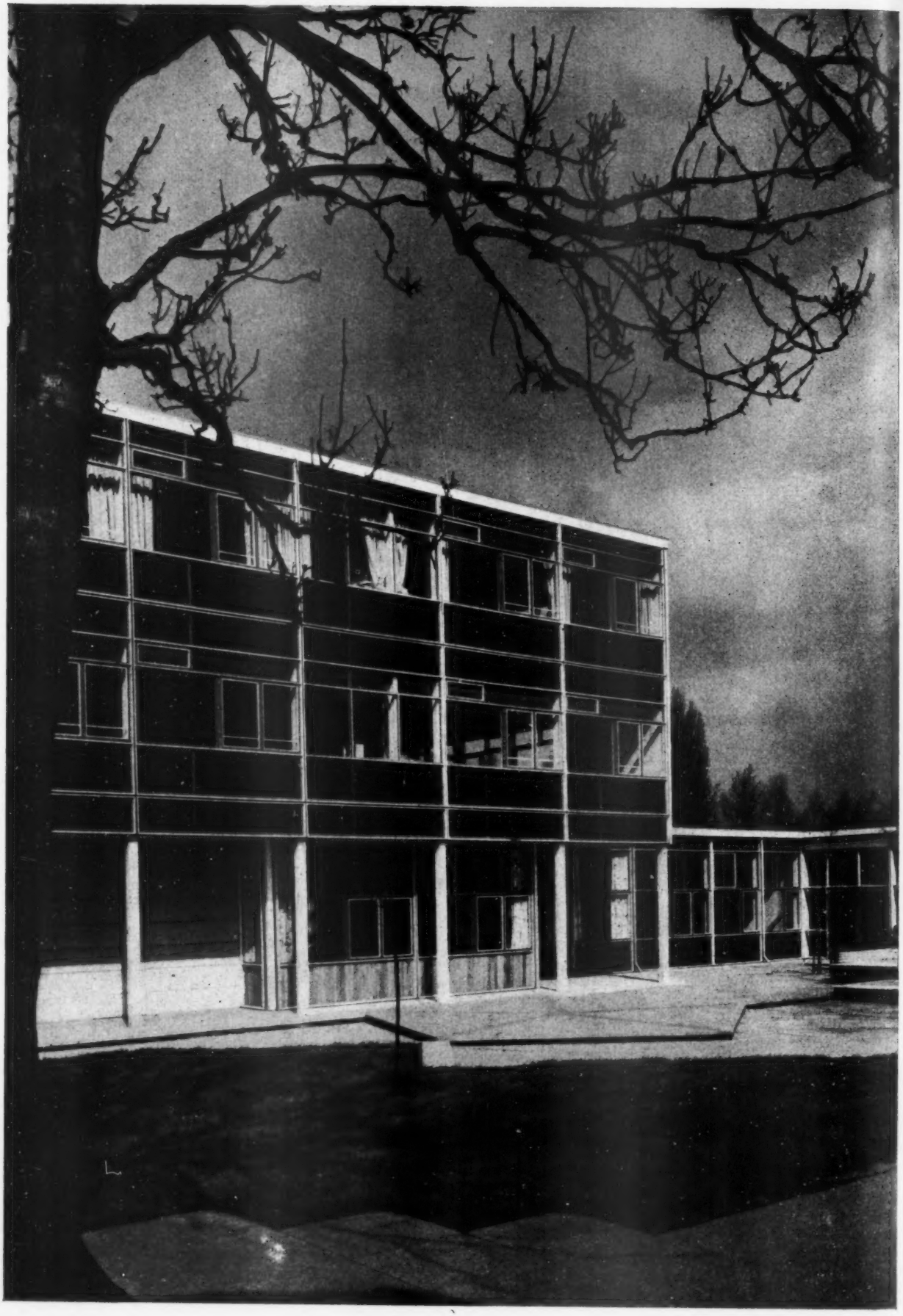
This week's JOURNAL *is largely devoted to the work of the Consortium of Local Authorities' Special Programme, its method of work and some of its earliest achievements, and we are glad to preface this report of progress with the following message from the Minister of Education:*

A Message from the Rt. Hon. Geoffrey Lloyd, M.P., Minister of Education

The Consortium of Local Authorities' Special Programme (CLASP) has now been in effective operation for about two years and I have watched its progress and success with interest and admiration. Lord Hailsham, my predecessor, was fortunate in being asked to help in the formation of CLASP but it was essentially the result of local education authority initiative, particularly that of the Nottinghamshire authority.

It is encouraging, and, if one recalls the history of post-war school building, not really surprising, that local authorities should willingly seek to back up their inventiveness by combining their administrative and technical resources and should, in doing so, strengthen their collective bargaining power. This has stood us in good stead when our school building programmes have been of the order of £50m a year. With the prospect of the even larger school building programmes outlined in the recent White Paper on Secondary Education for All, it will surely occur to some to argue whether the lead given by CLASP cannot with advantage be followed by others.

Geoffrey Lloyd



CLASP has produced a prefabrication system which is technically highly successful, and when used sensitively, as here in Tuxford Secondary School, can provide a building of high architectural merit.

CLASP

Consortium of Local Authorities' Special Programme

In the whole field of architectural and building development today the most significant work is that now being done by CLASP, the Consortium of Local Authorities' Special Programme. This work is so important that we are devoting most of this issue of the JOURNAL to describing the organization CLASP, its method of working, and to illustrating and giving details of three buildings which have been produced by the Consortium. In brief, CLASP is a co-operative effort by several local authorities wherein research and development work is pooled and building programmes organized on a major scale. All make use of the same flexible, prefabricated system to their mutual benefit; a benefit which is also shared by the materials' producers and the builders. The size of the orders places the client in an extremely strong position: no supplier or builder is indispensable, and savings through increased efficiency are already being passed back to the client in the form of reduced costs, higher standards of planning and finishes, or in extra building.

An eminent member of one of the best firms of private architects, on seeing one of the schools shown in this issue said, briefly: " It is not Architecture." No one would deny that the system is far from being perfect, that there is a great deal still to be done to improve details and standards and to refine the whole. The point is that a new approach to design and building has evolved, founded on the achievements of Herts, MOE and others, but free of some of the inherent defects which has limited advances elsewhere.

CLASP is a method of working dependent on architects thinking and planning in a big way; for instance, by placing big orders, so that the advantages of long production runs can be reflected in low prices. By having a large number of skilled minds concentrating on matters of detail, improvements can be easily introduced in successive programmes, and research work is more economically undertaken.

It is inevitable that this kind of development work should start in a school building programme, because school building has been the nursery of true modern architecture in this country. But one of the most interesting aspects of CLASP is that one member is the War Department who is using the system for non-scholastic purposes.

The system, and the principles behind it, are no longer relevant merely to school building. What is important is that other authorities, statutory bodies or private enterprises should copy the principles, though not necessarily, of course, the actual

structural system, and achieve similar advantages in terms of research, development, speed of building and true economy. How this has been achieved by the co-operative effort of CLASP is fully described in the following article.

Board of Chief Architects of CLASP: City of Coventry, Arthur Ling; Derbyshire CC, F. Hamer Crossley; Durham CC, G. R. Clayton; Gateshead County Borough, A. L. Berry; Glamorgan CC, E. A. E. Evans; Lanarkshire CC, D. G. Bannerman; Leicester City and County Borough, J. H. Lloyd Owen; Nottinghamshire CC, W. D. Lacey; War Department, D. E. E. Gibson; West Riding of Yorkshire CC, W. L. Glover; Clerk to the Consortium, A. R. Davis, Notts. county clerk; Treasurer to the Consortium, T. Weston, Derbyshire county treasurer.

The object of the consortium is, firstly, to sponsor and control a system of prefabricated construction and to reduce the cost of school building to the member authorities by combining their orders for the component parts; secondly, to deploy the resources of the authorities to carry out technical development work and research aimed at still further improving its quality, performance and economy; and, thirdly, to save the money normally spent on mining subsidence precautions by using this system.

The original member authorities were:

City of Coventry.
Derbyshire County Council.
Durham County Council.
Glamorgan County Council.
Leicester City and County Borough.
Nottinghamshire County Council.
County Council of the West Riding of Yorkshire.

1957-58 school building programme

The initial development of the system of construction used by the consortium was carried out by Nottinghamshire in 1956. An account of this work and a description of the construction were published in four articles in the JOURNAL for September 26 and October 3, 10, 24, 1957.

The system is based on the maximum use of factory made components designed for rapid dry assembly on the site. It consists of a light steel frame capable of three storey construction and any plan arrangement on a 3-ft. 4-in. grid. Roofs and floors are timber and there is a variety of dry cladding systems. The window frames are in timber and partitions are precast gypsum. One of the characteristics of this method of building is that it will withstand the ground movements caused by mining subsidence. It does this because it is light, it has a deliberately built-in flexibility and the whole of the structure is based on a 5-in. concrete slab, with no other foundations sticking into the ground.

This quality is inherent in the structure and no extra cost is required for mining subsidence precautions. Virtually without modification buildings are constructed with it on stable and unstable sites and are equally economical.

In the 1957-58 building programme, Nottinghamshire committed all of its new schools to this form of prefabrication. During the year, 11 educational projects and two general jobs were started, the total value of these contracts being £900,000. Ten of these buildings were in occupation by September, 1958, and three of them are illustrated in this issue.

In that programme, manufacturers were invited to tender for the supply of the standardized component parts of the system of construction on the basis of the approximate quantities required, on all 13 buildings. This meant the cost of moulds, jigs, tools and overheads would be spread over a number of jobs and therefore prices for steel frame, roof lights, concrete cladding units, heating apparatus, partitions and so on would reflect the advantages of quantity production rates. It was clear that the bigger the orders for a given component, the cheaper it would be up to a certain point. For this reason an informal collaboration was formed with Coventry City and Derbyshire County Council to build some schools with this construction. Coventry built one school in the 1957-58 programme, completing it early in 1958, and both authorities' architects contributed to the initial development work and have designed elements which are incorporated in the later schools in the Nottinghamshire 1957-58 programme.

Schools of a good quality were produced rapidly and economically and other authorities, particularly those who faced the mining subsidence difficulty, became interested.

Consortium 1958-59 programme

On July 24, 1957, a meeting of the interested Local Authorities was convened by the Ministry of Education under the chairmanship of Lord Hailsham. At that meeting the Authorities were asked to decide if they wished to join in a bigger group, and if so to contract in with the number of jobs they proposed to build in the system of construction, in the 1958-59 programme. It was decided that full membership would be based on having a stake of at least three jobs in the year.

As a result of the meeting the consortium was formed with a total of 31 schools representing a total value of £2,870,000 for the 1958-59 programme. This includes one school being constructed by Warwickshire County Council who, whilst not having a large enough programme to warrant full membership of the consortium, are working in association.

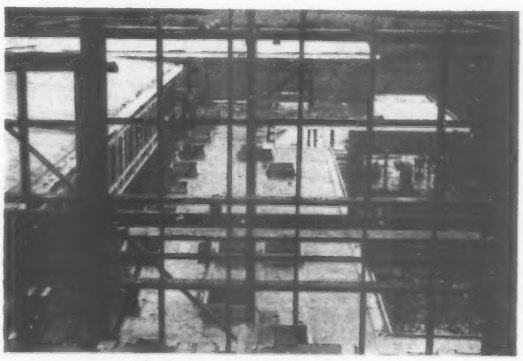
Almost all of the contracts are now building in different parts of England and Wales. Experience indicated that jobs using this type of construction can be erected extremely quickly—two secondary schools each of about £100,000 have been built in 13 months. This has been confirmed in the consortium programme. A primary school started at the beginning of the financial year in April, 1958, was opened and in full occupation on September 2, 1958, and other jobs are building to schedule.

CLASP was adopted as the name for the organization, the initials standing for "Consortium of Local Authorities' Special Programme."

Willenhall Wood II Junior School, Coventry. City architect, Arthur Ling.

Science laboratory block for Swanwick Hall Grammar School. County architect, F. Hamer Crossley.

The Lero Technical College, Leicester, under construction this snowy January. City architect, J. H. Lloyd Owen.



View from the main block of work in progress at Hirwain Secondary School, Glamorgan. County architect, E. A. E. Evans.

Organization of the Consortium

There were no precedents for this kind of organization. The way in which a number of large public authorities can combine to tackle a single operation has been discovered as the work has proceeded. The consortium is directed by a board of chief architects representing each of the authorities. In addition, represented at the meetings are the Clerk of Nottinghamshire and the Treasurer of Derbyshire. The chief architects meet about four times a year, each authority taking it in turns to act as host. The Clerk, Education Officer and Treasurer of the host authority will be represented at the meeting. Since the formation by the consortium the chief architects have met five times—at Nottingham, Cardiff, Durham, Matlock and Wakefield.

The chairman of the Chief Architects' meeting, Donald Gibson, formerly County Architect, Notts, now Director-General of Works at the War Office, has twice reported on behalf of the chief architects directly to a meeting of elected Council members representing the different authorities. These meetings were held in schools constructed by the consortium, the first in Nottinghamshire and the second in Coventry.

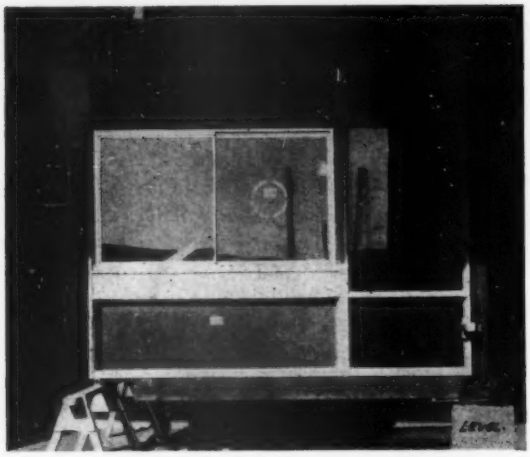
The chief architects determine the policy of the group but the actual work is done entirely in the architects' departments of the authorities. This work is co-ordinated by a Working Party consisting of members of all the architects' departments. The Working Party reports at intervals and carries out the policy laid down by the chief architects. There are about 15 or 16 architects and quantity surveyors present at Working Party meetings which take place about once a month, usually at Nottingham, which is fairly central, and it is this close personal contact at the technical and administrative level that is one of the keys to the successful working of CLASP.

The Working Party shares out the work among the members who when they have taken action will report back at a subsequent meeting. The meeting appoints each authority in turn to act on behalf of all in arranging tenders and nominating suppliers for components. The Working Party also directs the programme of technical development work which will be carried out by different architects' departments at different times and ensures that all other members are fully conversant with this work as it proceeds. At every meeting the master charts are reviewed. These charts show the predetermined starting date of each job on the ground in the building year. It is very important that jobs start construction on the programme date because if deliveries cannot be accepted by the general contractors, the stockpile in the factories may become too large. It is one of the few conditions of membership of CLASP that the authorities take delivery on the dates that they have proposed and had agreed by the Working Party. It is the job of the Working Party to ensure that both authorities and manufacturers are kept fully informed on progress.

The Working Party endorses the issue of all new standard drawings, new designs and technical information and cost analyses by the different architects. In this way the system of construction is controlled and the rapidly accumulating experience of the group as a whole is available to everyone.

Minutes of the Working Party meetings are circulated to all authorities. They are comprehensive but they represent almost the only paper work in the consortium apart obviously from photo negatives of drawings, quotations and specifications. There is very little letter writing between authorities because decisions and information are concentrated at the monthly meetings.

The numbers attending the meetings are now at about the maximum for settling the detailed technical and contractual points which the Working Party in-



The prototype MK II window assembly on a test frame in the factory.

Standard steel staircase at Worksop County Technical College, designed by F. Hamer Crossley in collaboration with Brockhouse Steel Structures.

evitably has to consider. If CLASP expands in the future, this point will need to be thought about.

Programme components

The first task of the Working Party was to obtain prices and nominate suppliers and sub-contractors for the main standardized components which would be required in all the schools in the 1958-59 programme. This work was carried out between November 1957 and May, 1958. The items which were to be treated as programme quotations were determined by the meetings of the chief architects. The ones selected were those which would be cheaper if produced in quantity.

The method of obtaining prices for the components was by inviting tenders for the supply on the basis of the estimated requirements of the whole consortium. The lowest tenderer was nominated to supply his particular item in all areas. In a few cases, however, where a component was of a highly specialized nature, prices were negotiated on the basis of the prices which Nottinghamshire had paid in the 1957-58 programme. All prices obtained were compared with those received for the identical components in the much smaller 1957-58 programme. It was therefore always possible to see where the combined order of the authorities was in fact reducing costs.

The following is a list of some of the main programme quotations accepted for the 1958-59 consortium programme, showing the percentage reduction against the prices that Nottinghamshire had hitherto paid on its 13 contracts:

Steel frame	5 per cent reduction.
Concrete cladding and plinth units	15 per cent reduction.
Metal roof lights	27½ per cent reduction.
Internal flush doors	No reduction but higher quality.
Precast gypsum internal partitions	2½ per cent reduction.
Rubber floor finishes	5 per cent reduction.
Vitreous enamelled steel sheets for fascia and breast panels	15 per cent reduction.
Heating and hot water installations	4⅔ per cent reduction.
Sanitary fittings	11⅓ per cent reduction.

Although in the CLASP system the greater proportion of any job is general contractors' work rather than specialist work, it should be noted that the two specialist elements of steel frame and heating systems in themselves represent approximately 20 per cent. of the cost of any one school. It can therefore be appreciated that the cost reductions in the items listed above materially affect the overall cost of the buildings.

The steel frame and heating have prices agreed on a sliding scale. The price reductions for these are on the estimated quantities already being ordered: if the consortium increases its orders for steel components or heating systems, the reduction in price to member authorities will be greater.

Technical development

Technical development work aiming at incorporating improvements in the 1959-60 programme was carried out during the autumn of 1958 whilst jobs in the current programme were under construction or were about to start on the ground.

The main effort was concentrated on producing a Mk. II window range. The original timber windows were measured in the bills of quantities as general contractors' items. The range of alternative types was restricted and with the greater number of architects using the CLASP system, there was a proliferation of "specials." Windows represented a big proportion of the cost of the buildings and any reduction in their cost would considerably affect the total cost of school construction.

The Mark II range of windows is based on a much greater standardization of much smaller units. A small

range of joinery sub-assemblies co-ordinated on a 4-in. module are mass produced and these can be fitted together in any way on the site. The joinery components are designed for specialist manufacture in quantity on a consortium basis.

The new windows have incorporated the experience of the earlier programmes and the specification is higher in quality. Aluminium sliding lights and glass louvre ventilators replace the side hung casements and top hung lights. These components are also for supply by nominated specialists.

When the Mark II designs had been approved by the Working Party, tenders were invited for joinery components from some of the biggest manufacturers in the country on the basis of the estimated requirements for next year, about £90,000 worth. Prices were also negotiated on a quantity basis for the other elements. The result was a 13½ per cent. reduction in cost over the Mark I windows: a saving of £1,500 on 3-F.E. Secondary Modern Schools. They are much better windows in every way and the reduction in cost reflects the greater standardization and bigger quantities of the sub-assemblies. The window development took three architects four months.

Production of the window components is now under way in readiness for delivery to the jobs which start in April.

A review of the steel secondary beam design was made and slight cost saving has been made; cheaper hot rolled square tube stanchion shafts have been introduced where reinforced cold-rolled shafts had been used before. In addition, a development exercise to confirm the practical manufacturing and erection tolerance of the steel frame was put in hand. In general, however, it was recognized that the steel was already a more "developed" element than some of the others and no major change was made.

Development work was carried out to make it possible to build four-storey structures using the 4½ in. × 4½ in. standard stanchion dimensions. This work involved an analysis of structure, site slab design and planning requirements.

There has also been a general review of drainage systems.

Many other smaller things have been developed by the member authorities' architects and these have been incorporated into the system at a convenient point by the Working Party.

Consortium 1959-60

At a meeting of elected members held at Coventry in October, 1958, the participating authorities stated the value of jobs they proposed to build in CLASP in the next programme. All authorities wished to continue and were joined by the County of Lanarkshire jointly with the Scottish Education Department, the County Borough of Gateshead, and the War Department. The total value of the new programme was approximately £3¼ million which represented a significant increase over the previous programme, especially as the national educational building programme was smaller. The 1959-60 programme chart was drawn up by the Working Party and most of the consortium programme suppliers and sub-contractors have been nominated or are in the process of tendering. Some of the components for the new programme are in the factory ready for the first deliveries in April and May this year.

This is the second time round for most of the authorities and whilst there are a number of differences in the CLASP 1959-60 construction, a good many of the organizational problems have been solved. Already the first steps in drawing up a development programme for the 1960-61 programme have been taken.

Cost

A little should be said about the cost of mining subsidence precautions because many of the member authorities are concerned with this problem. CLASP construction has saved £140,000 in the 1958-59 programme in which 22 of the school contracts are on subsidence sites. This figure assumes that the national average additional cost for schools built in other types of construction on subsidence sites is 7½ per cent. The Ministry of Education is allowing the consortium authorities to use money saved in this way to finance other building projects.

The combined purchasing measures have achieved a considerable reduction of cost for the components in the system below that which could have been obtained by any single authority. This, in addition to an inherently economical structure has enabled the authorities to obtain the maximum value in return for the money spent on schools. Some authorities have obtained tenders well below the Ministry of Education ceiling figures and thus made a saving; others have provided more than the minimum accommodation and are still keeping within the fixed ceiling cost. In all jobs it has been possible to afford the correct standard of finish and fittings of CLASP construction to encourage a small annual maintenance cost.

Conclusions

CLASP represents a new and important factor in the building industry and in Local Government. It has also considerable significance for the architectural profession.

It grew out of the similar but special requirements of certain local authorities—one of these being mining subsidence protection—but its subsequent development has revealed a potentiality beyond its original terms of reference.

It is now a powerful force, building a significant number of the country's new schools as well as other types of buildings. Jobs on the ground and on the drawing boards and programme charts add up to about £6,000,000 worth of building.

It is worth while, therefore, drawing some conclusions from its work so far and assessing the implications of this kind of organization in building.

CLASP has been developed to meet the needs of building efficiently with a completely prefabricated system of construction. The consortium organizational pattern is a response to the new technique of building with standardized factory-made components manufactured in advance of building by quantity production methods. It is an entirely new way of handling prefabrication.

Since the war years there have been various attempts at making prefabrication efficient in terms of quality and economy as well as speed of construction. In essence the problem has been to reconcile the diversity of requirements in the completed building with the need to standardize relentlessly for cheap factory production methods. A good deal of experience has been gained in the last 12 years. There has been the all-timber house, the all-steel house, the aluminium house and the concrete house—completed buildings produced on the basis of one manufacturer's main product. The manufacturing group has been tried in school construction whereby one manufacturer of the dominant component co-ordinated the other component manufacturers who were either subsidiaries or associates. There are the systems of construction sponsored by contractors' organizations based on precast concrete and there have been numerous completely comprehensive systems using timber—the nearest thing to a "universal" material.

Hertfordshire has developed and built schools with its own system of construction based on component prefabrication for 12 years and this represents an important departure from the rule of commercial sponsorship.

CLASP construction is sponsored and controlled by the member authorities. Its development, its co-ordination as a system, and its contract organization is the responsibility of their architects. Hitherto when authorities have adopted prefabricated construction, they have inevitably felt themselves in the hands of the firm sponsoring the system. With CLASP no one manufacturer is indispensable. The majority of the manufacturers of the components which make the system are appointed by competitive tender. This has meant that the cost of the components is firmly based on their market values and hence the cost of the system as a whole is also based on it.

The consortium has produced the big guaranteed orders that were always needed to reduce the cost of specialized building components. There is a real incentive for the manufacturers to make use of their factory efficiency and quote prices on the basis of serial production and standardization. The control of the design by the authorities means that if any one part of the construction is becoming expensive, it can be smoothly changed to an entirely different method. On this basis of control by the user combined with big enough orders, prefabrication has the opportunity to compete on cost with more traditional construction of the same quality.

The consortium members feel that perhaps this kind of organization is the one most capable of realizing the full potentialities of factory production methods.

The CLASP system makes use of the existing contracting organizations in the building industry. Small and medium-sized contractors who form the majority of the building force in Britain are usually appointed to build the jobs. The design of the construction avoids the need for the big high-pressure contractor who is virtually indispensable for building with other new techniques. No special machines are required on the site and all parts of the system are designed to be easily man-handled. There is a good deal of carpentry prefabrication which the G.C. himself will do and he can erect the steel frame. Speed of construction is inherent in prefabrication and is maintained easily by a reasonably well-organized builder. In this way a prefabricated system makes full use of the average firm.

The consortium is an experiment in Local Government. By combining their purchasing power, authorities are participating in quite big business. They are dealing on more equal terms commercially with private industry. That this can be done without infringing the regulations of the separate authorities, without restricting their autonomy and without producing a bureaucracy is a tribute to the flexibility and imagination of Local Government.

CLASP could, of course, be simply a machine for organizing bulk contracts and controlling a prefabricated system. Its members, however, feel that its main responsibility is to improve and go on improving ways of building, and in so doing contribute to the whole industry. For this reason co-ordinated research and technical development is written into its aims, and is a commitment that each authority accepts on joining. Technical development is not thought of as a job for a special group but is shared out as a normal and essential part of a large production programme. Experience of building suggests the next development job to be tackled. The results of this work are incorporated as a modification or Mark II in the next year's building programme. Quite apart from considerations of quality and design, the size of the programme makes research and development a highly economical proposition. The cost in terms of salary and overheads of setting the architects aside to produce a new design of window was almost completely paid for by the savings resulting from their work in one medium-sized contract and there are 46 contracts in the 1959-60 programme.

The architect members are not satisfied with their method of building. There is no finality about it and there are a tremendous number of improvements still to be made. They look forward to its steady development in the future.

In CLASP architects have taken the initiative. They are collaborating with a wide group of manufacturers and specialists in technical and administrative matters, but only they themselves are responsible for the design of the system as a whole and for the co-ordination of factories and sites. It is their responsibility just as much as is the design of the individual buildings using it.

The position is, therefore, fundamentally different from the one often anticipated for the future, where the architect has a subordinate rôle to play as the "all-in service" and the package "system of construction" grow in importance.

The application of large-scale industrial production methods to building is going to increase—this will occur in factories as well as on the sites. It is seen by many architects as a threat to their profession but it is in fact a challenge. If this challenge is accepted by the architect, it can help to restore his position in building. CLASP is one example of how this can be done.

THREE NOTTINGHAMSHIRE SCHOOLS

designed by W. D. LACEY, Notts County Architect, in succession to D. E. E. GIBSON; deputy, HENRY SWAIN

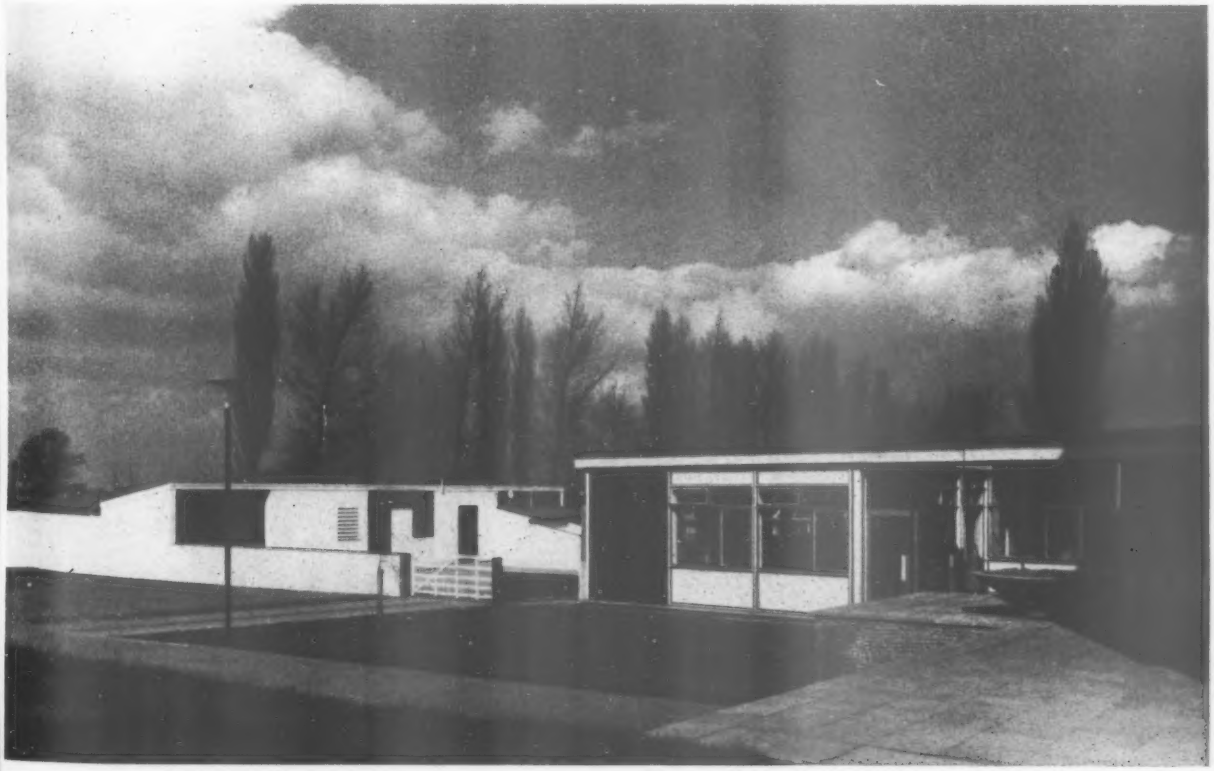
1. TUXFORD COUNTY SECONDARY SCHOOL, TUXFORD; group architect L. H. BLOCKLEY; job architect ALAN GOODMAN; quantity surveyors J. SCOTT, J. MARSHALL

2. RETFORD ORDSALL SECONDARY MODERN SCHOOL, RETFORD; group architect K. ALLERTON; job architect A. J. GRIFFIN; quantity surveyors DAVIS, BELFIELD AND EVEREST

3. NEWARK BARNBY ROAD COUNTY INFANTS' SCHOOL; group architect L. H. BLOCKLEY; job architect TREVOR PROSSER; quantity surveyors J. SCOTT, D. RHODES

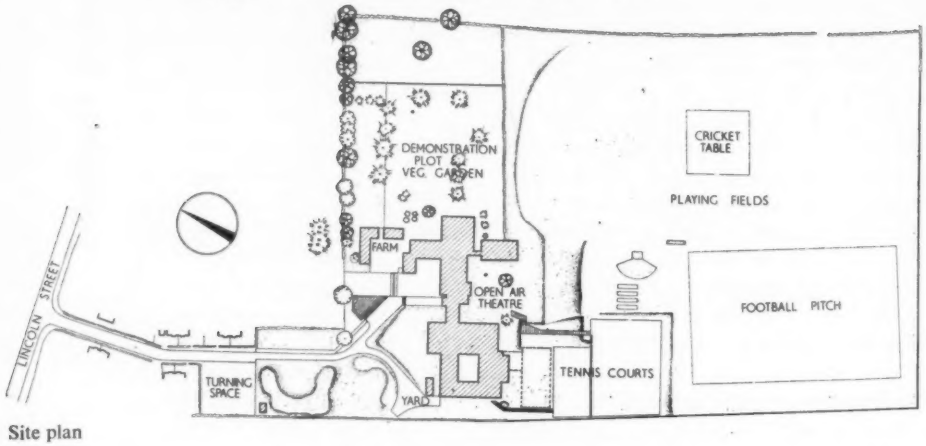
These three schools have been selected to illustrate in detail the work of the Consortium, in particular the pioneering work of Nottinghamshire, where they were the first schools to be erected on the anti-subsidence system and acquired the nickname of rock-and-roll schools. The structure was fully described in the JOURNAL (October 10 and 27, 1957) while the schools were being built: now we present a full appraisal of the results and a cost analysis.

Tuxford, a school with a rural bias, emphasised by placing a farm, garden and paddock alongside the main entrance approach.



building illustrated

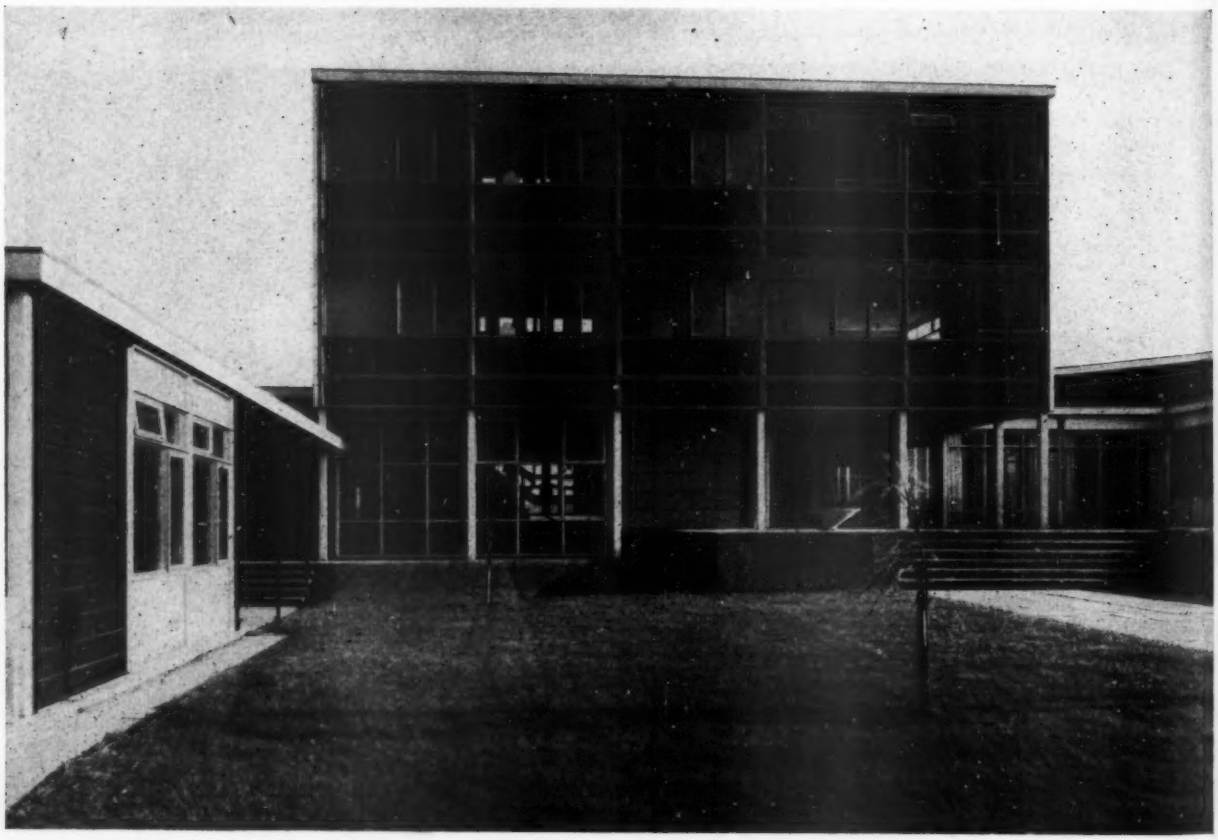
Tuxford County Secondary School

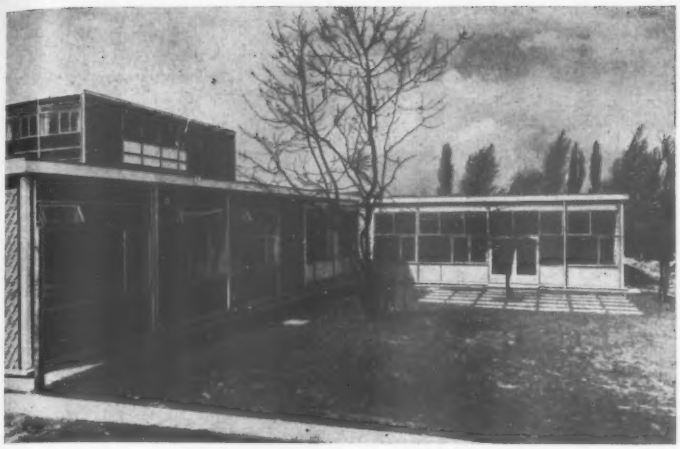


Site plan

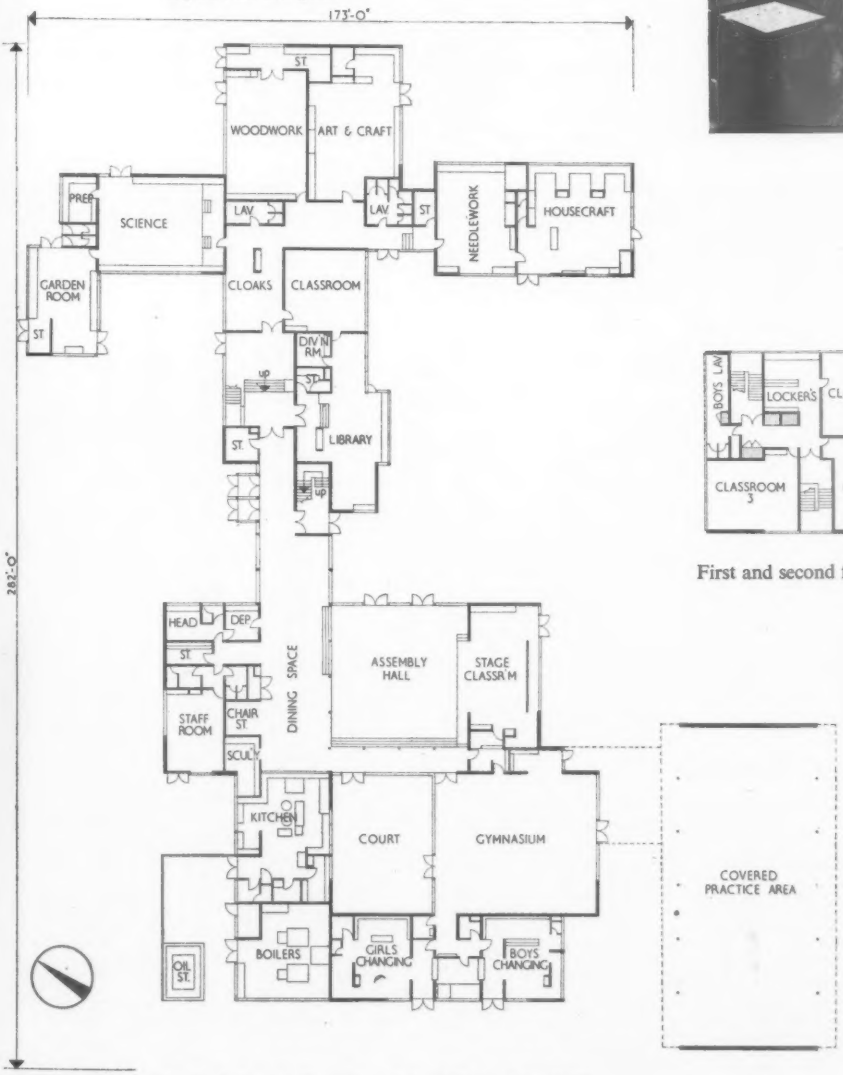
Left: general view of Tuxford along the entrance drive from the west.

Below: the 3-storey classroom block from the north, with the main entrance to the right approached via the terrace.

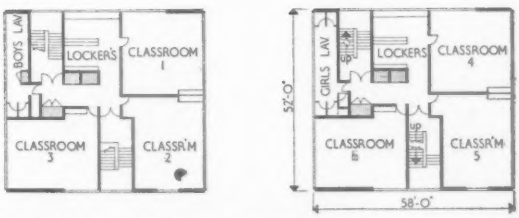




Above: the south-east corner of the school. To the right the art and craft room, to the left the needlework and housecraft rooms. Above right: view eastwards from under the link to the covered practice area, with the stage classroom end of the assembly hall on the left. Right: libraries are important focal points. At both Retford and Tuxford they are opened up visually from the entrance lobbies. Coffered ceiling is fibrous plaster picked out in pale blue and gold.



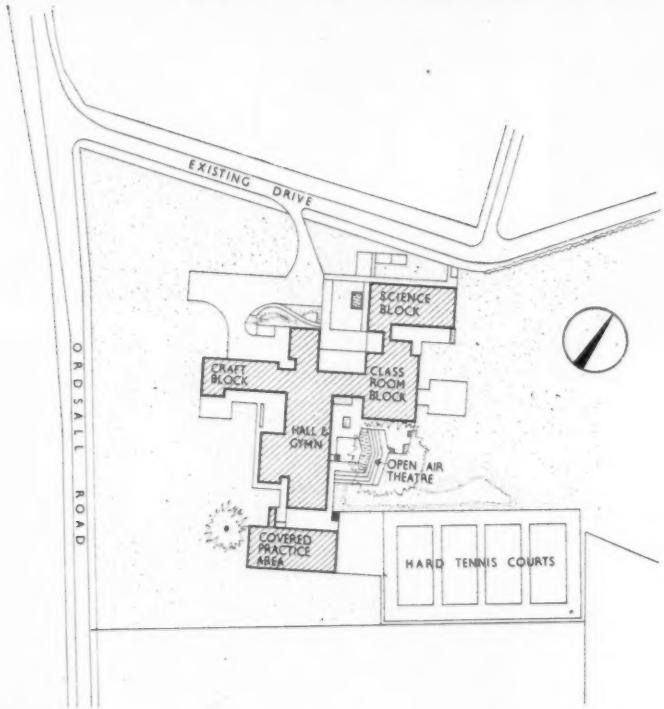
Ground floor plan, Tuxford County Secondary School [Scale: $\frac{1}{16}$" = 1' 0"]



First and second floor plans, classroom block

building illustrated

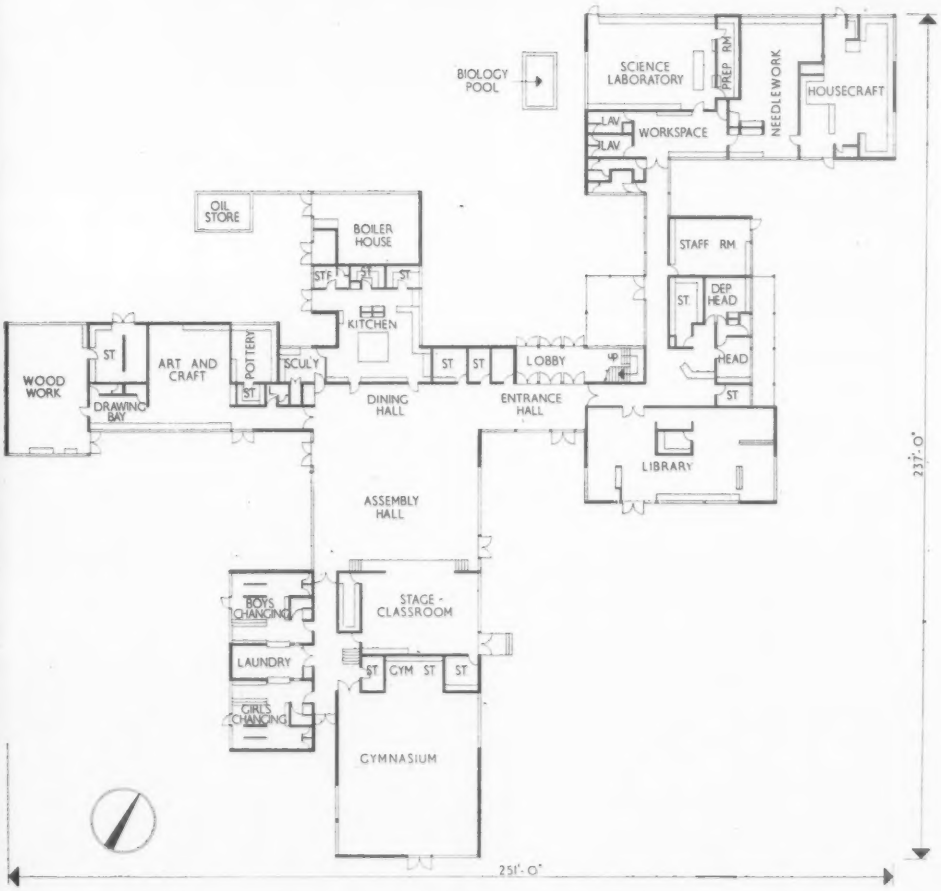
Retford Ordsall Secondary Modern School



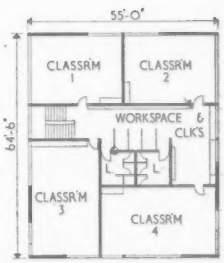
Site plan

Opposite page: corridor at Retford leading past staff accommodation to the craft block. The enclosure to the left is the fireproof screen to the staircase.

Below: the entrance to Retford from the west. The site is heavily wooded and it would seem likely that natural lighting to the craft block in the left foreground (even top lighting) will be seriously curtailed when the trees are in leaf.



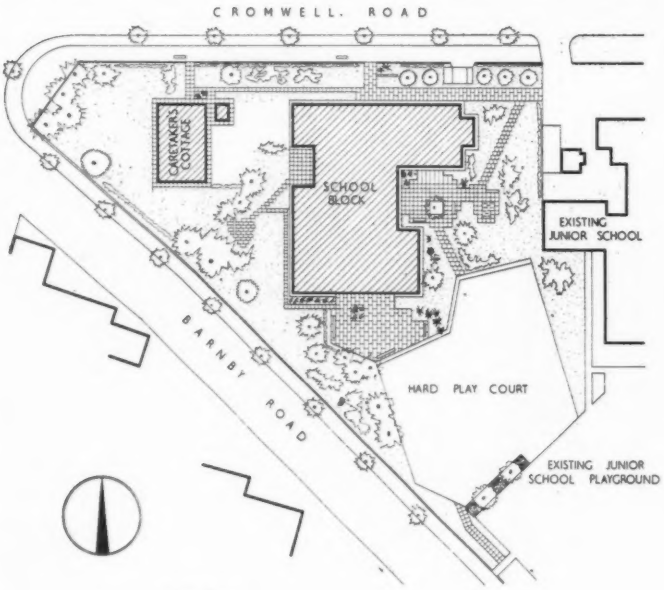
Ground floor plan, Retford Ordsall Secondary Modern School [Scale: $\frac{1}{16}$" = 1' 0"]



First floor plan, classroom block

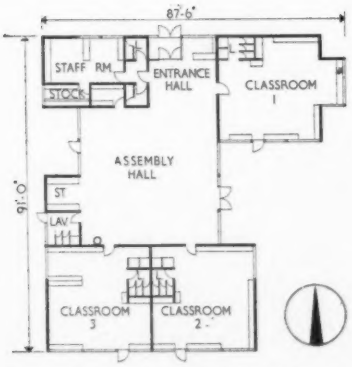
building illustrated

Newark Barnby Road County Infants' School



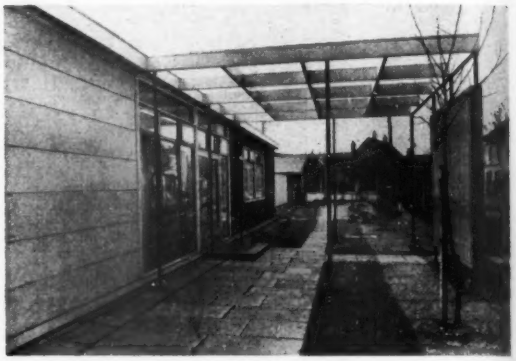
Site plan

View of the school from the south-east.

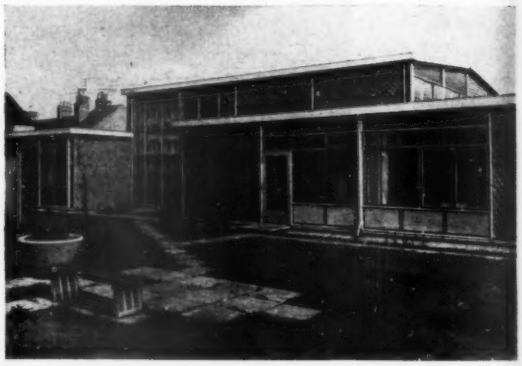


Ground floor plan [Scale: $\frac{1}{16}$" = 1' 0"]

Opposite page, top: classrooms 2 and 3 on the south side. The infill panels are of vitreous enamelled light gauge steel. Opposite page, bottom: the east side of the assembly hall, with the reception classroom on the right. The long panels above the windows are also of vitreous enamelled steel.

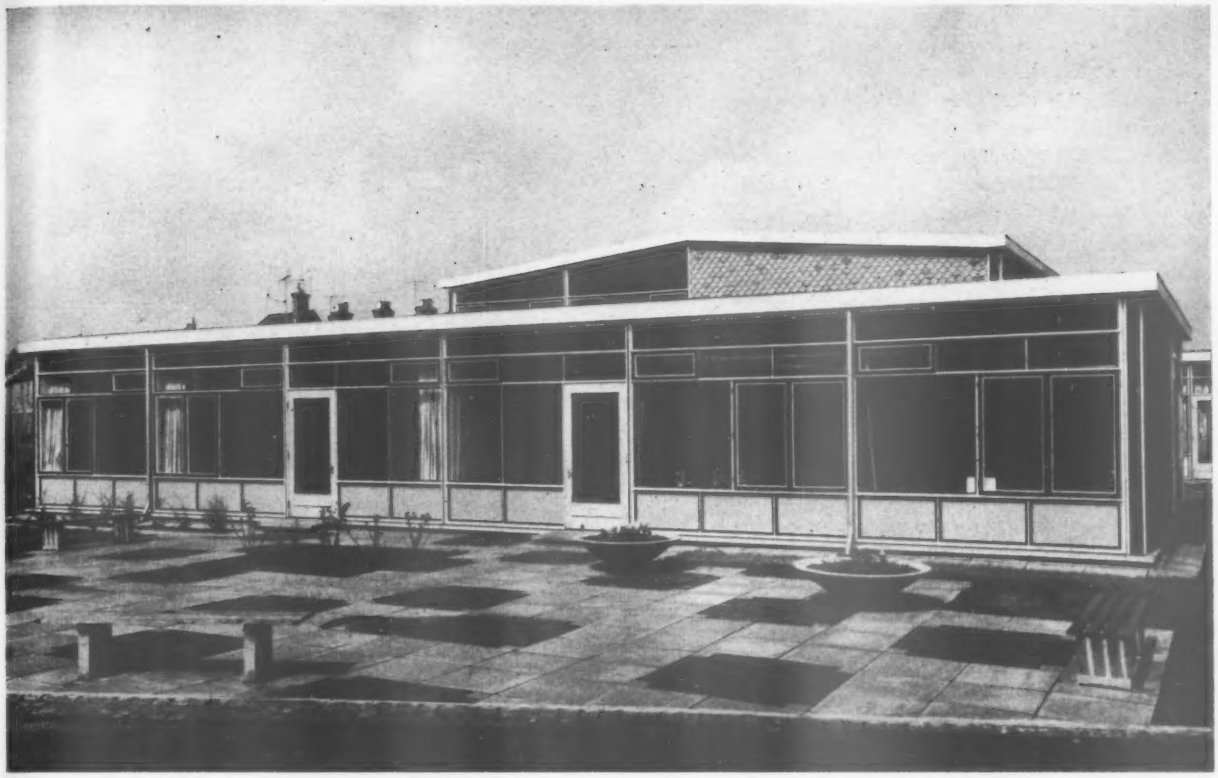


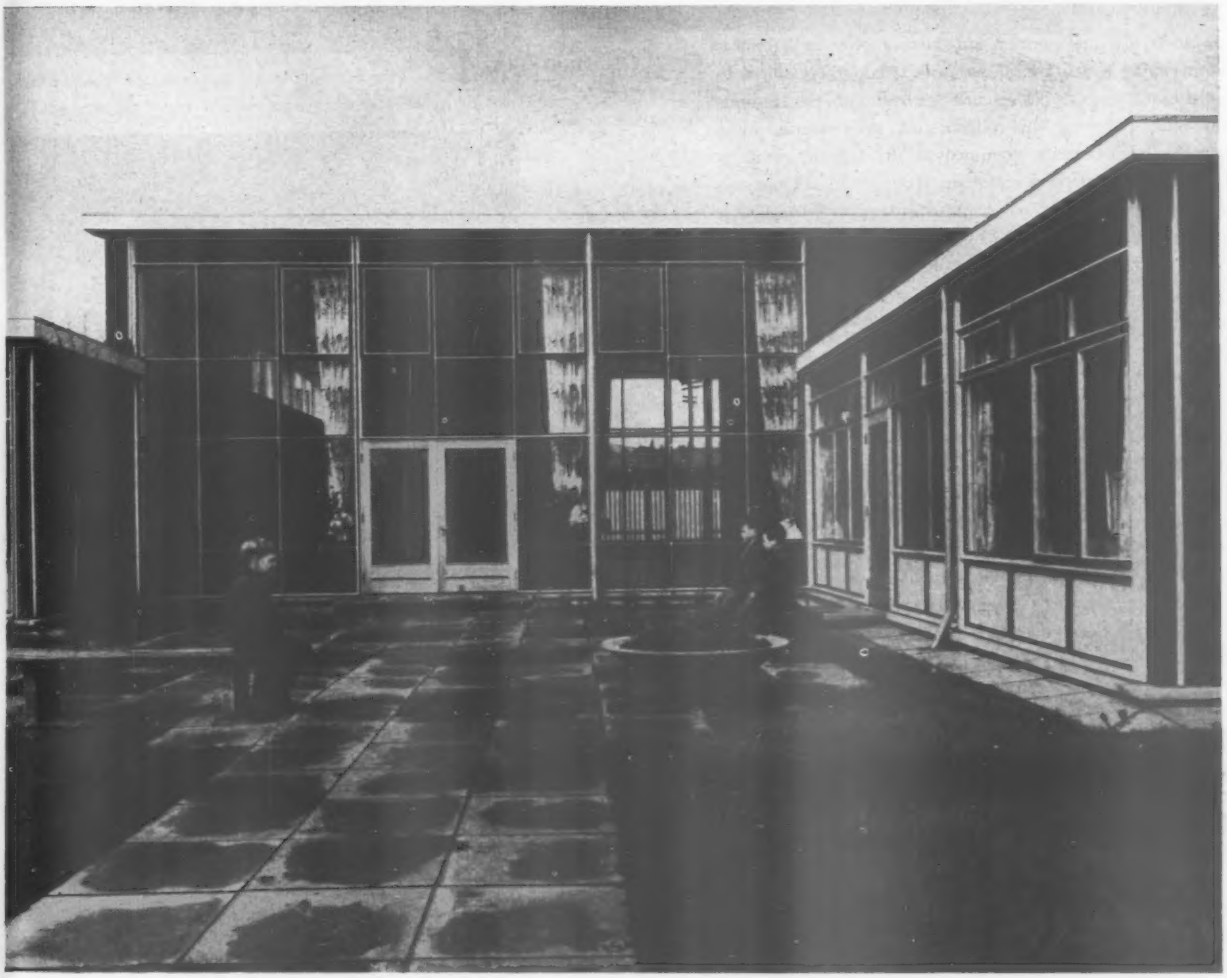
Above: the main entrance looking west. Below: the school from the south-west. Because there is very little likelihood of damage in an infants' school, tiled cladding has been used almost everywhere at Newark.



Below: this infant classroom follows recent patterns of planning with an informal layout providing small bays and areas where particular groups can carry on various different activities.

Below: the assembly hall looking towards the entrance hall. On the right is classroom 1.





building illustrated

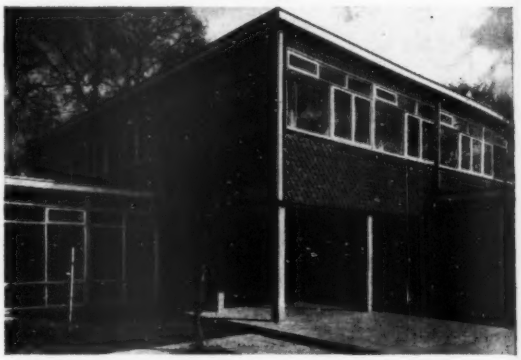
APPRAISAL: There were three reasons for the original drive which culminated in CLASP. In 1955 in Nottingham there was (*a*) an acute shortage of schools, (*b*) need for an effective and cheap method of building on sites liable to mining subsidence, and (*c*) a fundamental re-examination of school planning, based on ten years' experience since the 1944 Education Act made new demands on school buildings.

The shortage of school buildings was no new problem, and had been successfully overcome elsewhere by the maximum use of prefabrication, but previous systems would have been ineffective here, owing to the subsidence hazard. So a system was required giving freedom to express the new thoughts in the County about function, and which could be erected quickly and cheaply, with built-in protection against subsidence, so that it could be used wherever it was required. Such a system has been designed. It has been described in detail previously in the JOURNAL, so suffice it to say that it appears to be successful in all technical respects. The idea of the Consortium, however, will inevitably be valued by architects according to the buildings produced as a result: they will want first to find out what are the new planning concepts so often mentioned and examine their implications, and secondly to examine some of the buildings which are its outward expression—their internal space, the quality and detailing of the materials, and so on. For this purpose the three buildings cost analysed in this issue are used as being representative of the system, as it exists so far.

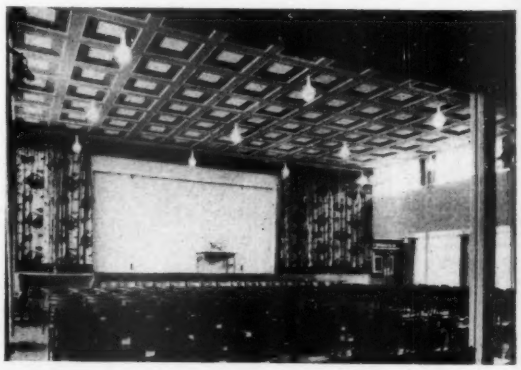
The close, informal co-operation of educationist and architect is something which a local authority is admirably suited to co-ordinate, and this has reached full fruition in the Nottingham office. Through this collaboration, pre-conceived ideas have been thoroughly examined in the light of working experience. An intensive collection of data from existing new schools now provides the basis for the planning briefs of new ones, and this will continue to develop, taking into account variables which occur from school to school.

Only one of the planning concepts arrived at is an innovation: this is the large covered games shed/gymnasium with which both Retford and Tuxford are equipped. Otherwise the schools follow the general trend of the MOE development schools and the more forward local authorities. The trend is towards breaking down formality by creating a social centre out of the communal areas, which tend to form the hub of the plan, with the quieter teaching areas, craftrooms, etc., radiating from it. In Notts. grammar schools (not illustrated here) the house room basis of organisation is also built into the design. It is not mere coincidence that the juxtaposition of the entrance and the community spaces at Tuxford and Retford is practically identical. The entrance is a circulation link with the assembly/dining hall on the right, and the library on the left. In both schools there is a view through the glazed link to an outside theatre. One arrives at the centre and goes straight into the most important spaces in the school, which form partly enclosed courtyards on each side of the entrance. In both cases, again, vertical access to the multi-storey teaching space in the centre of the plan is immediately adjacent to the main entrance. Circulation to the rest of the ground floor accommodation, which is generally divided into science and crafts on the left and gymnasium and kitchen on the right, is through the communal spaces and in many cases access to one room is through another.

". . . large covered games shed/gymnasium with which both Retford and Tuxford are equipped."

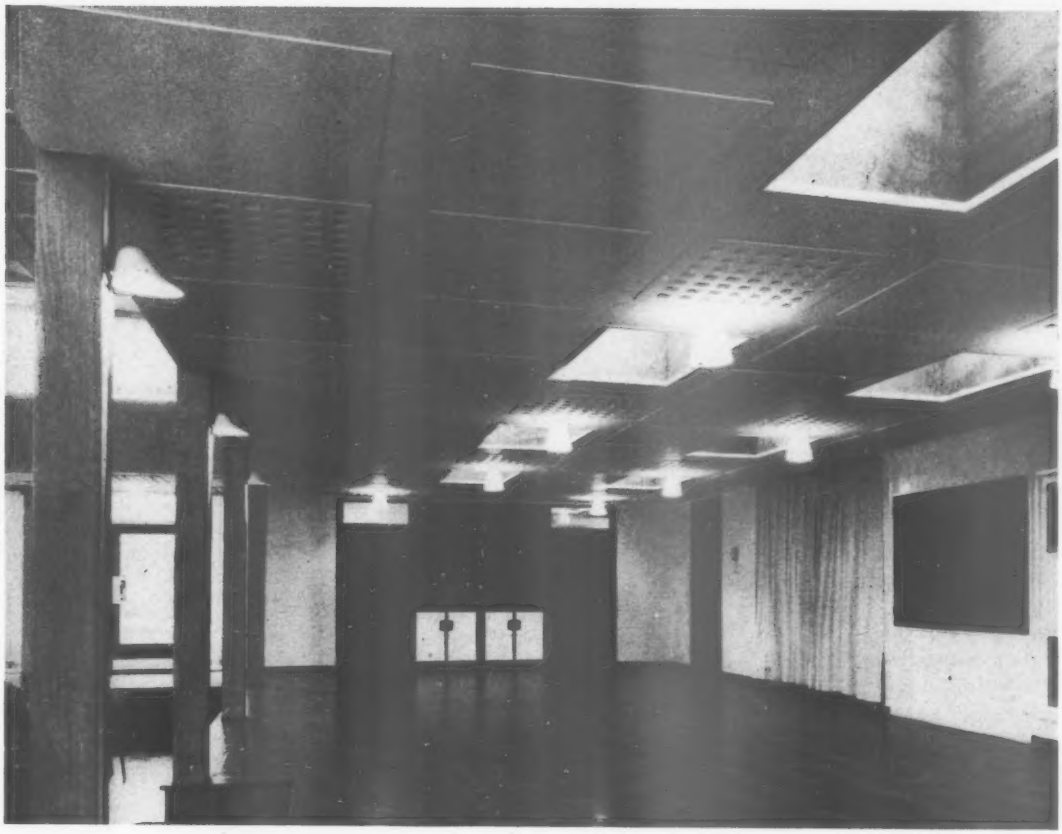


Retford: ". . . the most important spaces in the school, which form partly enclosed courtyards on each side of the entrance."

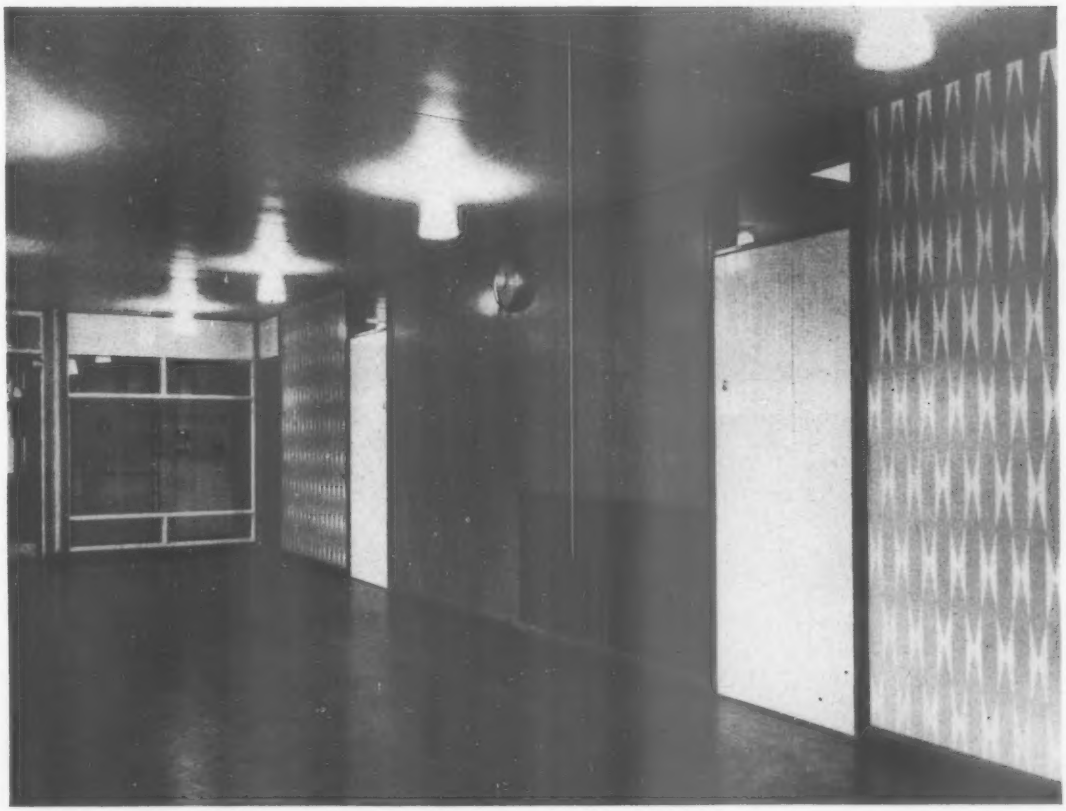


Retford: ". . . halls, particularly at Retford, have still a clearly defined one-directional axis."

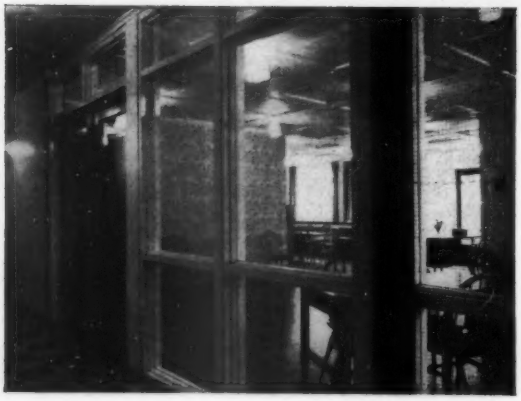
Tuxford: ". . . a large Dutch barn with partial protection at the sides is provided."



Tuxford (above). "... the result is emphasis on the visually arbitrary relationship of opening to wall surface."
Retford (below) "retains some of the scale by gathering all the parts together and handling them as a whole."

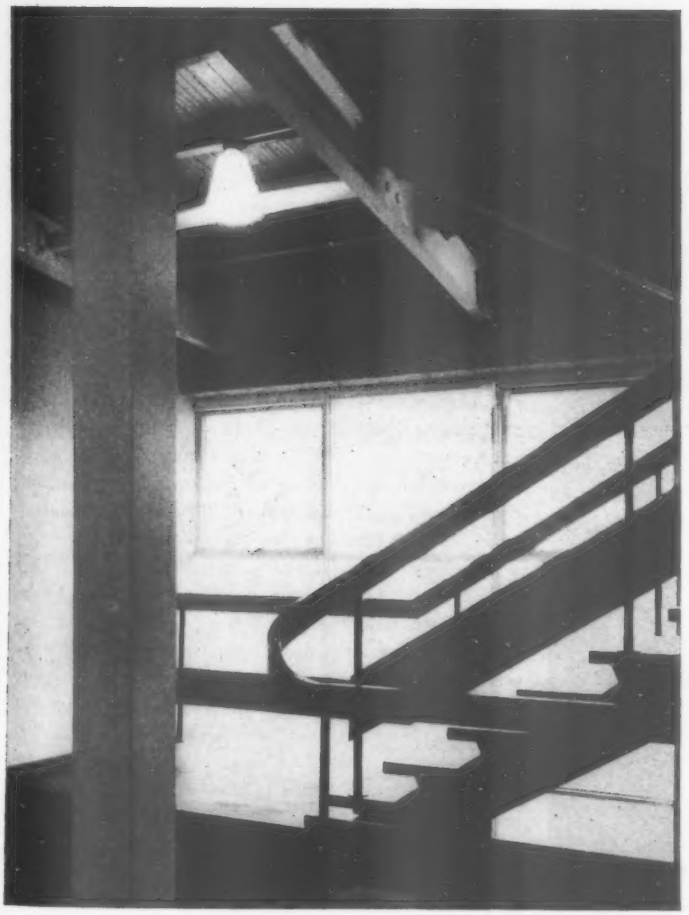


building illustrated



Tuxford (above): " A splendid sense of scale and warmth is given to the internal gyms by covering the whole wall surface with Parana pine."

Retford (left): " The glazed screen to the library at Retford is quite unforgivably heavy . . . "



In all three schools, low level windows open up the rooms to views out and in from other parts. Assembly halls are important only for their use as large informal spaces, except that, in the secondary schools, rather surprisingly perhaps, the stage retains its traditional importance. The halls, particularly at Retford, have still a clearly defined one-directional axis, due perhaps to the dual use made of the stage by a movable screen which can close the proscenium to form a classroom on the stage. It will be interesting to see if consideration is given in future plans to the breaking down of the stage axis, a development which would seem to go hand in hand with informality.

The really fundamental change is in the ideas which have been formulated about gymnasia. The conventional gym in these secondary schools is smaller than normal, but in addition a large Dutch barn with partial protection at the sides is provided, which gives possibilities for an immense range of activities. This has freed the assembly hall from being used as a make-shift gym, an important step forward. Inside the buildings the feeling is one of generosity. Space seems free and plentiful, and with few dividing walls one space flows casually into the next. As a result visual penetration across many spaces is possible, and at Tuxford especially this is exploited fully. To avoid visual confusion careful thought has been given to planes, textures, colour and detailing, although—as is common with other prefabricated buildings—wall areas tend to get broken up and spotty. This fault sometimes confuses the scale, and the use of heavy, dark hardwoods in dining areas is a case in point. All the wall surfaces have been broken up, and although each part has been considered carefully the result is an emphasis on the visually arbitrary relationship of opening to wall surface. The wall treatment of the similar area at Retford is more successful because it retains some of the scale by gathering all the parts together and handling them as a whole. A splendid sense of scale and warmth is given to both the internal gymnasia by covering the whole wall surface with Parana pine. Sound absorbance here is ensured by the ceiling.

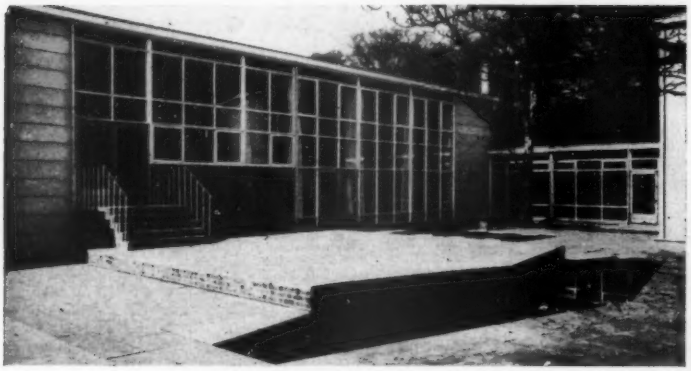
Detailing generally is of a high standard. For instance, rooflights are lined with veneered plywood, a pleasant idea because the depth of the roof assures an adequate cut-off from contrast glare and the colour of the plywood grades the light warmly down to the ceiling intensity. However there are a few failures in detailing and these usually arrive in the softwood joinery, which is not all that well made. The glazed screen to the library at Retford is unforgivably heavy and clumsy and contrasts badly with the excellent cloakroom fittings, which are well made and fit neatly into the first floor circulation area at the same school. Staircases are tough and woodsy, but squeaky and noisy, and the handrail supports in places are wobbly.

Classrooms and craftrooms are, as one would expect, extremely competently handled, especially the housecraft rooms

Retford (top left): " . . . excellent cloakroom fittings which are well made and fit neatly into the first floor circulation area . . . "

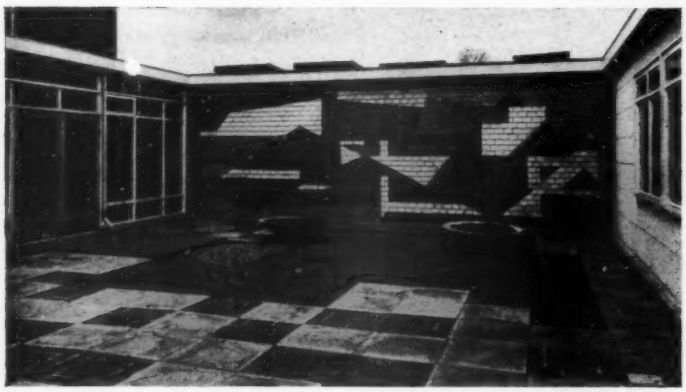
Tuxford (left): " Staircases are tough and woodsy . . . "

building illustrated



" Both secondary schools are provided with outside theatres." Retford (above) and Tuxford (below).

Tuxford (below): " . . . greater honour would have been done to Dorothy Annan's exciting mural if the trick paving had been left out . . . "



Tuxford (below): " . . . careful thought has gone into each part."

where a genuine effort has been made to create small, intimate areas with personality of their own. Apparatus which is always to be found on the walls of schools—switches, plugs, fire alarms, thermostats, fire-fighting equipment, pin-up boards,

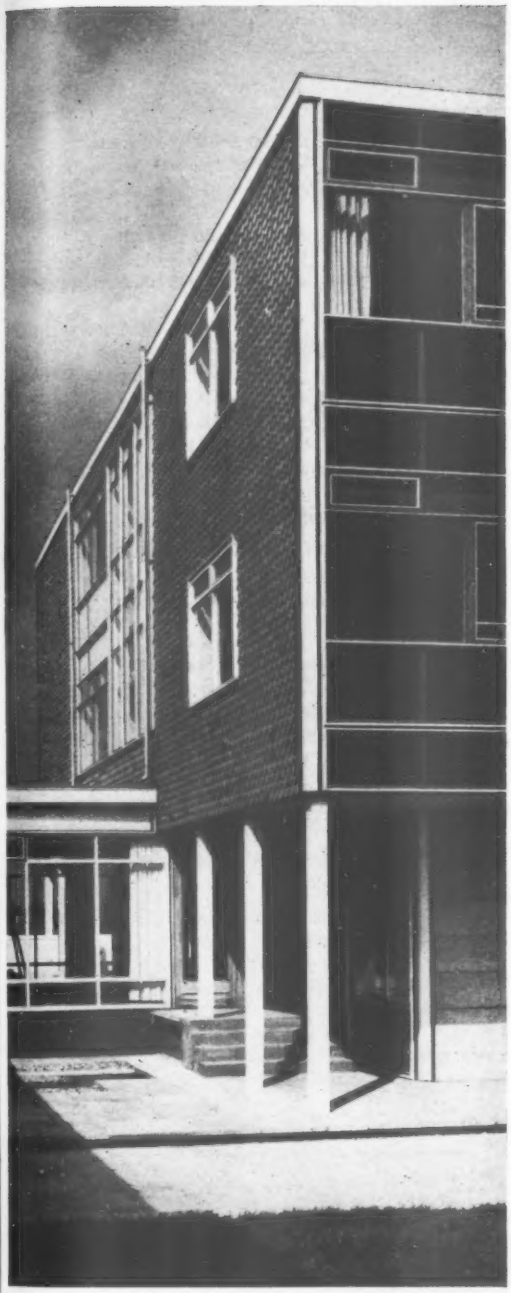
Tuxford: " . . . genuine effort has been made to create small, intimate areas . . . "

etc., are all thought out and carefully organised so as not to irritate.

Colour is subtle, and left pretty well to the natural materials: a great deal of hardwood is used, and where applied is a careful understatement which never shrieks.

Areas of paving about the schools are treated as extensions of the internal floor areas as well as part of the general landscaping. Both secondary schools are provided with outside theatres, and all three use various areas of paving and ground textures for pleasure, play and outside teaching spaces. Occasionally this texturing becomes meaningless and fussy because it is overdone: for instance, at Tuxford, greater honour would have been done to Dorothy Annan's exciting mural if the trick paving had been left out and simple gravel used instead.

These schools ramble somewhat, for they are expressions of their internal plan. Such buildings when elevated present difficulties in that there tends to be a confusion of the parts and a feeling of arbitrariness in their relationships. To produce a crisp, meaningful building from these ingredients is a difficult job. The early Herts schools architects were working with only two basic materials—concrete cladding and glass infill panels. The buildings produced on this basis were all much of a muchness, of a reasonable standard and not difficult to comprehend. At Notts a great many more external cladding components have been introduced. This means of course a great deal more flexibility, but it also means that unless care is taken over their use and form, mediocrity will result from a confusion of planes, textures and materials. On all three schools under consideration it is often difficult to make sense out of the sudden changes of materials used. It is obvious that careful thought has gone into each part, but the assumption has clearly been made that since the system is designed to take a variety of cladding, therefore variety must be used. The result is often confusion: one searches to find the logic of it. This is unfortunate because the inside of these schools is really splendid, and because parts of Tuxford show that the system has the potentiality of being just as fine outside as in. A discipline is urgently required to bring greater meaning and order where the part detracts from the whole.



Tuxford: why is the totally glazed elevation different from that around the corner? Are they doing different jobs?

Retford: why do the domestic scale tiles give way suddenly to the massive scale of the concrete slabs?

analysis

CLIENT'S REQUIREMENTS

Tuxford: A two-form entry instalment of a 3-form entry secondary modern school. The school is the latest of a series with rural bias in Notts, and has a farm, garden and paddock placed alongside the main entrance to emphasise this bias.
Retford: The first phase of a two-form entry secondary modern school, to which two classrooms will be added as a second phase to complete the school.
Both Tuxford and Retford represent the first attempt to translate a written brief of secondary modern schools (agreed after a series of meetings between education officers and architects) into building form.
Newark: A county infants' school with one reception room and two classrooms, assembly hall and ancillaries.

PLANNING AIMS

Tuxford and Retford: The plans use a formula which has been successful in primary schools, of a centre for communal and administrative and cultural activities, with specialist independent teaching units radiating from it in such a way that children have to cross and re-cross the centre of the school, unless moving between related specialist activities. The most noteworthy departure from normal secondary school planning is the provision of small heated gymnasia and large covered games areas in addition to an assembly hall, whereas a hybrid " gym-cum-hall " has been the generally accepted provision in 2-F.E. schools. This has been made possible by a dual use of certain areas in the centre and by the strictest economy in circulation.
Newark: The plan aims to form a central area and meeting place for the children, for communal and cultural activities, with teaching spaces radiating from this centre. The reception classroom is designed with alcoves opening from a central area to facilitate their use by children working in small groups at various activities. As the children progress through the school, the top classroom reflects the more formal method of teaching used in later years. The existing junior school had an oil-fired boiler house, so the opportunity was taken of linking the new infants school to this with underground heating pipes.

SITE

Tuxford: On the periphery of a small town, the site is bounded on the south and west by spec. development, and with open countryside to the north and east. There were some mature trees on the site which have been preserved. There is a slope of 1 : 35 from east to west and the soil is sandy clay with a bearing pressure of 2 tons/sq. ft.
Retford: The site is heavily wooded, in the grounds of Ordsall Hall. There is a good view to the east over the gardens and lawns of the Hall (an unremarkable and by no means stately home) and the two-storey class block, library, admin. rooms and assembly hall have been sited to take advantage of this. The site is flat; the soil is red sand with a high percentage of pebbles, bearing pressure of 2½ tons/sq. ft.
Newark: The school and a caretaker's cottage were built on a small flat and bare triangular site. It already contained a junior school and the area remaining was so limited that the north wall and south-west corner of the school and the west wall of the caretaker's cottage reach the building line. The site is surrounded by dreary pre-first world war terrace housing. The subsoil is sandy clay.

analysis

SUMMARY

	Tuxford	*Retford*	*Newark*
Ground floor area:	22,500 sq. ft.	19,568 sq. ft.	5,601 sq. ft.
Total floor area:	26,914 sq. ft.	22,897 sq. ft.	5,601 sq. ft.
Type of contract: RIBA			
Tender date:	May, 1957	September, 1957	January, 1958
Work began:	July, 1957	September, 1957	March, 1958
Work finished:	September, 1958	September, 1958	August, 1958
Tender price of foundations, superstructure, installations and finishes:	£91,769	£83,513	£18,961 5s 1d.
Tender price of external works and ancillary buildings:	£15,515	£11,272	£4,183 8s 11d.
Total:	£107,285	£94,785	£23,144 13s. 11d.

cost per sq. ft.	*Tuxford* s d	*Retford* s d	*Newark* s d
Preliminaries and insurances	10½	9¼	1 0¼
Contingencies	1 1½	1 9	1 3
Work below ground floor level	2 4½	3 6	2 10

In all three buildings 5-in. concrete slab is reinforced with steel fabric on a 6-in. bed of shale and sand (4-in. at Tuxford). Retaining walls are 9-in. common brickwork, backed with two coats waterproofing compound. Precast concrete plinth unit to perimeter of site slab. (At Newark, an underground link with the junior school boiler house carries heating and service pipes in insulating concrete.)

STRUCTURAL ELEMENTS

Frame or load-bearing element	8 9¾	9 3½	8 8¼

Single storey: 4½-in. square cold-formed steel stanchions and welded lattice beams at 6-ft. 8-in., or 10-ft. centres.
Multi-storey: 4½-in. square hot-rolled stanchions welded (formed from two 4-in. × 2-in. r.s. channels).
Floors: lattice steel beams at 3-ft. 4-in. centres for floors. Roof as for single storey. Fixed wind-braces in cold-formed steel. Dowel plate fixing to site slab, plate screwed at external corners.
2-in. × 2-in. × ¼-in. steel droppers at internal corners; 2-in. × 2-in. × ¼-in. steel angle cladding rail at eaves.

External walls	3 2	5 2½	3 5

1. Concrete cladding slabs, spar finished, with 3-in. gypsum plaster panels as inner lining.
2. Weather tiles, sandfaced, on battens, on softwood framing with 1-in. patent insulation. Inner lining of ⅜-in. asbestos insulation board.
3. Softwood weatherboarding on studding as above.
The price includes fibrous plaster stanchion-casings internally and softwood external corner boxes and terrazzo casing to *piloti*.

Ratio: $\frac{\text{solid wall}}{\text{floor area}}$ = Tuxford: $\frac{0{\cdot}387}{1}$ Retford: $\frac{0{\cdot}399}{1}$ Newark: $\frac{0{\cdot}350}{1}$

Windows and external doors	5 7¼	4 6¼	6 5¼

Windows are timber, all clear columbian pine, with hardwood lippings and sills. Fascia panels and some breast panels below the sills in 16g. vitreous enamelled steel sheet bonded to insulation board.
External doors are timber, some glazed, some solid, and some louvred. The cost includes ironmongery.

Ratio: $\frac{\text{windows}}{\text{floor area}}$ = Tuxford: $\frac{0{\cdot}278}{1}$ Retford: $\frac{0{\cdot}286}{1}$ Newark: $\frac{0{\cdot}427}{1}$

Ratio: $\frac{\text{doors}}{\text{floor area}}$ = Tuxford: $\frac{0{\cdot}044}{1}$ Retford: $\frac{0{\cdot}039}{1}$ Newark: $\frac{0{\cdot}305}{1}$

Upper floors	0 8¾	0 5	—

1½-in. t. & g. boarding on open web steel beams at 3-ft. 4-in. centres, spans from 6 ft. 8 in. to 26 ft. 8 in.
Superloads, 60 lb. per sq. ft. Area: Tuxford, 5,675 sq. ft. Retford, 3,295 sq. ft.

Stairs	1 1¾	0 6	—

Cold-formed 7-in. × 4-in. box-section steel stringers with pivot joints at landings. Mild steel balustrades.
Tuxford: 2 staircases of 4 flights each, 4 ft. 6 in. wide, total rise, 20 ft., with 2-in. treads, handrails and landings of indigbo.
Retford: 1 staircase of 2 flights, 4 ft. 6 in. wide, total rise 10 ft., with 2-in. sapele treads and plastic handrail.

analysis

	Tuxford s d	*Retford* s d	*Newark* s d
Rooflights	1 3	0 9	1 5½

Steel-framed lights on timber curbs with plywood internal linings. Cost includes glazing and rod operating gear for opening lights.

	Number of rooflights	*Total area*
Tuxford	67	1,109 sq. ft.
Retford	38	512 sq. ft.
Newark	17	153 sq. ft.

Roof	4 2	4 9½	5 8½

Two types of roof are used in all three schools:
1. Prefabricated timber deck units, ¾-in. softwood boarding on 4-in. × 2-in. or 5-in. × 1½-in. joists.
2. Asbestos cement decking over boiler houses.
The cost includes the following finishes: 3-layer 2-ply felt and granite chippings, with timber fascia and asbestos soffit.

Areas of each type of roof:	*Type 1*	*Type 2*
Tuxford	21,047 sq. ft.	702 sq. ft.
Retford	19,044 ,,	612 ,,
Newark	5,400 ,,	—

Glazing	1 0¾	1 10	2 6

32 oz. and 26 oz. bedded in mastic.
¼-in. polished Georgian wired glass to glazed doors and to hall or gymnasia windows below 6 ft. 8 in.

Total of structural elements: Tuxford 25s 11¼d. Retford 27s 2¾d. Newark 26s 10d.

PARTITIONS AND FITTINGS

Internal partitions and screens	3 0¾	3 7¼	2 6

Honeycomb gypsum plaster 3 in. or 6 in. thick, with fibrous plaster panels where wind bracing occurs.
Glazed screens in painted softwood.
At Tuxford and Retford the cost includes Parana pine boarding on studding in gymnasia, and also proscenium screens of asbestos fibre board on studding with insulating infil for sound proofing.
(Included in this element are fibrous plaster stanchion covers.)

	Area of 3-in. partitioning	*Area of 6-in. partitioning*	*Area of glazed screens*
Tuxford	379 sq. ft.	6,256 sq. ft.	945 sq. ft.
Retford	747 sq. ft.	9,900 sq. ft.	351 sq. ft.
Newark	144 sq. ft.	1,467 sq. ft.	—

W.c. cubicles	0 3½	0 3½	0 7½

Metal faced, painted plywood doors and partitions, 6 ft. 6 in. high.

Internal doors	1 0	1 2¾	1 1½

1¾-in. finished hardwood faced doors, with frames and finishings in hardwood and Columbian pine. (Cost includes ironmongery.)

	No. of single doors	*No. of double doors*
Tuxford	50	12 pairs
Retford	49	11
Newark	15	1

Fittings	5 9½	5 6	4 1½

Prefabricated storage cupboards, bookshelves, wall benching, hat and coat racks, window seating, classroom shelving, display shelves and units in hardwood.
Pin-up panels in ⅜-in. hardboard with 2-in. × 1-in. hardwood edging.
Venetian blinds.
At Tuxford and Retford housecraft room equipment, curtain tracks and stage equipment, kitchen serveries and laundry equipment.
(Cost includes all ironmongery.)

Total of partitions and fittings: Tuxford 10s 1¾d. Retford 11s 4¾d. Newark 8s 4¼d.

analysis

FINISHES

	Tuxford s d	*Retford* s d	*Newark* s d
Floor finishes	5 0¼	4 7¼	4 10¾

Type of finish	*Tuxford* Area in sq. ft.	Cost per sq. yd.	*Retford* Area in sq. ft.	Cost per sq. yd.	*Newark* Area in sq. ft.	Cost per sq. yd.
Concrete tile	1,800	28s 6d	2,768	28s 6d	243	21s. 11d.
Thermoplastic tile	7,020	16s od	2,400	13s 6d	1,017	17s. od.
Wood block	1,512	32s od	7,488	35s od	2,628	36s od.
Maple block	—	—	—	—	1,584	41s 6d.
Pitchmastic	450	15s 3d	933	15s 3d	—	—
Wood strip	2,745	33s 11d	1,980	33s 11d	—	—
Grano	1,098	13s 3d	1,244	13s 3d	—	—
Softwood block	648	31s 11d	—	—	—	—
Rubber sheet	4,815	45s 9d	3,080	45s 9d	—	—

Wall finishes and decorations — 2 5¼ | 1 10 | 1 6½

Glazed wall tiling, mainly behind sanitary fittings.
Two coats flat oil paint generally; gloss in kitchens and laundries.
Ceilings, distempered.
Internal softwood painted three coats gloss oil.
Doors, three coats plastic finish.
Wallpaper in staff rooms, stair wells and practical rooms.

Ceiling finishes — 2 8¼ | 3 1 | 3 5¾

1. Plain and perforated plasterboard panels with glass fibre quilt backing on aluminium T suspension.
2. Plain, perforated and coffered fibrous plaster panels on bearer and filler beams. Fibrous plaster cornices throughout.

Total of finishes: Tuxford 10s 2¼d. Retford 8s 2d. Newark 9s 11d.

SERVICES

External plumbing — 0 1¾ | 3½ | 0 2

3-in. diam aluminium rainwater downpipes.

Internal plumbing and hot and cold water installation — 0 2½ | 1 2 | 1 7

Tuxford: Hot water supply from unit electrical heaters generally, with points where large concentrations are required, such as kitchen, showers, housecraft rooms, supplied from calorifiers.
All fittings except steam ovens and showers supplied from high pressure storage tank of 300 galls.
One pipe system into drains, in cast iron with supply pipes and waste in copper.
(Cost includes a cylinder gas installation to housecraft and science rooms. Also towel rails and mirrors in lavatories.)
Retford: Hot water generally supplied from calorifiers, augmented by unit heaters over isolated basins and sinks (cost given under Gas and Electrical installations).
Cold water service runs, copper.
Storage tank, 250 galls.
All fittings except steam ovens and showers off high pressure.
Newark: Hot water to classrooms, electric cylinders with immersion heaters.
Hot water to staff room; lavatories and caretakers room etc, instantaneous electric heaters.
Low pressure cold water from storage tank in adjacent junior school.

Sanitary fittings — 0 6¾ | 1 9½ | 1 3½

Type of fitting	*No. of each type at:* *Tuxford*	*Retford*	*Newark*
Lavatory basins	32	24	9
W.c.s	25	20	13
Urinals	9	6	—
Drinking fountains	4	6	1
Shower fittings	24	19	1
Sinks	23	23	5

Heating and ventilation — 6 9¼ | 7 5¼ | 7 9½

Heating is by oil-fired boilers, which supply hot air units and some isolated radiators.

analysis

	Tuxford s d	*Retford* s d	*Newark* s d
There is mechanical ventilation to the kitchens at Retford and Tuxford. Internal temps.: 62 deg. F. in classrooms, 57 deg. F. in central areas. Air change, 3 per hour. U of walls, 0·3. U of roof, 0·2.			
Gas installation At Retford only.	—	0 2¾	—
Electrical installation	3 6¼	3 6	2 7¼
Drainage Cost covers only drainage within the curtilage of the building. 3-in., 4-in., and 6-in. pitch fibre pipes and junctions: dual system of drainage to main sewers. Manholes in pre-cast concrete.	1 10	1 2	1 2½
Playground and paved area (Cost covers only areas in immediate vicinity of building) Tuxford and Retford: Generally 2½-in. cold asphalt on shale. 1¼-in. timber edging. 9-in. brindle brick walls; 2-in. concrete paving slabs; cobbles in concrete. Newark: 2½-in. tarmac o/a, 1¾-in. tarmac and ½-in. cold asphalt with white spar chippings rolled into surface. Paved areas, 2-ft. × 2-ft. × 2-in. pressed concrete precast slabs, patterned with 2-in. thick blue bricks.	2 1¾	2 7¾	2 9
Covered games area Tuxford and Retford: 16-ft. high dutch barn structures (modified) with galvanised sheet cladding and 9-in. brick walls to gable ends. Roller screens to sides in plastic woven fabric. Floor finish, 2½-in. cold asphalt. Cost includes marking out of courts. Lighting cost given under electrical installation.	1 10	2 5	—

Location / *No. of points*

Laboratory and prep. room	1 one-way tap 10 two-way taps 1 three-way tap
Kitchen	1 cooking range 3 boilers 3 hot cupboards.

Type of fitting	*No. of each type at:* *Tuxford*	*Retford*	*Newark*
Light fittings	585	430	83
S.o.	85	76	8
Motive power	3	3	—
Cookers	5	4	—
Water heaters	16	10	6
Low voltage units	1	1	—
Kiln	1	1	—
Radio	1	1	—
Stage	1	1	—
Heating	1	1	—
Class change	1	1	—

Installation wired throughout with flat p.v.c. insulated and sheathed cable, with earth continuity conductor.

Total of services: Tuxford 12s 2½d. Retford 14s 5d. Newark 13s 6½d.

Total per sq. ft. of floor area:

Tuxford $\frac{\text{£91,768 4s 6d (net cost excluding external works)}}{\text{26,914 sq. ft. (measured inside external walls)}}$ = **68 2¼**

Retford $\frac{\text{£83,513}}{\text{22,897}}$ = **72 11½**

Newark $\frac{\text{£18,961 5s}}{\text{5,601}}$ = **67 8¼**

analysis

COST COMMENTS

Competitive tenders were received for Tuxford in May 1957. The contracts for the schools at Retford and Newark were negotiated from the original tender; *i.e.* their bills of quantities were priced on the rates in the Tuxford bill, or pro rata thereto, and due allowance made for fluctuations since the date of the original tender.

The perimeter to floor area ratio at Tuxford and Retford is identical, at 0·7, so differences in the distribution of costs between these two schools are due mainly to differing requirements.

Tuxford will eventually be the larger school and has, for example, a separate dining space. Again, the ratio of partitioning to floor area at Retford, $\frac{\text{10,998 sq. ft. partitioning}}{\text{22,897 sq. ft. floor area}} = 0{\cdot}48$ is twice that at Tuxford, $\frac{\text{6,580 sq. ft.}}{\text{26,914}} = 0{\cdot}24$.

Cost comparisons between these schools, however, is possible by reducing elements to unit or " average " unit rates, using the quantity factors provided, as shown in the following examples:

1. Windows and breast panels

Tuxford: $\frac{\text{5s 7¼d per sq. ft floor area}}{\text{0·278 ratio}} = \text{20s 2d per sq. ft.}$

Retford: $\frac{\text{4s. 6d. per sq. ft. floor area}}{\text{0·286}} = \text{15s 10½d per sq. ft.}$

Newark: $\frac{\text{6s. 5¼d per sq. ft. floor area}}{\text{0·427}} = \text{15s 1d per sq. ft.}$

The differences in cost are no doubt due to the arrangement of fenestration, as savings on the Mk. 2 windows were not applicable to the schools in this programme.

2. Rooflights

Tuxford: $\frac{\text{1s 3d per sq. ft. floor area} \times 26{\cdot}914}{\text{1,109 rooflight area}}$

= 30s. 4d per sq. ft.

Retford: $\frac{\text{9d} \times \text{22,897}}{\text{512}} = \text{33s 6½d per sq. ft.}$

Newark: $\frac{\text{1s 6½d} \times \text{5,601}}{\text{153}} = \text{53s 4½d per sq. ft.}$

The discrepancy in cost can be explained by reference to the numbers of rooflights which shows that a smaller type has been used at Newark.

Only two figures in the analyses look suspect, and they are the cost of Tuxford's internal plumbing and sanitary fittings at 2½d and 6¾d per sq. ft. of floor area respectively.

The value of the consortium's standardisation and bulk buying is not fully visible in these analyses as the schools were part of the 1957-58 building programme and therefore presumably carry the initial costs of jigs, moulds, specialists' design overheads, etc., which should not be repeated in later programmes.

The architect and q.s. team appear to be exploring to the full the advantages to be gained from rationalisation.

CONTRACTORS

NEWARK INFANTS' SCHOOL: *General contractors:* M. D. Sweeney & Palmer Ltd. *Sub-contractors: Felt roofing:* Wm. Briggs & Sons Ltd. *Electrical installation:* Stanley Tagg Ltd. *Pitch fibre drain pipes:* Key Engineering Co. Ltd. *Fixed furniture:* Gee, Walker, Slater Ltd. *Fibrous plaster casings:* W. J. Wilson & Son. *Venetian blinds:* J. Avery & Co. Ltd. *Decoration:* Sam Walker. *Landscape:* Stanley H. Overton (Playing Fields) Ltd.

RETFORD SECONDARY MODERN SCHOOL: *General contractors:* Harold Ashley & Sons Ltd. *Sub-contractors: Felt roofing:* Wm. Briggs & Sons Ltd. *Electrical installation:* Stanley Tagg Ltd. *Pitch fibre drain pipes:* Key Engineering Co. Ltd. *Fibrous plaster suspended ceilings:* Hodkin & Jones Ltd. *Thermoplastic floors:* Marley Tile Co. Ltd. *Tygan blinds:* J. Taylor (Syston) Ltd.

TUXFORD COUNTY SECONDARY SCHOOL: *General contractors:* M. D. Sweeney & Palmer Ltd. *Sub-contractors: Terrazzo:* E. C. Decara Ltd. *Tygan screens:* T. Simmons Ltd. *Electrical:* J. Smith Ltd. *Fixed furniture:* Armstrong Ltd. *Plumbing:* H. Hilton Ltd. *Decoration:* H. Millott & Sons. *Felt roofing:* D. Anderson & Sons Ltd. *Fibrous plaster suspended ceilings:* Hodkin & Jones Ltd.

Sub-contractors for all three schools: Reconstructed stone plinth units and concrete cladding slabs: Evans Bros. (Concrete) Ltd. *Vitreous enamel fascia panels:* J. A. Jordan & Sons Ltd. *External tile cladding:* Maidenhead Brick & Tile Co. Ltd. *Steel frame:* Brockhouse Steel Structures Ltd. *Rooflights:* Crittall Manufacturing Co. Ltd. *W.c. partitions:* Flexo-Plywood Industries Ltd. *Ironmongery:* Wilkes Berger Engineering Co. Ltd. *Sanitary fittings:* Adamsez Ltd. *Preformed wastes:* Econa Ltd. *Heating system:* Weatherfoil Heating Systems Ltd. *Suspended plasterboard ceilings:* Thos. Stephens Ltd. *Woodblock floors:* Fitchett & Woollacott Ltd *Gypsum plaster partitions:* Reema Boot Ltd.

CONCRETE FAVOURITE

The results of the first stage of the Churchill College competition will lead to endless speculation. The four finalists are an intriguing group. Rumour has it that the assessors have rejected any form of high block. All the finalists have low buildings and the designs are mostly inward-looking and precinctual. Sheppard and Robson are tipped as being a sober counter-balance to the more unorthodox strivings of the other three (Chamberlin, Powell and Bon; Howell, Killick and Partridge; Stirling and Gowan). One of the assessors' liking for the neo-Corb school would seem to be proved by the fact that the last two firms are of this faction. But all this is idle conjecture. It will be fascinating to see who gets home first, and to learn the assessors' reasons why the other nineteen failed.

RIBA REPORT

The RIBA annual report, re-dressed by Herbert Spencer and edited by an unknown hand, is better to look at, easier to read, and better arranged than it has ever been before. The reports of the committees have been edited and rewritten to give them uniformity in length and presentation. The names of committee members are printed alongside reports so that you can see at a glance who was responsible for what, and a lot of information is tucked away in an appendix where it does not get in the way of the reports. Some people may find it difficult to read the names of council and committee members, and to distinguish between committees and sub-committees. But these are trifling criticisms.

*

The reports are informative, although at times tantalizing. Incomplete work cannot, of course, be properly reported, but the Council is still reluctant to take members into its confidence. The Town and Country Planning and Housing Committee refers to a paper on " The Rôle of the Architect in Planning," by Lionel Brett, which has been approved by the Council and discussed with the RICS and other professional organizations. The Committee's hope, that an agreed document can be hammered out, is, from what ASTRAGAL hears, distinctly optimistic. (Brett's paper has ruffled a great many rival institutional feathers.) But can't architects be allowed to read the paper which was submitted to other organizations on their behalf?

NO CHANNEL

The RIBA's annual report contains, however, at least one extraordinary sentence: " One of the difficulties in disseminating information to architects has been the lack of a suitable channel." This looks like a gratuitous insult to the *RIBA Journal*, at first sight, but presumably is not intended as such. One wonders what the Science Committee (who make this statement) consider " a suitable channel." There are almost certainly more channels for conveying information to architects in this country than in any other. All, presumably, have been found wanting for disseminating the kind of information the Science Committee have in mind. It is an intriguing thought. One wonders how much valuable information has been withheld from architects for lack of a suitable channel. Some of the cleverest members of the profession are on the Science Committee. It is appalling that they and their friends have been prevented from disseminating information. What a frustrating situation. The issue must certainly be raised at the A.G.M. in May.

THE WINNER THE LOSER

In a statement published last week the RIBA showed it is worried about the Town and Country Planning Bill. It feels that if the Government wants landowners to be compensated at current market value for land acquired compulsorily, the extra cost should be borne by the Government itself. This would prevent local authorities having to buy back values created by their own enterprise.

*

ASTRAGAL would like to be able to compare the RIBA's proposal, which has reached the House of Lords as a tabled amendment by Lord Silkin (Minister of Town and Country Planning from 1945 to 1950), with the TPI's. But the TPI is a dead duck these days, and its criticisms—if any—of this Bill have never been published. It is extraordinary that the professional town planning organization has nothing to say about a major change in town planning law—a change that many planners think a change for the worse. The death of Sir George Pepler, the father figure of the TPI, immediately raises the question, who is going to lead the TPI in the next few years when good leadership could help to lift planning out of the doldrums? The TPI is expected to get its Royal Charter soon, which should give it a status it has never had before. Clearly there is a great opportunity here for the right man.

THE GREATER THE FEWER

A good time was had by all, as they say, at the AA's annual reception. Faces were familiar, décor and entertainment was characteristic and there were some gorgeously melodramatic Victorian lantern slides. Jacqueline Mackenzie's architectural jokes hardly came off, but she made up for it with some other good stories. I liked the one about the latest American rocket—called " Civil Servant " because nobody can get it to work and it can't be fired. However, a lot of people stayed away—200 more than last year. This may have been due to the AA's decision to charge members (as well as guests) £1 a head. ASTRAGAL hopes there is truth in the rumour that this won't happen again.

WHEN?

ASTRAGAL sends his best wishes to *Which?* the Consumer Association's paper, which is now to have 20 pages

every month instead of 32 per quarter. The subscription will be £1 instead of 10s., which is good value and ought to help the Association (with its 125,000 members) to test a lot more appliances than it has done in the days of limited funds.

THE OPERATIVE WORD

If you want your acoustic tiles to be fixed with adhesives you may start a dispute between plasterers and painters. Your enthusiasm for an r.c. frame may cause the steel erectors to covet pre-cast concrete assembly. And the "fetch and carry" boys may lose work because you want a curtain wall. Did you know all this? ASTRAGAL learned it at the NFBTO's conference on "New Techniques."

*

At first the meeting was evenly divided between union delegates concerned with "who should do what" on the site and those who said that demarcation disputes were only the symptom of deeper changes. As the meeting wore on, progressive opinion got the upper hand. One speaker said that the craft structure no longer fitted the new building techniques; others said that trades should be grouped so that new apprentices would learn more than one skill. Somebody said that we should train "constructional workers" for the increasing amount of mechanical and assembly work. And there was more than one plea for a single building union.

*

When he summed up, Harry Weaver, the vice-president, said that operatives must now look further than the mere defence of their interests: they must collectively study science, design, and investment management and reorganize the structure of the Federation. He hoped that architects and engineers would be in on this. What about an offer of help from the RIBA?

LAST TESTAMENT

By a sad coincidence the Architectural Press is bringing out* *A Testament* by Frank Lloyd Wright this week. It has two parts (Book 1 *Autobiographical*, Book 2 *The New Architecture*) and it is the second which will interest most people because of its appraisals of other architects, from Richardson to Mies van der Rohe.

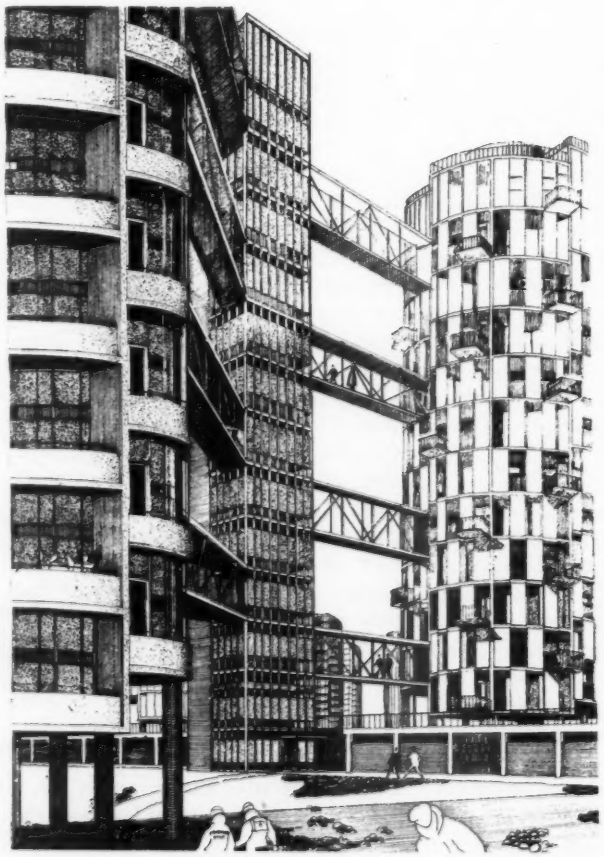
*

Incidentally, I've just heard the story of how one of FLW's best post-war houses was built. The would-be clients asked him to design a house for them and didn't get his agreement until they had just settled down in another one. "How could we turn it down?" they said. "After all, it might have been Mr. Wright's last house, and we should have so regretted not building it."

NOT QUITE ARCHITECTURE

One of those infuriating agency handouts which describe a scheme without giving the architects' names told me about a proposed new town in the Canadian Arctic. It was really wild technological stuff—seven-hundred foot domes, clustered towers, plastics, atomics and all that, at Frobisher Bay, in Baffin Land. The basic idea seems admirable—a *comfortable* outpost in the undeveloped wilds, an area supposedly rich (I quote) in oil, natural gas, gold and minerals. All the same, the scheme didn't convince me, and after a bit of atlas-research, I found that Frobisher Bay isn't in the arctic at all—it is, in fact, further south than Lulea, colder than Lulea, but drier than Lulea. What, you may ask, is all this stuff about Lulea? It's in northern Sweden and Ralph Erskine has just completed an enclosed shopping centre there that looks much more like real arctic architecture—snug and compact, with everything wrapped tightly up inside one close-knit building. The Canadian scheme, with its fly-away pedestrian bridges and free-standing stair-towers, all glazed, of course (see my illustration, below), seems to be going out of its way to create heat-wasting surfaces in precisely the manner that Erskine avoids. For a climate like that it would have made better sense to go underground, rather than up in the air.

ASTRAGAL



A proposed new town in Baffin Land. See "Not Quite Architecture" above.

* 70s.

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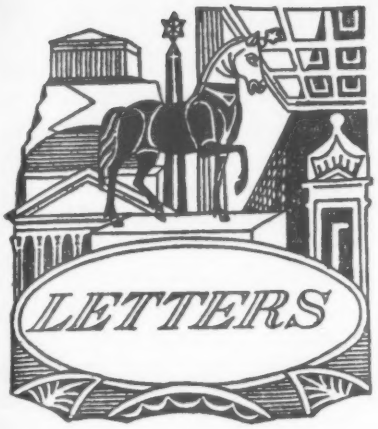

Cecil Stewart, F.R.I.B.A.
Head of the School of Architecture, Manchester Regional College of Art.

R. W. G. Bryant, M.Sc., A.M.T.P.I.

Ken Jones General Manager, Vitreous Enamel Development Council.

W. E. J. Budgen, M.Inst.C.E., M.I.Struct.E.

The Combined Course

SIR: The recent comment by ASTRAGAL about Manchester's new combined course of training was welcome, although the sting in the tail was, I think, uncalled for. The course has had a flying start, and at a recent meeting held here of some 40 practising architects, every indication was given of eagerness to participate in the experiment. ASTRAGAL suggested that the architects' offices in Manchester were not fit to carry the responsibility for such a venture. "Not," according to ASTRAGAL, "if we judge from some of the local buildings." It may be that some of the local buildings do not appear to conform to the high standards of your JOURNAL, but here, as elsewhere, there are architects of merit whose works have not yet received the accolade of the Architectural Press. Are there not, too—as I seem to recollect from a recent exploration of the city of London—some local buildings there to which similar criticisms might be applied?

Manchester is, I believe, particularly suitable and ready for an experiment in architectural education. It is an unhappy fact that there have been in Manchester for half a century two competing schools, only one of which was recognized by the RIBA. Now, with the establishment of a Joint Consultative Committee of the University and the College of Art, Manchester is able to offer two complementary courses, each of its own distinctive character. The Council of the RIBA has approved in principle the inauguration of the combined course in the College of Art, and has promised to inspect the work just as soon as the first cycle is complete. Meanwhile, I hope that during the RIBA Conference, which is to be held in Manchester in 1960, architects will be able to see not only the progress that is being made in the new course, but also some local buildings which will show that the architects are fit to carry the responsibility.

CECIL STEWART

Manchester

Architects as Planners

SIR: I warmly support the RIBA view that every sizeable city should have a separate architects' department, but not the corollary that the city architect should of necessity be responsible for planning.

Surely every local planning authority should have a separate planning department under its own chief officer, as counties usually have already. The chief might well be an architect as well as a planner. The important thing is that he should be a good planner. To claim that this requires an architectural training is preposterous professional arrogance. After all, the rebuilding of the City has been done under architectural supervision, but can anyone call this good planning? It is a pity that in so many towns planning is done by an understaffed junior section of the borough surveyor's department. On the other hand, there are outstanding planning officers who happen to be engineers or surveyors. It is a question of personal qualities. It is high time we dropped this hyphenated "engineer-planner," "architect-planner" outlook, and treat planning as the complex yet distinctive discipline that it is.

R. W. G BRYANT

Coventry

"A Wrong Use of Colour

SIR: I have read with interest J. M. Richards's article, "A Wrong use of Colour" (AJ, April 9). He mentions glass in a number of cases where vitreous enamel has, in fact, been specified. Whilst it is true that this is glass on steel, there is an extremely wide range of colours available for this finish. In addition, it can be produced in a number of textures from a full gloss to a full matt or, in fact, slate or other finishes can be simulated if so desired.

As far as the reference to its weathering properties in the London atmosphere, architects may rest assured that this finish will withstand this violent corrosive atmosphere and give many years of satisfactory service with a minimum of maintenance.

I wonder too whether the public are considered in the architects' choice of colour in buildings. I am sorry to see that Mr. Richards does not like the widespread use of this most attractive blue. I am sure that many Londoners and, in fact, Mancunians, are pleased to see the bright colours of these modern buildings lifting them from the drab faces of some of the dirty brick and stone buildings which abound in the city.

KEN JONES
General Manager, Vitreous Enamel Development Council
London

Mr. Richards replies: My worry about weathering was not that these bright colours would not withstand the London atmosphere but that they would—a step forward in one sense, but a step that makes it much more important that the colours should be properly used. It may be true that the public likes a vivid blue, and there is no harm in such a colour in the right place. But I maintain my opinion that coloured wall panels are often crudely and inappropriately used, especially in relation to the street as a whole.

A Cost Analysis

SIR: It would appear from your cost analysis of the extension to the Washington Hotel (AJ, January 22) that the two "utility" staircases cost about £8,800, *i.e.*, almost as much as the work below ground floor level, nearly twice as much as the frame or load-bearing elements, and almost as much as all the floors in the building.

Is there some explanation of this?

W. E. J. BUDGEN

Berks.

The quantity surveyors for the Washington Hotel reply: Owing to the necessity for brevity in the descriptions giving the construction of the staircases, it was not possible to give the full details of the work included in this section. The staircase from the basement to ground floor of the bank included a balustrade and handrail; the external emergency stair included balustrading and handrails and also a glazed metal screen to one side of the staircase for the full height of 73 ft. to act as a firebreak to the bedroom windows adjoining; the utility link stair connecting the new extension to the existing hotel also included balustrades and handrails and glazed curtain walling to both sides for the full height of 60 ft.

The above items taken together account for almost 50 per cent of the total cost per square foot of this section.

DIARY

The New Code of Compensation (Under Part 1 of the Town and Country Planning Bill). Talk by P. G. E. Haddock at the RICS Ordinary General Meeting, 12, Great George Street, S.W.1. 5.45 p.m. MAY 4

RIBA Annual General Meeting. 66, Portland Place, W.1. 6 p.m. MAY 5

Ten Years of Building Thin Shell Structures. Lecture by Felix Candela. Organized by the Cement and Concrete Association at Friends' Meeting House, Euston Road, N.W.1. 6 p.m. MAY 5

Exhibition of New Building Materials. At the Building Centre, 26, Store Street, W.C.1. MAY 5-16

Office Block in Birmingham. Talk by Erno Goldfinger at the AA, 34/36, Bedford Square, W.C.1. 6.15 p.m. MAY 6

(An exhibition of the Office Block in Birmingham is also being held at the AA from MAY 4-16)

British Architecture and the British Postcard—Imagination or Commonsense. Talk by E. J. Carter. Organized by the DIA at Overseas House, Park Place, St. James's, S.W.1. 12.30 p.m. MAY 7

RIBA

Annual Report

The following points are taken from the annual report of the RIBA, which is to be considered at the AGM on Tuesday, May 5.

Competitions Committee
The committee has initiated discussions with the Public Relations Committee to see what more can be done to get across to the public the unique value of the competition system.

Practice Committee
Jointly with the Town and Country Planning and Housing Committee this committee is negotiating a comprehensive revision of the scale of fees on local authority housing schemes with the Local Authority Associations. The scale fixed in 1955 works out at not more than 1 per cent. of the cost of the works. The Committee is also preparing a short memorandum on the merits and snags of forming service limited liability companies to hold the business assets of a firm. A booklet on arbitration is in preparation, and a proposed code on selective tendering procedure has been drafted. The Conditions of Engagement and Sale of Professional Charges is being re-appraised by a sub-committee.

Science Committee
A scheme has been prepared with the Professional Text and Reference Books Committee for the publication of a technical information service to be known as RIBA Notes, consisting of regularly issued sheets and monographs. The intention is to develop these into an authoritative information file sufficiently comprehensive to answer all day-to-day needs at the drawing board.

The Ad Hoc Committee
A paper has been prepared, but not yet published, reviewing the arguments for and against allowing architects to become directors of building companies, a subject which is now being taken up by the Practice Committee.

Salaried and Official Architects' Committee
This committee met only twice last year, so much of its functions having been taken over by the Ad Hoc Committee or dealt with by Honorary Officers and Staff. Discussion on various proposals for the overhaul of the Institute's Committee structure, including proposals to merge this committee with the Ad Hoc and the Practice Committees to form a Professional Relations Committee, have been shelved, but the committee hopes to see the situation clarified in 1959. The sub-committee on the appointment of Architects as Chief and Planning Officers to Local Authorities is concentrating on the 38 County Boroughs which have no Chief Architect: a paper on the advantages of establishing an Architect's Department under an independent chief officer is being prepared.

The Town and Country Planning and Housing Committee
This Committee reports on efforts to reach agreement with the other professions on who should be responsible for what in the planning field. The RIBA submitted a paper on "The Rôle of the Architect in Planning" produced by the Brett Committee to the other professional institutions, which are now to produce their own papers with the object of reaching agreement.

Finance and House Committee
Income exceeded expenditure by £11,759, which has been transferred to the newly formed Development Fund.

Codes and Standards Committee
Many of the existing building Standards have been based on the needs of low-cost housing, and the Committee think that Standards for products of higher quality should now be prepared. A long-term programme for improving the Codes of Practice is being prepared.

An RIBA Election Quiz

Every year we open our columns to candidates for election to the RIBA Council and invite them to tell our readers why they are standing for election. The rough idea is that this helps electors to decide which candidates they should vote for. In practice, the candidates' replies are often so well stuffed with woolly generalities and so chockful of praiseworthy sentiments that it is difficult, if not impossible, to distinguish the good candidates from the bad or *vice versa*.

This year we have decided to apply the popular contemporary Quiz technique. Every candidate is hereby invited to answer questions on RIBA problems and policy, the idea being that this will make it more difficult for candidates not to disclose their hand. It will also help them by indicating some of the main issues on which electors would like to know their opinions. Embarrassing questions (such as "what is the *real* reason why you are standing for the RIBA Council?") have been omitted.

The Questionnaire

1. What is the most important issue now facing the RIBA, and what do you consider the RIBA ought to be doing about it?

2. What is your view of the concept of a two-tier profession, with separate qualifications for (*a*) architects and (*b*) architectural assistants or building technicians?

3. Do you think the All-In service is a menace or a useful contribution: if the latter, do you think the Code of Professional Conduct should be amended to allow architects to become directors of building firms?

4. What in your view is the most urgent reform in education?

5. (*a*) Do you think that all local authorities of substantial size should have an architect's department under an independent chief officer? (*b*) Should the city architect's department be responsible for town and country planning? (*c*) How should these aims be achieved?

6. Are you satisfied with the internal organization and administration of the RIBA? If not, what changes do you suggest?

We shall publish candidates' answers to these questions on May 21. Replies must be kept extremely short, preferably within a total of 300 words. As we do not know the names of candidates who have been individually nominated, will candidates regard this as an invitation and send in their replies not later than Tuesday, May 12? The Editors reserve the right not to publish replies which are too long, libellous, or too late.

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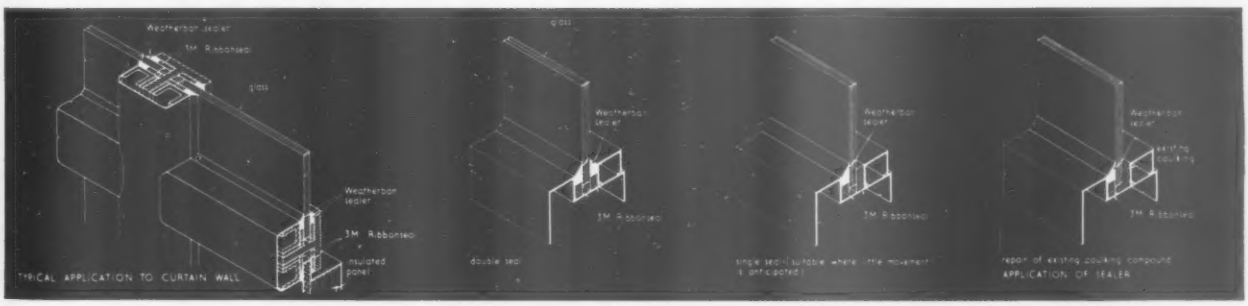

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RIBA

Candidates for Election

There will be elections this year of three Fellows, one Licentiate, three Associates and three Ordinary Members of Council irrespective of their class of membership, to serve on the Council for three years. Twenty-five candidates have been nominated by the RIBA Council, and additional nominations may be made by any seven or more subscribing members before the Annual General Meeting on Tuesday, May 5. The candidates nominated by the RIBA Council are as follows: William Alexander Allen (A) (Garston), Eric Bedford (A), Jack Bernard Brandt (F) (Southampton), Sir Hugh Maxwell Casson (F), Denis Clarke Hall (F), Andrew George Derbyshire (A) (Sheffield), John Henry Forshaw (F), Robert Oswald Foster (F) (Buckhurst Hill), Frederick Gibberd (F), Donald Evelyn Edward Gibson (F) (Chessington), Alexander John Gordon (A) (Cardiff), Leonard Cecil Howitt (F) (Manchester), Stirrat Andrew William Johnson-Marshall (A), Herbert John Whitfield Lewis (A), Eric Alfred Lyons (F) (East Molesey), Edmund Douglass Jefferiss Mathews (F), Tom Mellor (A) (Lytham St. Annes), Gwyn Henry Morris (L) (Coventry), Robert William Paine (A) (Fordwich, nr. Canterbury), Frederick Bernard Pooley (F) (Aylesbury), Richard Herbert Sheppard (F), Charles Howard Simmons (A) (Lytham, Lancs), Frank Reginald Steele (F) (Chichester), Henry Thornhill Swain (A) (Nottingham), Gordon Thomas Tait (F).

Sanitation Within Buildings

On April 21 a meeting organized by the Science Committee was held at the RIBA to discuss sanitation within buildings. The principal speakers were A. J. M. Tolhurst, the LCC architect chiefly concerned with the 19-storey block shortly to go up at Tidey Street, Poplar, and J. Clancey, F.R.S.H., the LCC's Chief Sanitary Inspector. J. H. Forshaw was in the Chair. As both Mr. Clancey's talk and the subsequent discussion followed the pattern set by Mr. Tolhurst, it seems best to summarize this and to interpolate the comments of later speakers on each subject.

Mr. Tolhurst began his paper by describing the changes in planning which recent advances in sanitation and service technique have made possible; and the need for the tall building if we are to provide enough dwellings on the sites available. He then pointed out the economy in building frontage which results from internal bathrooms: with three room maisonettes three foot of frontage is saved and with "cross over"* maisonettes more than six foot of frontage is saved per dwelling. Mr. Negus of MOHLG speaking on the same point put the saving at 40 sq. ft. or £40 per dwelling.

*The "cross over" maisonette plan has a central access corridor at every other floor which is so arranged that one storey of each maisonette passes either over or under this.

Single stack plumbing

Mr. Tolhurst next talked about the single stack plumbing at Tidey Street. Since a height limitation of five storeys is placed on single stack installations, that at Tidey Street (19 storeys) is to be ventilated at six intermediate floors. The branches from the main stack to the ventilation stack are to be made with flanged joints so that the effect can be tried of disconnecting different sections.

The ground floor is open. It had been hoped to run a horizontal drain in the 4-ft. deep false ceiling above the open ground storey, but fear of back pressure in the first floor fittings prevented this and the stacks are to pass straight down through the open storey, being encased in large diameter spun concrete pipes. The 4-in. stacks are being increased to 6-in. diameter at the foot to lessen the force of water entering the drain and allowance has been made in the manholes for a calculated 4-in. differential settlement.

Rainwater in soil stack

Mr. Tolhurst next discussed the inclusion of rainwater in single stack wastes. Some of the water from the roof at Tidey Street is going into the waste stack and, in another four storey job, all wastes and rainwater is being taken in unvented 4-in. single stack pipes. In this case, however, the ground floor w.c.'s are being taken direct to manholes to prevent back flooding and to permit the drains to be cleaned. Mr. Clancey, speaking on this point, said that it was at present against the law in England and Wales to run rainwater down the soil stacks, but it is permitted in Scotland. In his view all depends on the size of the roof.

Mr. Tolhurst next asked why we cannot omit intercepting traps in single stack pipes and, by allowing the pipes to ventilate the sewer, to dispense with fresh air inlets. Several speakers took up this point. Mr. Clancey agreed that drains would be more self-cleaning without the interceptor. Dr. Turner, the Medical Officer for Health for Poplar, said that its omission would be justified where sewers were new (*i.e.*, in a New Town), but not where they were as old as in London. It had been tried in Chelsea, but occupants had been much troubled by rats.

Ventilation

The next subject in Mr. Tolhurst's paper was ventilation. He regretted the recent return to the use of the spine corridor in plans which did not allow natural cross ventilation. To meet this problem in tall blocks the LCC have evolved two types. Both have internal corridor access, but one obtains sufficient ventilation by making the corridor of two-storey height and the other —which is the version used at Tidey Street —employs the cross-over plan. This provides perfect cross-ventilation and has the added advantage that the fire escape can be provided to each flat clear of the access stairway. Mr. Negus defended the central corridor plan when used with mechanically ventilated internal bathrooms on the ground that the latter provides the equivalent of natural cross-ventilation. While on this subject Mr. Tolhurst deplored the decision to remove the byelaw requirement of an air-brick in all rooms, instancing the number of deaths which have happened through leaving flueless heaters on all night in a room which has been weatherstripped. Mr. Negus asked if progress had been made with naturally ventilated internal bathrooms. He was answered by Mr. Clancey, who reported that results so far had been unsatisfactory. Mr. Clancey favoured mechanical over even unducted natural ventilation, on the grounds that you can be sure that mechanical ventilation is operating virtually all the time whatever the weather. Several speakers questioned the validity of the customary three air changes per hour for w.c.s, pointing out that these are used more intensively than at twenty-minute intervals and suggesting that it would be better to substitute some on/off system, operating perhaps from the light switch.

Condensation and suspended damp

Several speakers discussed condensation and mentioned the flueless heater as a special cause of it (one gallon of paraffin produces one gallon of water and gas is about as bad). To mitigate this nuisance the LCC use a mixture of retarded hemihydrate gypsum and perlite plaster. Another new problem is that of entrapped moisture due to speed and wet methods of construction. Mr. Tolhurst quoted a recent calculation that 100 yards of roof screed could contain three tons of water.

New heating system

There was some discussion on heating tall buildings. At Tidey Street a new small bore, open high temperature system is being used. This was invented by Dr. Cialente of Turin University and is marketed under the name Synterpoiz. Oil-fired boilers heat water to a temperature of some 300 deg. F. Half-inch diameter risers pass straight up the building, feeding gilled convectors in each room as they pass. The water is prevented from turning to steam by the weight of water in each riser. As the risers are very hot they will have to be encased in some form of insulation.

Mr. Cox, of Crittall's, who are responsible for the heating at Tidey Street, reported on investigations his firm had made in America on the heating of tall buildings. They had assumed that the greater exposure high up would lead to a greater heat requirement. Instead they found that the stack effect caused all the heat to rise to the top and that it was necessary to shut off the shafts midway. Mr. Tolhurst estimated that the Synterpoiz system would save about 20 per cent. of heating costs: Mr. Cox believed that the saving would be nearer 40 per cent.

Water storage

At Tidey Street the main water storage is at ground level where it is easier to control and insulate than in the roof; and intermediate tanks are being provided at different levels to equalize the pressure.

Refuse disposal

The last subject to be raised by Mr. Tol-

hurst was refuse disposal. At Tidey Street the usual chutes and containers are being used, but the speaker was clearly dissatisfied with this and so were several other speakers. Mr. Clancey spoke of the chaos caused when there is a breakdown in the collection system. The Garchey system which has been tried out recently in Finsbury is very popular and efficient, but is too expensive. Dr. Turner spoke of the "wastemaster" type of disposal, but again said that this was expensive (£50 per flat was the figure he gave) and that its use gave rise to a fear of excessive siltation in the sewers. Mr. Clancey agreed and added that this type does not in any case deal with the entire refuse product. Thomas Mitchell said that he thought that the Garchey system could be made to work economically and that, in estimating its cost, it was essential to take into account the saving in collection. The vote of thanks was proposed by Edwin Williams and seconded by Bryan Westwood.

CHURCH DESIGN

Birmingham Conference

A correspondent writes:

A residential conference, organized by the Department of Extra-Mural Studies of the University of Birmingham, was recently held at the Norfolk Hotel, Edgbaston. The conference was primarily concerned with the movement of liturgical renewal in the Church and its implications for architecture. Most of the speakers were members of the recently-formed "New Churches Research Group," and the majority of the 60 persons who took part in the conference were architects, clergy or students. As in the case of earlier conferences arranged by the University of Birmingham, many of the lectures were concerned with recent developments on the Continent, both liturgical and architectural.

The Bishop of Knaresborough and Fr. J. D. Crichton read papers on the fundamental aims of the liturgical movement, and Dr. J. G. Davies considered the probable lines of liturgical reform in this country in the context of the experimental liturgy drawn up by a group of Birmingham theologians. The president of the New Churches Research Group, the Bishop of Llandaff, considered the prospects for the future, with particular reference to the aims of the Group. The Rev. Peter Hammond underlined the importance of recent experiments carried out in France in the design of "provisional churches": inexpensive buildings which could be constructed within a few weeks and which did not commit the Church to patterns of ministry which might well become irrelevant in the course of a few years.

The greater part of one day was given over to visits to new churches in Coventry and Birmingham. The most notable contributions to the conference were Peter Jay's lucid analysis of the function of lighting in church design—a subject the importance of which has still to be generally recognized—and Robert Maguire's paper on "The Church and Modern Architecture: The Need for Research," in which the inadequacy of several widely prevalent assumptions was brilliantly exposed. It is hoped that both of these papers will be published in due course. The NCRG has arranged a further conference on modern church architecture at Cambridge on Saturday, May 9. The conference will be held at Clare College, and details may be obtained from Dr. Esther Moir, Newnham College, Cambridge.

COID

Design Centre in Wales

"The Design Centre Comes to Wales" is the second COID exhibition to be held outside London. Its aim is to give cities a taste of what is provided at the Design Centre in London. 4,000 sq. ft. of David Morgan Ltd.'s Cardiff store have been admirably used for this purpose, and will be open during shopping hours until June 3.

The exhibition was designed by Robert Nicholson and is based on a 2-ft. module as in the Design Centre. Simple timber frames supporting glass shelving form the stands, and can be arranged in any multiple of 2 ft. The high ceiling of the store (matt black) is ingeniously lowered by a 2 ft. mesh of stainless steel wires stretched at about 8 ft. above floor level. Occasional squares of hardboard arranged in an abstract pattern fill the squares formed by the taut wires, but generally the matt black of the store ceiling reads as a solid plane on the mesh, giving an illusion of large ceiling tiles—a most ingenious device. Incidentally, the pastel shades of the hardboard squares tended to distract me from the exhibits (perhaps because I disliked the colours themselves). The same design in shades of grey with white might have been very effective against the black ceiling.

Many of the exhibits themselves are well known to anyone interested in industrial design; this is a shopper's guide, not a designer's display. However, Welsh exhibits should be mentioned as they may not be widely known. Appropriately enough iron-ware is good: see the ThiKBas saucepan and frying-pan made by the Welsh Tinplate & Metal Stamping Co.; this is in dark blue like the old tea-cans road menders once used. Note also Curran's vitreous enamel saucepans (designed by Noel London) in a very good range of colours; they look as though they would pour well.

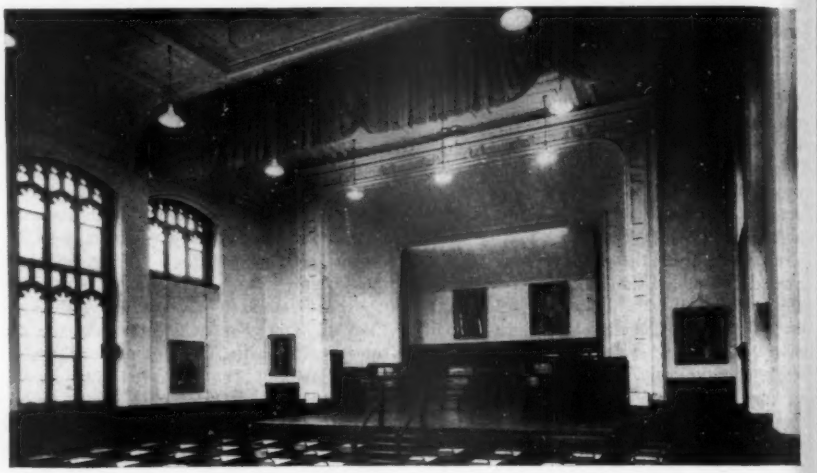
Portmerion lustreware (designed by S. Williams-Ellis and made in Stoke-on-Trent) is well worth noting for shape and pattern. One feels it has Victorian industrial ware behind it which is a refreshing break from the more usual folksy pottery. I have long felt that Welsh blankets and honey-comb quilts, though excellent in quality of weave and wool, were often of the drabbest designs and colours. Little in the exhibition dispelled this suspicion. Unfortunately no Welsh flannel (generally so exceptionally good in colour and pattern) was shown. Nor was there any slate.

This exhibition deserves every success and looks like having it judging from the crowd when I made my tour. It is to be hoped that industrialists will see it as well as shoppers.

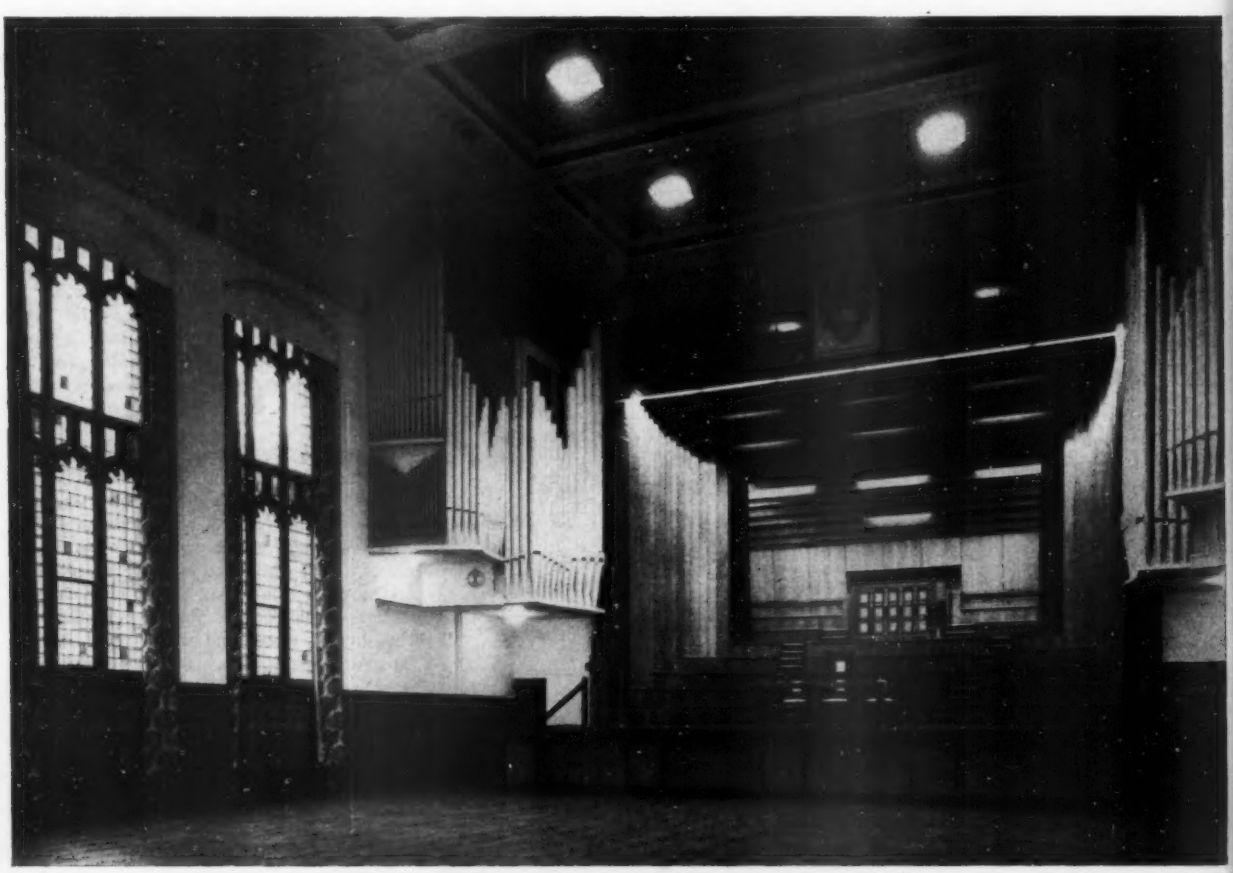
E. B.

"The Design Centre Comes to Wales" show at Cardiff

REDESIGNING THE GREAT HALL AT LEEDS UNIVERSITY



The top photograph shows the Great Hall at Leeds University as it was until a short while ago—unchanged since Alfred Waterhouse designed it in 1894—and the lower photograph shows the transformation of the platform end recently completed by Frank Chippindale, head of the Leeds School of Architecture. Following a decision to instal an organ, he was asked by the University to design the mounting of the organ either side of the proscenium, a new proscenium arch, stage and choir seating, redesign the gallery (at the opposite end) and provide it with a new staircase, improve the acoustics and lighting of the hall and curtain the gothic windows. The organ is mounted either side of the proscenium on a 6-in. cantilevered reinforced concrete platform. All the pipes "speak" at their true length—there are no dummy pipes—and the working parts, such as the swell-box, are visible. The console, which is at the back of the stage, is concealed behind a curved screen of mahogany framing with maple veneer panels. The sides of the stage have mahogany fins to reflect sound evenly into the hall. The dished stage seating is in Honduras mahogany, with risers in veneered pear. The sloping reflector at the back is in bleached pear. The proscenium surround is in West African mahogany and the stage floor in teak. The stage front is in pear veneer with ebony strips. The curtains are from a design made by James Gardiner for the Brussels Exhibition. A large number of acoustical adjustments were made, and with an average audience of 400 the reverberation time of the hall is now 1·5 secs. at 512 c.p.s.



working detail

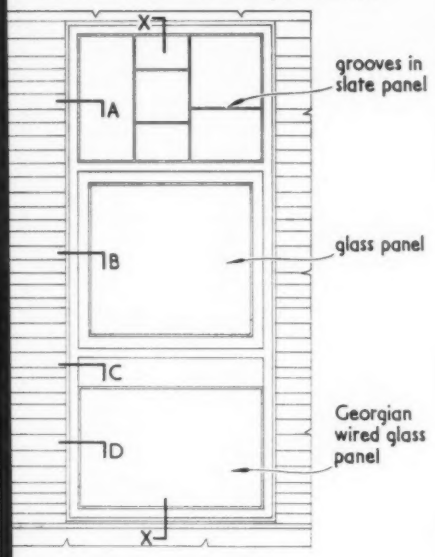
WINDOW IN FLAT: COLLEGE IN OXFORD

Architects' Co-Partnership, architects

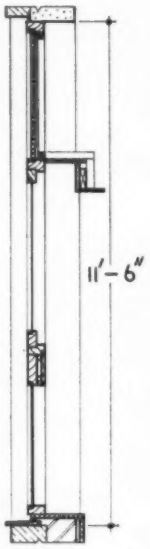
This window in the caretaker's flat has Georgian wired glass in the fixed lower light and the panel above the opening is one slab of slate grooved for decorative effect.

WINDOW IN FLAT: COLLEGE IN OXFORD

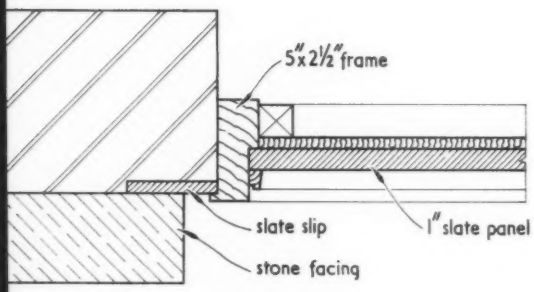
Architects' Co-Partnership, architects



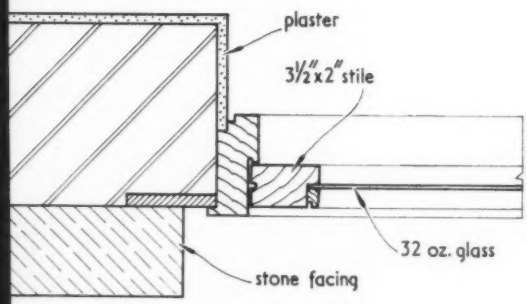
ELEVATION. scale 1/4" = 1'-0"



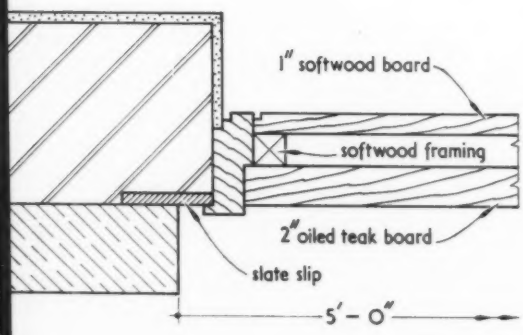
SECTION.



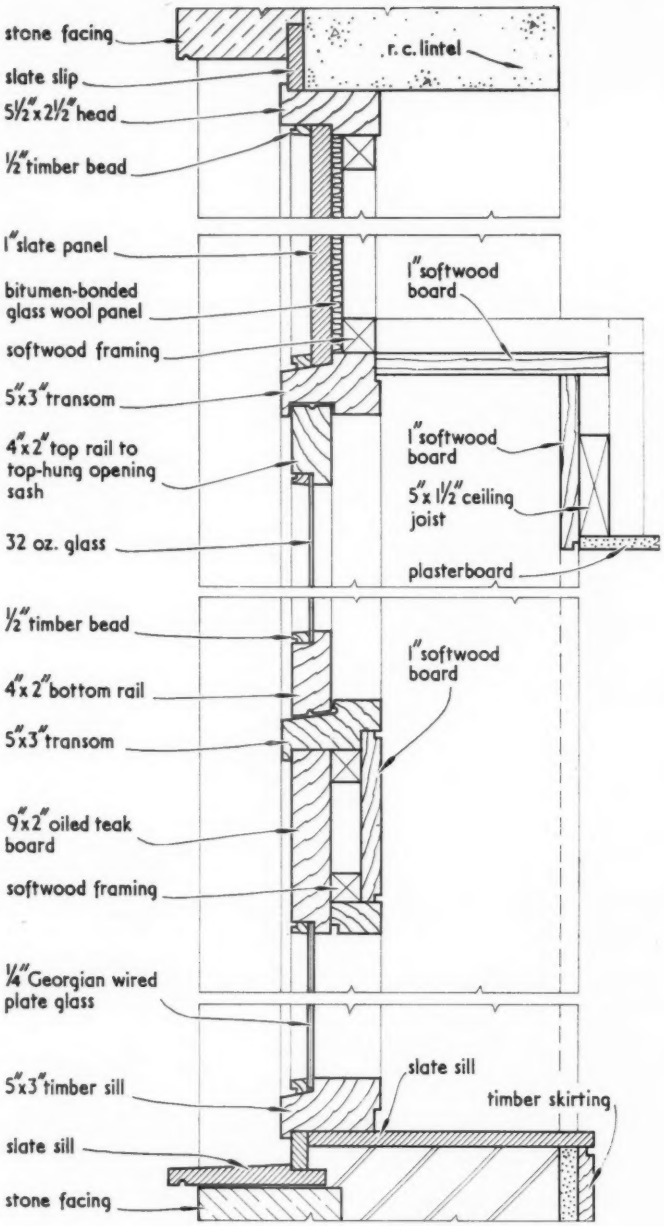
PLAN AT A. scale 1/4" = 1'-0"



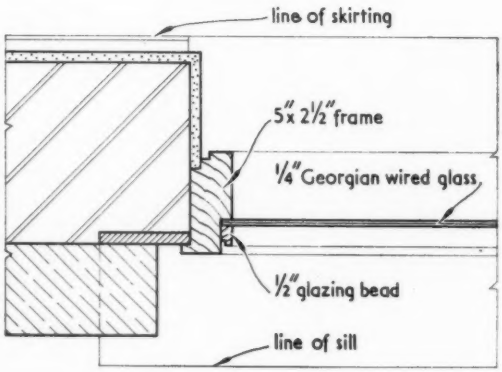
PLAN AT B.



PLAN AT C.



SECTION X – X. scale 1/8 full size



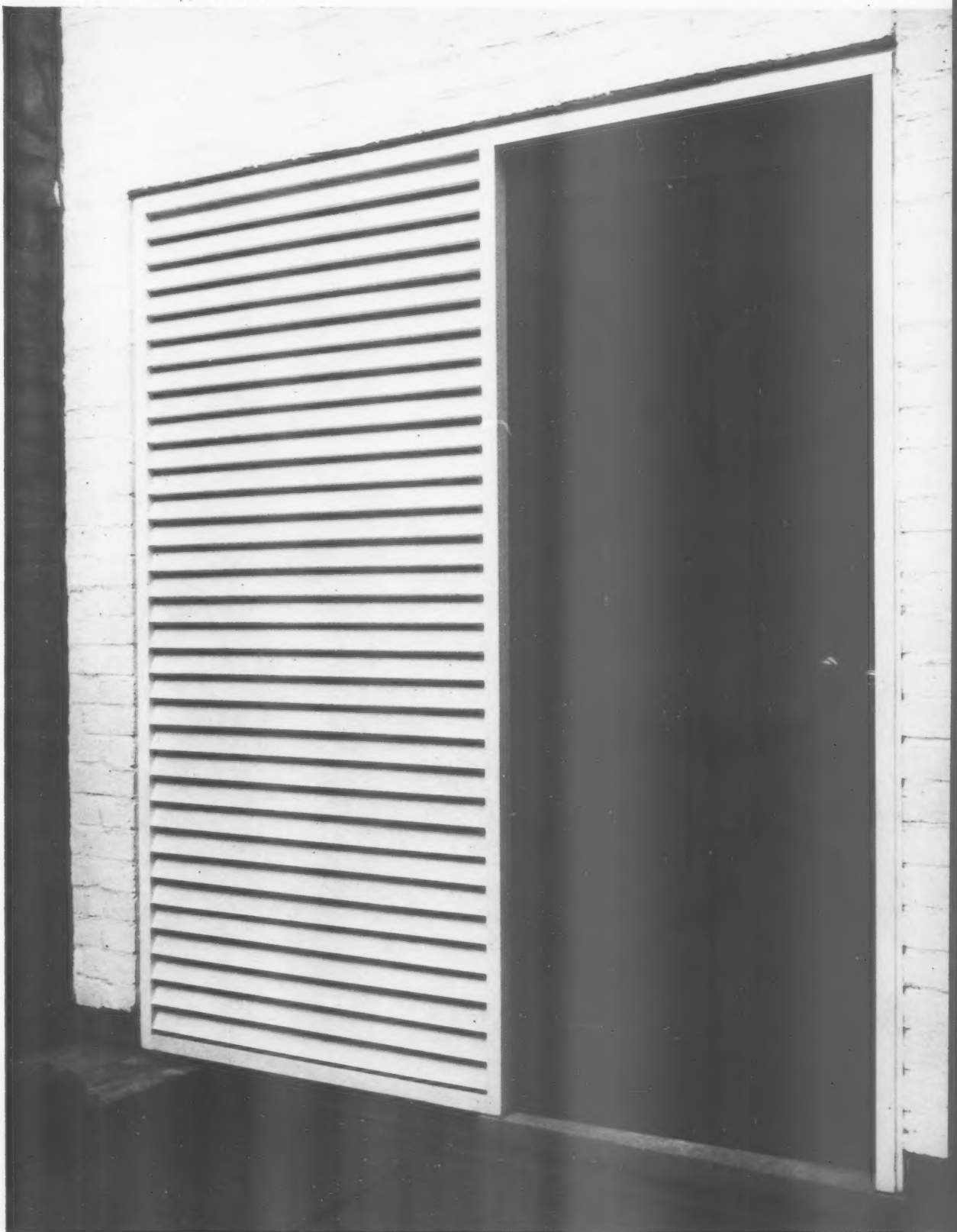
PLAN AT D.

working detail

DOORS: 42

ENTRANCE DOOR TO FLAT: COLLEGE IN OXFORD

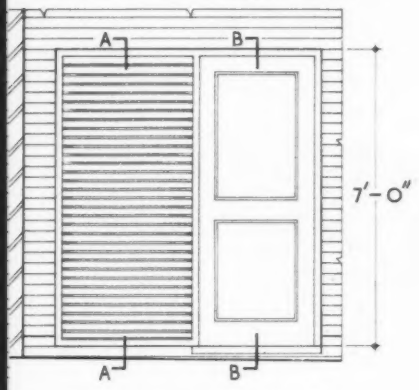
Architects' Co-Partnership, architects



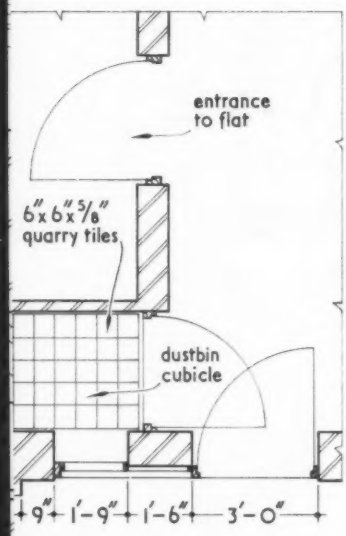
The problem of accommodating the dustbin has been neatly solved in this entrance to the caretaker's flat. A small compartment just inside the door is ventilated by a louvred panel, backed with a screen of perforated zinc to exclude insects.

ENTRANCE DOOR TO FLAT: COLLEGE IN OXFORD

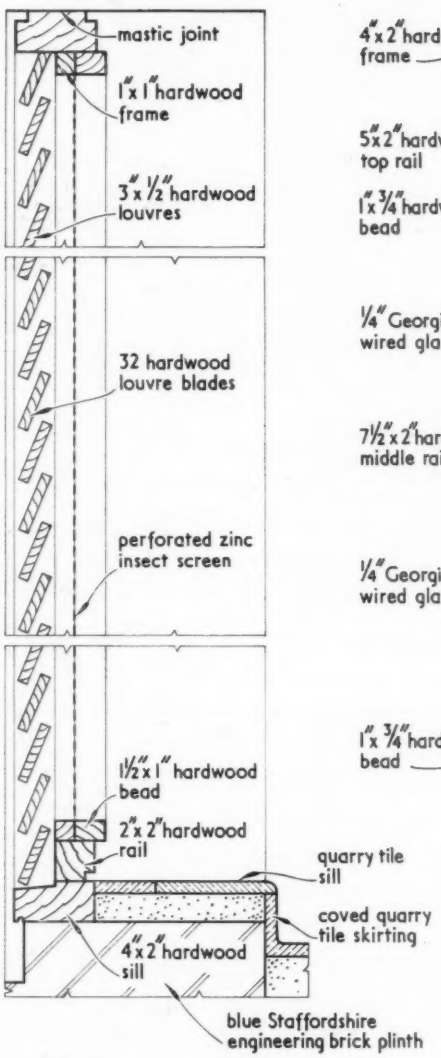
Architects' Co-Partnership, architects



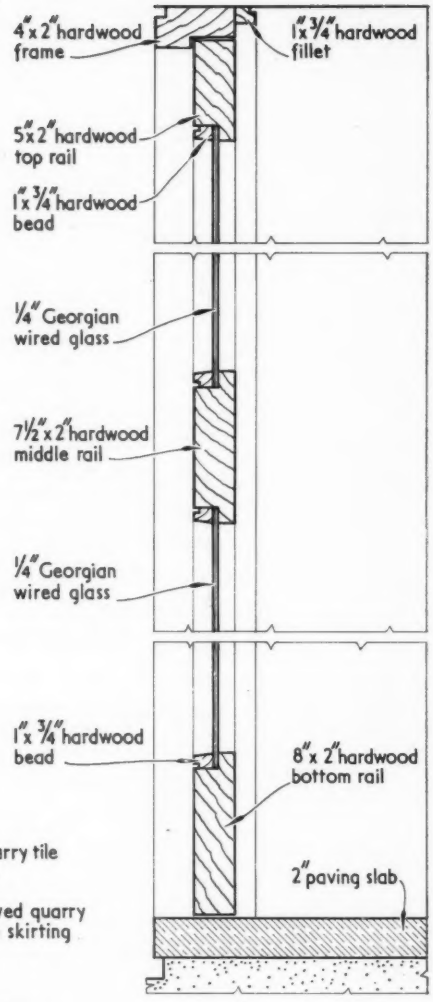
ELEVATION. scale 1/4" = 1'-0"



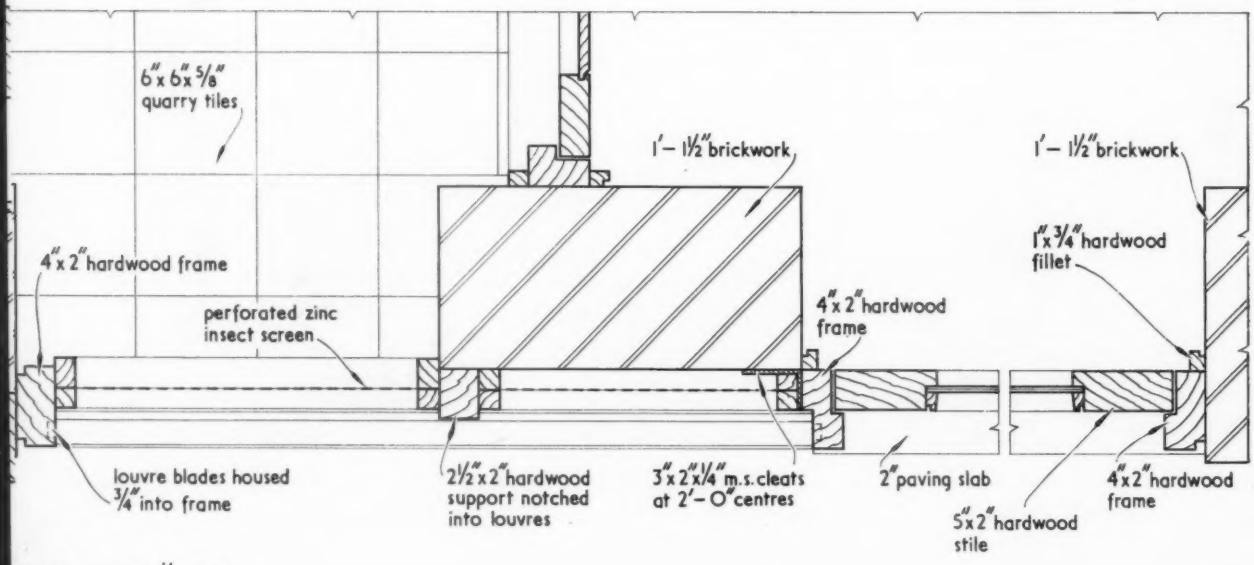
PLAN. scale 1/4" = 1'-0"



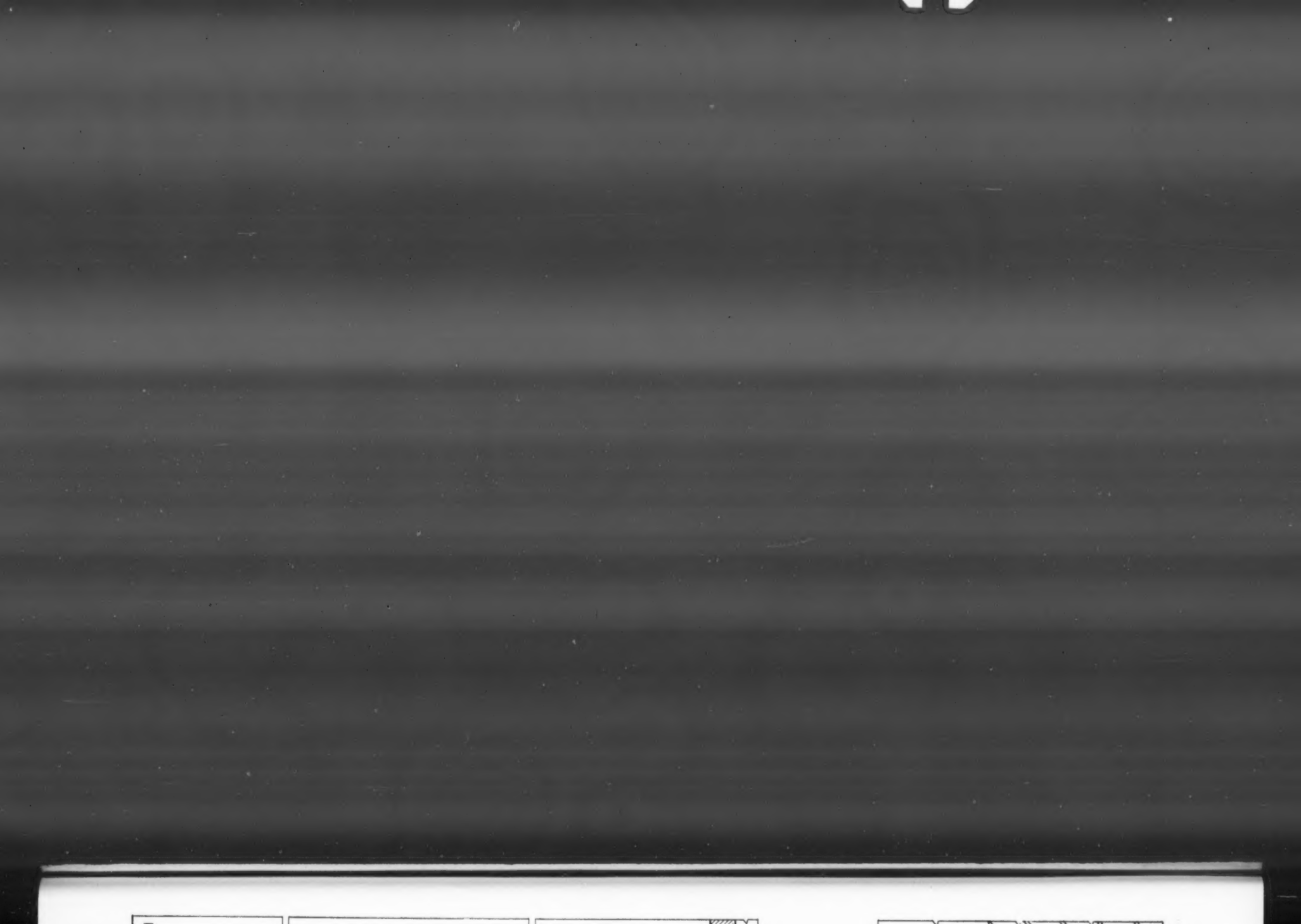
SECTION A – A. scale 1/8 full size



SECTION B – B.



PLAN. scale 1/8 full size



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AUSTRALIAN ACADEMY OF SCIENCE, CANBERRA

The new headquarters of the Australian Academy of Science in Canberra has now been completed. Designed by Grounds, Romberg and Boyd of Melbourne, the body of the building is inside a massive dome constructed of three inch thick concrete covered with copper. The interlocking copper sheets rest over the dome like a skin separated from the concrete by insulating material. The dome is supported on two foot thick arches rising out of a pool which surrounds the whole building. The internal walls are free-standing and are connected to the inside of the dome only by expanding rubber gaskets. The building includes an air conditioned circular conference hall to seat two hundred and twenty people and also a reading room, exhibition gallery, reception and committee rooms.

Announcements

C. L. Lister, A.R.I.B.A., has now moved to Garsett House, St. Andrew's Hall Plain, Norwich, Norfolk (telephone Norwich 28597).

Concrete Limited have opened a sales office at Winchester House, 5, Victoria Square, Birmingham 2.

E. A. Webb, Sales Manager of Winn & Coales Ltd., flew to the British West Indies on April 8, where he will spend about three months with Denso Agents throughout the area.

Frank C. Lynam, managing director of The Airscrew Company & Jicwood Ltd. of Weybridge, Surrey, was elected Chairman of the British Wood Chipboard Manufacturers' Association at its recent Annual General Meeting. He succeeds E. B. Goldson who held the office for two years.

D. E. Woodbine Parish, F.I.O.B., has recently resigned as Chairman and Managing Director of Holliday & Greenwood Ltd., to take up another appointment in the Building Industry later in the year. K. Greenwood has succeeded him as Chairman and G. Holliday, M.I.O.B., as Managing Director.

On and after April 20, the address of The Combustion Engineering Association will be 70, Jermyn Street, London, S.W.1 (telephone Whitehall 5536).

The Technical Advertising Service has now moved to larger offices at 83/89, Kingsway, W.C.2. The telephone number remains the same.

A. Mackie is the newly appointed Sales Manager in Scotland for Sissons Brothers & Co. Ltd.

The offices of J. L. Thomas, Scottish Area Manager of The Cape Asbestos Co. Ltd., and his staff, have moved to Hobden Street, Petershill Road, Glasgow, N.1 (telephone Springburn 6144). This is also the new address of A. Armour Clark, Scottish Area representative of Cape Building Products Limited, subsidiary of Cape Asbestos.

Hall Harding Ltd have transferred their Derby branch to larger premises at Alliance House, Becket Street, Derby (telephone 42281/2).

D. Frith has been appointed as an assistant to J. T. Grundy, chief lighting sales engineer of Siemens Edison Swan Ltd.

Manners, Hearne & Manners have moved their offices, industrial and commercial premises department to 8 and 10, Wigmore Street, Cavendish Square, London, W.1 (telephone Langham 0531).

Leslie J. Cox, M.I.P.R., has been appointed chief of the Public Relations Department of Wolf Electric Tools Ltd., and Edward Patterson, M.I.B.E., Technical Liaison Officer.

Albert M. Cole, executive vice-president of Reynolds Aluminium Service Corporation, has appointed Sid W. Jagger as his executive assistant.

On March 30 J. W. Raven, a senior grading supervisor attached to the Grading Inspection Department of the British Columbia Lumber Manufacturers Association, arrived in London from Vancouver to continue the technical advisory work carried out by Walter Ross before he returned to BCLMA head office some weeks ago.

Scaffolding (Great Britain) Limited and James Lovell & Co. Ltd. have formed a new company—James Lovell (SGB) Limited, which has been brought about by the merging of the Welded Structures Division of Scaffolding (Great Britain) Limited, and James Lovell & Co. Ltd.

J. D. Winston has been appointed General Sales Manager for British Resin Products Limited and is now responsible for the sales of all the plastics materials produced or marketed by them.

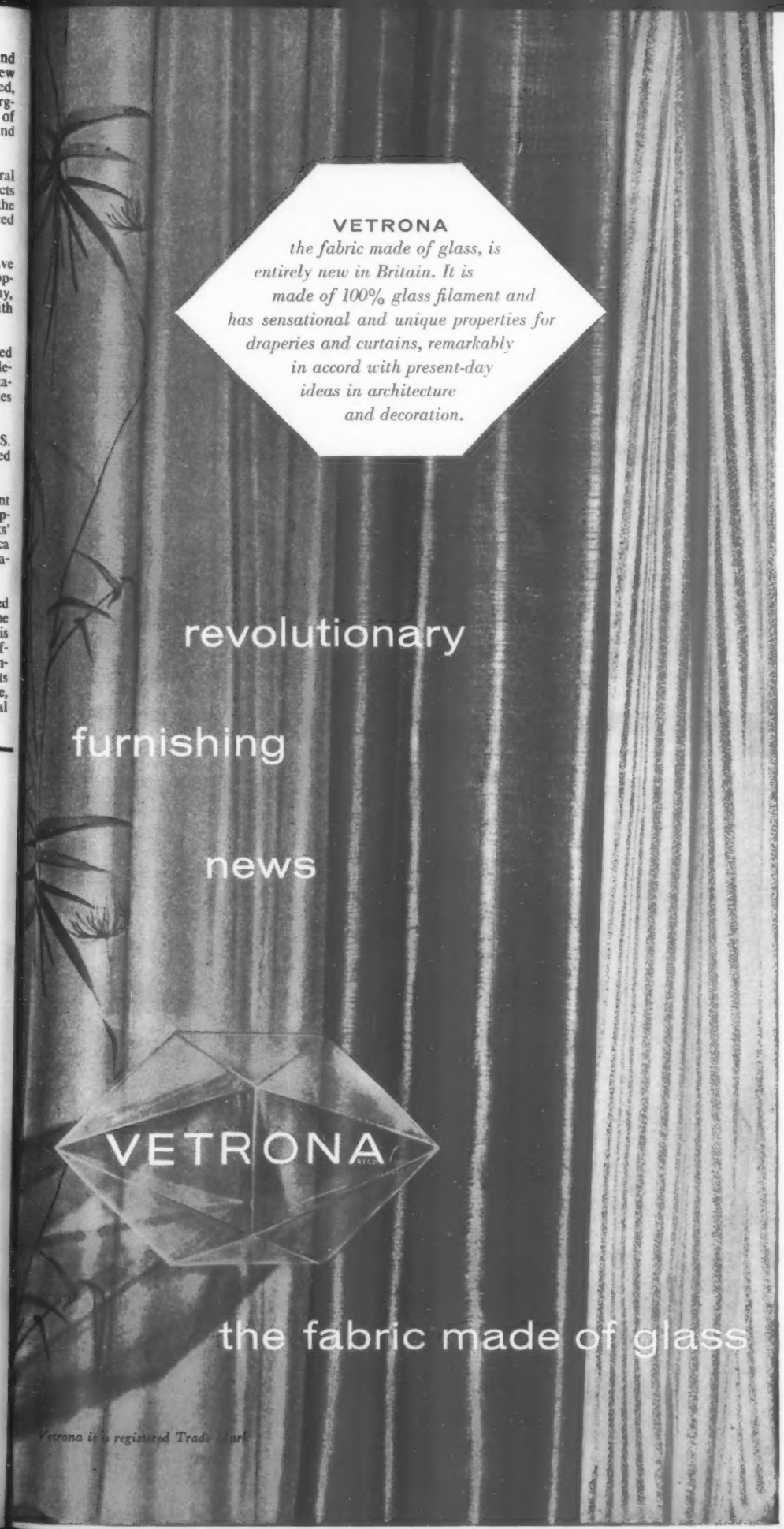
Holloway Brothers (London) Limited have extended their activities to property development and formed a new associate company, Holloway Developments Limited, with offices in Westminster.

G. C. Pillinger & Co. Ltd. have now opened a branch at 2, Queens Terrace, Exeter (telephone Exeter 71902). The local representative is J. Ley, who will welcome all inquiries from the West of England contractors.

B.B. Chemical Co. Ltd. have appointed J. S. Douglass as Manager of the newly formed Building Trades Sales Division.

The Managing Director of George Kent Ltd., W. A. Hartop, sailed from Southampton on April 2 for an extensive ten-weeks' business tour covering much of South Africa and the Federation of Rhodesia and Nyasaland.

The Kent mobile-exhibition, now embarked on a nine-week United Kingdom programme covering a route of over 1,600 miles, is scheduled to stop at approximately 30 different locations. It will be available for inspection by engineers and industrialists between Cardiff, Glasgow and Scunthorpe, and features a selection of Kent industrial instruments and controls.



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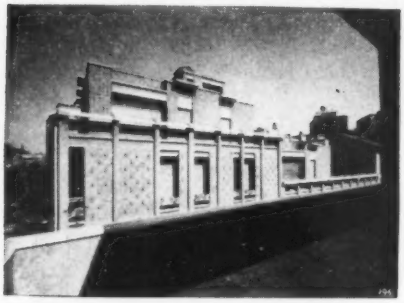
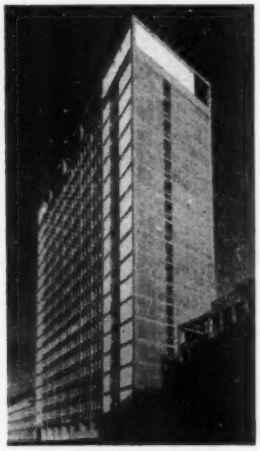
ar

APRIL

Neoliberty: a recent house in Milan by Figini and Pollini, discussed in Reyner Banham's article on the 1910 Revival in Italy, and the current retreat from Modern Architecture there.

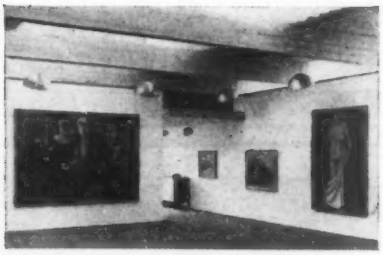


Without proscenium: the stage and amphitheatre of the Festival Theatre, Stratford, Ontario, designed by Rounthwaite and Fairfield, from Richard Leacroft's article on the open stage.

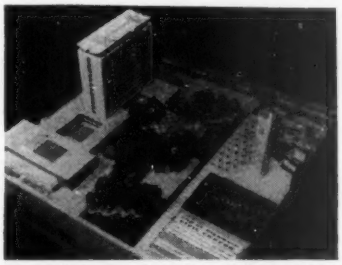


Eastbourne Terrace: right, one of the tall blocks from Cecil Elsom's street-long redevelopment scheme on bombed sites at the side of Paddington station.

MAY

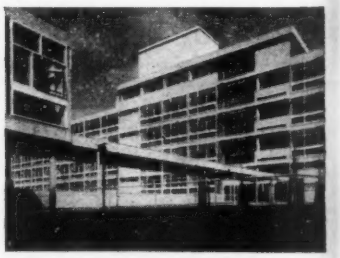


Art Galleries: a room in the Louisiana museum of modern art (Architects: Bo and Wohlert) outside Copenhagen, from a survey of recent trends in art gallery design in this issue.

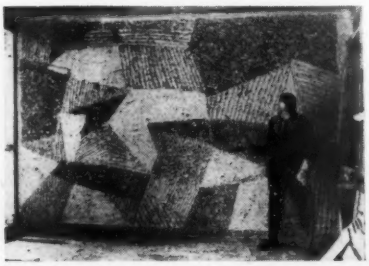


Plymouth Centre: Stage One of the new Civic centre for Plymouth (Architects: G. A. Jellicoe and Partners)—a multi-stage development whose townscape possibilities are explored in an article by Kenneth Browne.

Garrett Green Comprehensive School: Wandsworth one of a contrasting pair of new comprehensive schools in the 2,000 pupil class, designed by the Schools Division of the L.C.C. Architects' Department.



JUNE



Exposed Aggregate: Carl Nesjar in front of one of his sand-blasted murals, from John Stillman and John Eastwick-Field's survey of exposed concrete treatments.

Piccadilly after dark: illuminated and animated advertising, from Kenneth Browne's study "Advertising into Architecture," criticising recent proposals for the redevelopment of Piccadilly Circus.

Student Hostels: new buildings for Clare College, Cambridge, by David Roberts, described and illustrated in this issue, together with Sir Hugh Casson and Neville Conders' hostel in Holland Park.

The Architectural Review's new standard binding, with alternate years bound in black and white, and alternate volumes initialled A and R, makes easier the identification of individual volumes, and their proper replacement on the shelf. The binding is buckram, and the price of binding per volume is 25s. Copies to be bound should be addressed, with the appropriate index, direct to the Architectural Press warehouse, Abbey House, 8 Victoria Street, London, S.W.1.

The annual post free subscription rate payable in advance is £3.3.0 sterling; in U.S.A. and Canada $10.50; elsewhere abroad £3.10.0.

THE ARCHITECTURAL REVIEW, 9-13 QUEEN ANNE'S GATE, WESTMINSTER, S.W.1

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.

AIR-MAIL SERVICE available on request:
In response to requests from a number of Overseas subscribers for air-mail delivery of Public and Official Appointment details and Other Appointments Vacant, we have been pleased to arrange that cuttings of all such classified advertisements appearing in the A.J., shall be despatched by air-mail on Wednesday of each week (one day prior to A.J. publication date). The cost of this special service to Overseas subscribers will be 5s. for four weeks (1s. 3d. for each additional week) and prepayment should be sent by subscribers wishing to take advantage of this service. The charge we are making represents only the actual cost of the postage involved.

Public and Official Announcements

30s. per inch; each additional line, 2s. 6d.

BOROUGH OF ENFIELD
BOROUGH ENGINEER'S DEPARTMENT

Applications are invited for established posts within the Grades shown:—

(*a*) ARCHITECTURAL ASSISTANT—A.P.T. I & II (£575—£845 per annum).

(*b*) ARCHITECTURAL ASSISTANT (MAINTENANCE)—AP.T. I (£575—£725 per annum).

A London Weighting allowance of £10—£30 per annum, according to age, will be paid in addition to the above salaries. The commencing salary will be in accordance with qualifications and experience.

Saturday mornings are normally free of duty.

Application forms, returnable by the 13th May, 1959, to be obtained from H. Deryck Peake, M.Sc.(Eng.), M.I.C.E., Borough Engineer & Surveyor, "Percy House," 7 Little Park Gdns., Enfield, Middx.

CYRIL E. C. R. PLATTEN, LL.B.,
Town Clerk.

Public Offices,
Enfield, Middx. 3889

COUNTY BOROUGH OF OLDHAM
BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT
APPOINTMENT OF
SENIOR ARCHITECTURAL ASSISTANT

Applications are invited from qualified persons for the above appointment which involves the design and carrying out of architectural works of major importance in the town, and the successful candidate will be offered a salary in the upper limits of the Special Classes Grade (£750—£1,030), in accordance with experience.

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

Housing accommodation is available if required.

Applications endorsed "Senior Architectural Assistant," together with the names of two referees, should reach me not later than Friday, the 8th May, 1959.

A. L. HOBSON,
Borough Engineer and Surveyor.

Municipal Buildings,
75, Union Street,
Oldham. 3915

BOROUGH OF BEXLEY
ASSISTANT ARCHITECT

Applications are invited for this appointment at a salary within the Special Scale (£750 to £1,030 per annum) plus London weighting.

Candidates should have experience in school and housing projects and must have passed the R.I.B.A. Final.

Form of application and conditions of appointment are obtainable from the Borough Engineer, West Lodge, Broadway, Bexleyheath, Kent, to whom completed applications must be returned by 4th May, 1959. The Council may be prepared to assist in the provision of housing accommodation.

Canvassing will disqualify.

ARTHUR GOLDFINCH,
Town Clerk.
3847

COUNTY BOROUGH OF OLDHAM
BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT
APPOINTMENT OF ARCHITECTURAL DRAUGHTSMAN

Applications are invited for the appointment of Architectural Draughtsman at a salary within Grade Miscellaneous V (£625 × £20 — £685), commencing salary according to experience.

The successful applicant will be engaged in the Architectural section of my Department and should be a competent draughtsman, capable of working up detail drawings and carrying out the measurement of land and buildings.

The National Conditions of Service and the Local Government Superannuation Acts will apply, and the successful candidate will be expected to pass a medical examination.

Applications endorsed "Architectural Draughtsman," together with the names of two referees, should reach me not later than Friday, the 8th May, 1959.

A. L. HOBSON,
Borough Engineer and Surveyor.

Municipal Buildings,
75, Union Street, Oldham. 3916

NEWCASTLE REGIONAL HOSPITAL BOARD
REGIONAL ARCHITECT'S DEPARTMENT

During the next two years the Board plans to spend several millions on hospital developments and larger programmes are being planned to follow. The present building programme includes a wide variety of projects, ranging from houses to hospitals, and (since a large hospital resembles a small town) affords ample opportunity for gaining both general and hospital experience simultaneously.

The following posts in the Regional Architect's Department are at present open to applicants. The salary-scales quoted include interim increases pending completion of a current Health Service review of salaries.

(i) ASSISTANT ARCHITECTS (4). Salary £730 × £25(2) × £30(2) × £35(5) × £40(1) — £1,055.

Applicants should be registered architects and have had experience of the planning and construction of public buildings. The commencing salary will be fixed within the Grade by reference to relevant experience and to age.

(ii) ARCHITECTURAL ASSISTANT. Salary £545 at age 21 × £20(3) × £25(4) × £30(2) to £765.

Applicants should have passed the Intermediate Examination of the R.I.B.A., or an examination recognised by the Institute as equivalent, and some practical experience is desirable.

The commencing salary within the grade will depend upon the applicant's age and practical experience, but will not exceed £605.

(iii) ARCHITECTURAL DRAUGHTSMAN. Salary £445 × £25(5) × £30(3) — £660.

Applicants should have had previous experience in an architect's drawing office and be neat and quick draughtsmen.

Evening study facilities are available at King's College of Durham University in Newcastle.

Applications, stating age, qualifications, past and present appointments, present salary and details of experience and training, together with the names of three referees (of whom at least two should be architects), should be forwarded to the Secretary to the Board, Benfield Road, Newcastle upon Tyne, 6, not later than 7th May, 1959. 3917

CWMBRAN DEVELOPMENT CORPORATION
APPOINTMENT OF ASSISTANT QUANTITY SURVEYOR

A Quantity Surveyor is required for varied and interesting work in connection with the development of Cwmbran New Town. On the salary scale £934—£1,146, the point of entry being in accordance with qualifications and experience.

Candidates should be experienced in taking off, billing and abstracting, site measurements, valuation of work and the preparation of final accounts.

The post is superannuable and housing accommodation will be made available in suitable cases.

Applications stating age, experience, details of present and former employment (together with applicable salaries) and the names and addresses of two referees must reach the undersigned by first post on Monday, 11th May, 1959.

J. C. P. WEST, A.R.I.B.A., M.T.P.I.,
Chief Architect.

Victoria Street,
Cwmbran,
Mon. 3853

LONDON COUNTY COUNCIL
QUALIFYING EXAMINATION FOR THE OFFICE OF DISTRICT SURVEYOR

An examination for Certificates of Proficiency to perform the duties of District Surveyor will be conducted in London in the week commencing 12th October, 1959. The minimum age limit for candidates is 25.

Possession of this certificate is necessary for appointment to positions as District Surveyor (Salary scales £1,850 to £3,050 a year) or as Assistant District Surveyor (Salary scale £1,245 to £1,482 10s. a year, plus allowance £59 a year).

Apply to the Architect to the Council (AR/ED/RWF), County Hall, Westminster Bridge, S.E.1, for application forms and further particulars. (657.) 3589

BUILDING SURVEYORS

Vacancies in Building Regulation Division and District Surveyors' Service for work in connection with applications under London Building Acts, and Bylaws. District Surveyors' offices are located in Metropolitan Boroughs and work involves negotiations with developers and supervision of works in progress. Up to £860 with starting rates according to qualifications and experience. Application form and particulars from Hubert Bennett, F.R.I.B.A., Architect to Council, L.C.C. (AR/EK/28/59), County Hall, S.E.1. (541.) 3436

HOLLAND COUNTY COUNCIL invite applications for the appointment of:—

ARCHITECTURAL ASSISTANT — Special Grade, £750—£1,030 p.a., or Grade III, £845—£1,025 p.a. (according to qualifications and experience).

The Council have a varied and interesting programme and the successful applicant will be required to work within a "Group" system, where enthusiasm, initiative and contemporary outlook are appreciated.

The appointment will be subject to the provisions of the Local Government Superannuation Acts, the N.J.C. Scheme of Conditions of Service, and a medical examination.

The County Council would consider making a contribution towards the cost of removals.

Forms obtainable from the County Architect, should be returned to the Clerk of the County Council, County Hall, Boston, Lincs., by 9th May, 1959. 3950

AIR MINISTRY WORKS Design Branch requires in LONDON and PROVINCES ARCHITECTURAL ASSISTANTS experienced in planning/preparation of working drawings and details for permanent and semi-permanent buildings. Salaries in LONDON up to £1,055 p.a. for men and £1,008 p.a. for women. Somewhat lower in provinces. Starting pay dependent on age, qualifications and experience. Long term possibilities with promotion and pensionable prospects. Five-day week, three weeks three days' leave a year. Liability for overseas service (for men). Normally natural born British subjects. Write stating age, qualifications, employment details including type of work done to any Employment Exchange quoting Order No. Borough 250. 3337

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE
OFFICE OF THE COUNTY ARCHITECT

The Council require SENIOR ARCHITECTS in salary grades A.P.T. IV (£1,025—£1,175) and Special Grade (£750—£1,030) for their extensive and interesting building programme which includes schools, colleges, old people's and children's homes, clinics, ambulance, fire, and police stations, and other public buildings. Architects appointed will be employed at the Central Office in Wakefield solely upon capital works and will be expected to handle building projects from sketch plans to completion.

Applications are also invited for the undermentioned posts at the Central Office.

HEATING ENGINEERS.

(*a*) SENIOR ASSISTANT HEATING ENGINEERS—Grade A.P.T. V, £1,175—£1,325.

(*b*) SENIOR ASSISTANT HEATING ENGINEERS—Grade A.P.T. IV, £1,025—£1,175.

(*c*) ASSISTANT HEATING ENGINEERS—Special Grade, £750—£1,030.

Applicants for the senior posts must be, and for the other preferably should be, Associate Members of the Institution of Heating and Ventilating Engineers, and be capable of designing and detailing heating, hot water and ventilation installations.

QUANTITY SURVEYORS.

(*a*) SENIOR ASSISTANT QUANTITY SURVEYORS—J.N.C. Scale "A," £1,170—£1,390.

(*b*) SENIOR ASSISTANT QUANTITY SURVEYORS—Grade A.P.T. V, £1,175—£1,325.

(*c*) SENIOR ASSISTANT QUANTITY SURVEYOR—Grade A.P.T. IV, £1,025—£1,175.

Applicants for post (*a*) should be Associate Members of the Royal Institution of Chartered Surveyors, and candidates for all the posts should have had experience in the preparation of Bills of Quantities and measuring for and adjustment of final accounts.

(*d*) ASSISTANT QUANTITY SURVEYORS—Special Grade, £750—£1,030.

SURVEYORS (SITES).

JUNIOR SURVEYING ASSISTANT, Grade A.P.T. I, £575—£725.

Applicants should have good experience in surveying, levelling and plotting sites and should be neat draughtsmen. Experience in surveying buildings would be an advantage.

ELECTRICAL ENGINEER.

ASSISTANT ELECTRICAL ENGINEER—Grade A.P.T. II, £725—£845.

Applicants should hold the Higher National Certificate in Electrical Engineering and be capable of preparing schemes, specifications and estimates.

Applications are also invited for the undermentioned posts at DIVISIONAL OFFICES:—

HARROGATE DIVISIONAL OFFICE

ARCHITECTS.

(*a*) ASSISTANT ARCHITECT—Special Grade, £750—£1,030.

(*b*) JUNIOR ARCHITECTURAL ASSISTANT—Grade A.P.T. I. £575—£725.

Applicants for (*a*) should have experience in the maintenance of buildings and of works of minor adaptations and improvements.

DONCASTER DIVISIONAL OFFICE (ADWICK-LE-STREET)

JUNIOR ARCHITECTURAL ASSISTANT—Grade A.P.T. I. £575—£725.

Applications to be submitted by the 19th May, 1959, on forms to be obtained from and returned to the undersigned.

A. W. GLOVER, F.R.I.B.A.,
County Architect.

"Bishopgarth"
Westfield Road,
Wakefield. 3972

CITY OF CAMBRIDGE
(AMENDED ADVERTISEMENT)
ASSISTANT ARCHITECT
(Special Grade £750—£1,030)

Applications are invited for this superannuated post in the Architects' Section of the City Surveyor's Department, in which there is a programme of major schools, housing and general works.

Applicants must have passed parts I and II of the R.I.B.A. Final or Special Final Examination or equivalent, and entry point on the grade will depend on experience.

Application forms from the City Surveyor, The Guildhall, Cambridge, to be returned by 14th May, 1959.

The Council may be able to provide housing accommodation.

ALAN H. J. SWIFT,
Town Clerk.

The Guildhall,
Cambridge.
18th April, 1959. 3981

SHEFFIELD REGIONAL HOSPITAL BOARD

Applications are invited for the post of ASSISTANT ARCHITECT on the Board's Architectural Staff. Candidates must be Registered Architects and have passed the requisite examinations. Salary according to age and experience within the scale £730—£1,055 per annum. Appointment is subject to Whitley Council terms and conditions of service, to the National Health Service (Superannuation) Regulations, and to one month's notice on either side. Applications, together with the names of three referees, should be sent to the Secretary, Sheffield Regional Hospital Board, Fulwood House, Old Fulwood Road, Sheffield, 10, not later than the 15th May, 1959. 3969

QUANTITY SURVEYING ASSISTANTS required by AIR MINISTRY in the PROVINCES. Duties include abstracting and billing, site measurement and preparation of estimates. Commencing salary according to age, qualifications and experience. Salary ranges from £680 at age 26 rising to £850. Candidates must hold O.N.C. (Building or Builders Quantities) or equivalent and have good experience under Quantity Surveyor or Building Contractor. Knowledge W.D. Schedule an advantage. Approved full time study will count towards period of experience. Promotion and pensionable prospects. Five-day week, three weeks leave a year. Appointments carry liability for service anywhere U.K. or overseas. Applicants normally should be natural born British subjects. Write, stating age, qualifications and previous appointments, including type of work done, to Manager, Professional and Executive Register, Ministry of Labour and National Service, Atlantic House, Farringdon Street, London, E.C.4, quoting reference PE 105/745. No original testimonials should be sent. Only applicants selected for interview will be advised. 3897

LANARK COUNTY COUNCIL

Applications are invited for appointment to the following posts in the County Housing Architect's Department, Hamilton.

(*a*) SENIOR ARCHITECT to act as group leader—Salary scale £1,250—£1,350.
(*b*) SENIOR ASSISTANT ARCHITECTS—Salary scale £1,100—£1,250.
(*c*) ARCHITECTURAL ASSISTANTS—A. & P. Grade I to VIII (£595—£1,055).

Applicants for posts (*a*) and (*b*) must be fully qualified and have experience in preparation of comprehensive layouts for areas of new development and redevelopment; design and construction of multi-storey flats and maisonettes, shops and other ancillary buildings.

For (*c*) placing on A. & P. Grades will be dependent on qualifications and experience.

Superannuation. Medical examination. No canvassing.

Applications, stating age, qualifications and experience, together with names and addresses of two referees, to County Clerk, P.O. Box 1, Glasgow, within 14 days of date of advertisement. 3945

BOROUGH OF BASINGSTOKE
ARCHITECT'S DEPARTMENT

Interesting work offered in a rapidly expanding town to an Associate R.I.B.A. as a SENIOR ASSISTANT. Salary Range £750 × £40 — £1,030 according to experience. Housing accommodation available. N.J.C. conditions: post pensionable: medical examination. Applications giving details of age, training, experience, etc., and two referees, to Town Clerk, Municipal Buildings, Basingstoke, by 11th May, 1959. Enthusiasts only. Canvassing disqualifies. 3874

BIRMINGHAM REGIONAL HOSPITAL BOARD

SENIOR ASSISTANT ARCHITECTS required—£1,060 to £1,245 per annum. Applicants must be registered architects having passed the requisite examinations. Experience of hospital planning and construction an advantage. Ability to control drawing-office staff essential. Superannuable. Apply giving details of training, present appointment and previous experience and naming three referees, to Secretary, 10 Augustus Road, Birmingham 15, by 11th May. 3914

DEPARTMENT OF HEALTH FOR SCOTLAND

The Architectural Division which covers work on housing, hospitals, schools, local authority buildings, agricultural colleges and State institutions and includes development work, has vacancy in Edinburgh for an ASSISTANT ARCHITECT (non-pensionable post). Salary range £805—£1,260. Write Establishment Officer, Department of Health for Scotland, Room 30, St. Andrew's House, Edinburgh, 1, for application form. Closing date Friday, 15th May, 1959. 3684

BOROUGH OF HARROW

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

ARCHITECTURAL ASSISTANTS — Special Grade (£750 to £1,030 per annum) plus London "weighting."

The commencing salary will be in accordance with qualifications and experience. Contributions toward removal expenses will be considered. All appointments will be subject to the National Joint Council's Scheme of Conditions of Service. Application forms are obtainable from me, to whom they should be returned not later than Wednesday, 13th May, 1959.

D. H. PRITCHARD,
Town Clerk.

Town Clerk's Office,
Harrow Weald Lodge,
92, Uxbridge Road,
Harrow, Middx. 3960

OXFORDSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the following:—

(*a*) ASSISTANT QUANTITY SURVEYOR, A.P.T. Grade III (£845—£1,025)*.
(*b*) ASSISTANT QUANTITY SURVEYOR, A.P.T. Grade II (£725—£845)*.
(*c*) ASSISTANT QUANTITY SURVEYOR, A.P.T. Grade I (£575—£725)*.
(*d*) QUANTITY SURVEYOR'S ASSISTANT, Misc. Grade V (£625—£685)*.
(*e*) JUNIOR ASSISTANT, General Division (£200—£450)* or Higher General Division (£230—£560)*.

*Subject to new award.

Applicants for appointment (*a*) must have passed a suitable professional final examination, (*b*) and (*c*) must have passed the appropriate Intermediate Examination, and for (*d*) must have experience in abstracting, billing, interim valuations and final accounts.

Applications, giving two referees and one recent testimonial, must give details of qualifications, education, experience, age and relevant particulars, and must reach the County Architect, Park End Street Offices, Oxford, not later than the 14th May, 1959.

GERALD GALE BURKITT,
Clerk of the Council.

County Hall,
Oxford. 3961

CUMBERNAULD NEW TOWN

ARCHITECTS and PLANNERS are required in the Department of the Chief Architect and Planning Officer (L. Hugh Wilson) for a variety of interesting projects including high density housing development. There are vacancies for:

ASSISTANT ARCHITECTS (Grade B) (Ref. A.2); Salary scale £1,034—£1,366.

ASSISTANT PLANNING OFFICERS (Grade C) (Ref. P.3); Salary scale £844—£1,029.

A.R.I.B.A. required for the architectural posts and at least one of the planning posts. A.M.T.P.I. required for the planning posts.

Experience of statistical analysis desirable for one of the planning posts.

Starting salary according to experience; Local Government Superannuation (subject to medical examination); assistance with housing may be given; five-day week.

Write quoting reference number of post to the General Manager, Cumbernauld Development Corporation, Cumbernauld House, Cumbernauld, by Glasgow, for application form, to be returned by Monday, 18th May, 1959. 4011

COUNTY BOROUGH OF SWANSEA
BOROUGH ARCHITECT'S DEPARTMENT
ARTICLED SCHOLARSHIP
PUPIL QUANTITY SURVEYOR

Applications for the above Scholarship, in accordance with the Scheme approved by the Council, are invited from Pupils who have been for at least FOUR YEARS Students at Schools of Secondary School level and who have attained the minimum educational standard required of candidates for enrolment as students of the Royal Institution of Chartered Surveyors.

The minimum standard required is a General Certificate of Education at "ordinary" level in at least five subjects, which must include English Language and Mathematics. At least three of the subjects must have been passed at one and the same examination.

A copy of the Scholarship Scheme can be obtained from the undersigned. The period of the Scholarship will be THREE YEARS.

Applicants must be over 16 years and under 19 years of age on the 1st August in the year of the Award and must have, or their parents or guardians must have, resided in the Borough during the last four years.

Form of application may be obtained from the Borough Architect, The Guildhall, Swansea.

Application, marked "Pupil Quantity Surveyor, Borough Architect's Department," must be delivered to the Borough Architect, The Guildhall, Swansea, not later than Saturday, 16th May, 1959.

T. B. BOWEN,
Town Clerk.

The Guildhall,
Swansea.
21st April, 1959. 3993

CORNWALL COUNTY COUNCIL
APPOINTMENT OF ASSISTANT PLANNING OFFICER (ARCHITECT)

Applications are invited for the above-mentioned appointment in the Headquarters Office of the County Planning Department at Truro, at a commencing salary within A.P.T. IV (at present £1,025—£1,175). Candidates must be Associates of the Royal Institute of British Architects and preference will be given to those who are also Associate Members of the Town Planning Institute. Full details of the appointment can be obtained from the County Planning Officer.

The customary service conditions of the Local Government Service will apply and the successful candidate will be required to provide a car for official travelling for which the appropriate mileage allowance will be paid.

Applications, together with the names and addresses of three referees, should be addressed to the County Planning Officer, County Hall, Truro, and received not later than 11th May, 1959.

E. T. VERGER,
Clerk of the County Council.

County Hall,
Truro.
21st April, 1959. 3992

COUNTY BOROUGH OF SWANSEA
BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited for the following posts:—

(*a*) JUNIOR ASSISTANT ARCHITECT—Grade A.P.T. I (at present £575 to £725). Applicants must have passed the Intermediate Examination of the R.I.B.A.
(*b*) JUNIOR ASSISTANT QUANTITY SURVEYOR—Grade A.P.T. I. Applicants must have passed the Intermediate Examination of the R.I.C.S. (Quantities Sub-division) and have had experience in abstracting, billing and measurement of works on site.
(*c*) JUNIOR ASSISTANT QUANTITY SURVEYOR—Grade H.G.D. (at present £230 to £560, according to age). Applicants must have passed or be exempt from the Preliminary Examination of the R.I.C.S. and be capable of squaring, abstracting and billing.

In all cases, the commencing salary within the grade will be in accordance with ability and experience.

Candidates must be under 45 years of age unless in Local Government Service.

The appointments will be subject to the provisions of the Local Government Superannuation Acts and may be terminated by one month's notice on either side.

The successful candidates will be required to pass a medical examination.

Forms of Application may be obtained from the Borough Architect, The Guildhall, Swansea, to whom they must be returned not later than Saturday, 16th May, 1959.

Canvassing disqualifies.

T. B. BOWEN,
Town Clerk.

The Guildhall,
Swansea.
21st April, 1959. 3994

WESTERN REGIONAL HOSPITAL BOARD

Owing to an expansion in the work being undertaken directly by the Architectural Division in connection with major hospital development schemes, etc., additional staff is required and applications are invited for the following posts:

PRINCIPAL ASSISTANT ARCHITECT II. Salary scale £1,195 × six annual increments—£1,420.

SENIOR ASSISTANT ARCHITECT (three posts). Salary scale £1,050 × six annual increments—£1,245.

ASSISTANT ARCHITECT (six posts). Salary £730 × 10 annual increments—£1,055.

In the Assistant grade starting salary may be above the minimum having regard to experience.

Candidates must be Registered Architects, having passed the requisite examinations. Previous hospital experience will be an advantage.

The appointments are superannuable and are terminable on two months' notice on either side. Successful candidates may be required to pass a medical examination.

Applications, stating age, qualifications and full details of previous experience, together with the names of three referees, should be addressed to the Secretary, Western Regional Hospital Board, 64, West Regent Street, Glasgow, C.2, within 14 days of the appearance of this advertisement. 4028

BOROUGH OF WEMBLEY
APPOINTMENT OF SENIOR TOWN PLANNING ASSISTANT

Applications are invited for the above established appointment from persons with practical experience in Town Planning administration and who have passed a professional examination for corporate membership of one of the Institutes appropriate to practising Town Planners. Salary rising to £1,095 per annum.

Applications disclosing any relationship to a Member or Senior Officer of the Council, giving the names and addresses of three referees, stating whether able to drive, and quoting Ref. "C," must reach the Borough Engineer and Surveyor, Town Hall, Wembley, by the 11th May, 1959.

Housing accommodation not provided. Canvassing disqualifies.

KENNETH TANSLEY,
Town Clerk.

Town Hall,
Wembley, Middlesex.
22nd April, 1959. 4035

AYR COUNTY COUNCIL invite applications for the following posts in the PLANNING DEPARTMENT, County Buildings, Ayr:—

DISTRICT PLANNING OFFICER.—Salary scale £1,005—£1,085 p.a. Applicants should be Corporate Members of Town Planning Institute and preference will be given to those who also hold architectural qualifications. They must have had good practical experience in planning work and in operation of the relevant statutes; SENIOR PLANNING ASSISTANT.—Salary scale £820—£1,025 p.a. Applicants should hold same qualifications as specified above. They should be experienced in preparation of town maps and in particular preparation of schemes of comprehensive development. Both posts superannuable and placing within scales will be given according to qualifications and experience. In each case applications giving age and particulars of qualifications and experience, with names of two referees, should be lodged with the County Clerk, County Buildings, Ayr, within 14 days of appearance of this advertisement. Canvassing disqualifies. 4041

WELSH COLLEGE OF ADVANCED TECHNOLOGY
WELSH SCHOOL OF ARCHITECTURE
(associated with the University of Wales)

Applications are invited for three posts:—(*a*) READER, (*b*) SENIOR LECTURER and STUDIO INSTRUCTOR, (*c*) ASSISTANT LECTURER (Grade B) and STUDIO INSTRUCTOR.

The Reader will be expected to engage in research relating to modern building organisation and to establish courses arising from this research work.

The Senior Lecturer will be responsible for part of the advanced work in Design and Construction for the Degree and Diploma courses.

The Assistant Lecturer will be required to assist with the general teaching duties of the Department. Candidates should have been trained in a "recognised" School of Architecture, be Associates of the R.I.B.A. and have had approximately three years' post-academic practical professional experience.

Salaries will be in accordance with the Burnham Scales, as follows:—

Reader: £1,627 10s. to £1,890 p.a.
Senior Lecturer: £1,417 10s. to £1,627 10s. p.a.
Assistant Lecturer: £682 10s. to £1,076 5s. p.a.

In the case of the Assistant Lecturer additional allowances are payable for a degree, training, etc.

In all cases research and consultative work will be encouraged and industrial or research experience is regarded as of importance where applicable.

Further particulars and forms of application are obtainable from the Principal, at the College, Cathays Park, Cardiff, to whom they should be returned as soon as possible.

ROBERT E. PRESSWOOD,
Clerk to the Governing Body.
City Hall, Cardiff. 4036

LANCASHIRE COUNTY COUNCIL

Applications are invited for the post of PRINCIPAL ASSISTANT COUNTY ARCHITECT, Senior Officers Scale 1, £2,325—£2,610.

The successful applicant will be required to collaborate with the Architect and his staff principals, and will be mainly concerned with the standards of Architectural Design—the coordination of the work of Technical Staff Groups within the Department, on a varied and large scale building programme, and overall responsibility for contract progress on site.

Administrative work will be connected with the purely technical aspect as distinct from Local Government Administration of Procedures.

Application forms from the County Architect, P.O. Box 26, County Hall, Preston, returnable by 4th May, 1959, quoting reference A/AJ. 3962

KENT COUNTY COUNCIL requires an ARCHITECTURAL ASSISTANT in the Headquarters of the PLANNING DEPARTMENT at Maidstone. Salary within Special Grade (£750—£1,030 per annum); likely to be increased shortly as a result of National Award. Commencing salary according to qualifications and experience.

Candidates should be Associates of the Royal Institute of British Architects or hold an equivalent qualification. National Scheme of Conditions of Service applies and registered disabled persons will be considered.

Applications, with names of two referees, to County Planning Officer, County Hall, Maidstone, by 20th May, 1959. 4022

GLENROTHES DEVELOPMENT CORPORATION
CONSTRUCTION PROGRESS OFFICER

Applications are invited for a new appointment as CONSTRUCTION PROGRESS OFFICER on the staff of the Chief Architect and Planning Officer. Candidates must have held executive position in a large contracting business or hold professional qualifications coupled with supervisory experience. Extensive practical experience in the control and organisation of large scale building works carried out by contract and knowledge of the operation of a large architectural office are essential. Experience of a small Direct Labour and Stores Organisation connected with building operations would be advantageous. Salary Grade £1,226/£1,454 per annum with placing according to qualifications and experience. House to rent available. Medical examination under Superannuation Scheme. Particulars of duties and application forms obtainable from Secretary and Legal Adviser, Glenrothes Development Corporation, Glenrothes, Fife, to be returned by 16th May, 1959. 4019

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies for ARCHITECTURAL ASSISTANTS, starting salary up to £860. Full and interesting programme of houses, flats, schools and general buildings.

Application form and particulars from The Architect to the Council, County Hall, S.E.1, quoting AR/EK/14/59 (256). 3040

SOUTHAMPTON COUNTY BOROUGH COUNCIL requires under N.J.C. conditions of service: ASSISTANT QUANTITY SURVEYOR—salary within Special Grade (£750/£1,030 p.a.).

Applicants must be Chartered Quantity Surveyors, preferably with experience in municipal housing, including multi-storey flats and shopping centres.

Apply on application form obtainable from the Borough Engineer and Surveyor, Civic Centre, Southampton, as soon as possible. 3816

LONDON COUNTY COUNCIL
QUALIFYING EXAMINATION FOR THE OFFICE OF DISTRICT SURVEYOR

An examination for certificates of proficiency to perform the duties of district surveyor will be conducted in London in the week commencing 12th October, 1959. The minimum age limit for candidates is 25.

Possession of this certificate is necessary for appointment to positions as District Surveyor (Salary scales £1,650 to £2,750 a year) or as Assistant District Surveyor (Salary scale £1,246 to £1,482 10s. a year, plus allowance £59 a year).

Apply to The Architect to the Council (AR/ED/RWF), County Hall, Westminster Bridge, S.E.1, for application forms and further particulars. (657) 4038

CITY OF STOKE-ON-TRENT
CITY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

(*a*) ASSISTANT ARCHITECTS, Special Scale, £750—£1,030.
(*b*) ASSISTANT QUANTITY SURVEYOR, A.P.T. III, £845—£1,025.
(*c*) ARCHITECTURAL ASSISTANT, A.P.T. I, £575—£725.
(*d*) JUNIOR DRAUGHTSMAN, Higher Gen. Div., £230—£560.

Applications, stating which post applied for, and giving full details of qualifications, training and experience, etc., to J. R. Piggott, T.D., F.R.I.B.A., City Architect, Kingsway, Stoke-on-Trent, by Friday, 8th May, 1959. 4015

PLANNING DIVISION
ARCHITECT'S DEPARTMENT
LONDON COUNTY COUNCIL

Following re-organisation vacancies exist for:—

(1) PLANNING OFFICERS, GRADE II—Salary up to £1,305. A.R.I.B.A., A.R.I.C.S., or B.Sc. (Estate Management), with planning qualifications and/or experience to lead small teams engaged on Civic Design, detail planning development plan and development control.

(2) PLANNING OFFICERS, GRADE III—Salary up to £1,090. Architect or Surveyor Planners to assist in the above work.

(3) PLANNING ASSISTANTS—Salary up to £860. Experience in Development Control essential.

(4) PLANNING DRAUGHTSMEN—Salary up to £12 8s. 0d. a week.

Posts are pensionable with prospects of advancement on merit. Holiday arrangements will be respected. Closing date for Grade II and Grade III positions, 11th May, 1959.

Application form and particulars from Hubert Bennett, F.R.I.B.A., Architect to the Council, The County Hall, S.E.1, quoting Ref. AR/EK/40/59. (858.) 3937

CITY OF BELFAST

Applications are invited for the following positions in the Education Architect's Department.

ARCHITECT CLASS I

Applicants must be registered and qualified by examination and should be capable of supervising architectural staff. Preference given to those with experience in modern school designing and construction.

Salary: £970 × £40 — £1,250 per annum.

TECHNICAL ASSISTANT CLASS I (ARCHITECTURAL)

Applicants should be experienced architectural assistants, capable of carrying out the drawings, specifications and supervision necessary for alterations to existing buildings and new minor works.

Applications will only be considered from persons who, although not possessing a recognised architectural qualification, can show that they have reached a high standard of architectural and constructional ability and with a special aptitude for this type of work.

Salary: £610 × 2/25 × 30 × 25 × 30 × 3/25 — £820 × 20 — £840.

Commencing salary according to ability and experience. Superannuation contributions of approx. 6% of remuneration payable. Reciprocal pension arrangements exist between the Corporation and certain Public Authorities.

Canvassing will disqualify.

Application forms, etc., obtainable from Education Offices, 40, Academy Street. Completed applications must reach the undersigned by *Thursday, 14th May*, 1959.

JOHN DUNLOP, *Town Clerk.*

City Hall, Belfast. P.O. Box 234.
22nd April, 1959. 4018

WEST SUSSEX COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

(1) CHIEF ASSISTANT ARCHITECT, at a salary in accordance with A.P.T. Grade V of the National Scale of Salaries, £1,220—£1,275—£1,325—£1,375. Commencing salary according to experience.

(2) SENIOR ASSISTANT ARCHITECT, at a salary in accordance with A.P.T. Grade IV of the National Scale of Salaries, £1,065—£1,120—£1,170—£1,220. Commencing salary according to experience.

(3) ASSISTANT ARCHITECT, at a salary in accordance with the Special Grade of the National Scale of Salaries, at present £750 × £40—£1,030. Commencing salary according to experience.

(4) TEMPORARY CLERK OF WORKS, at a salary of £16 per week.

Further particulars should be obtained from the County Architect, County Hall, Chichester, to whom all detailed applications must be submitted not later than 21st May, 1959.

T. C. HAYWARD,
Clerk of the County Council.

County Hall,
Chichester.
23rd April, 1959. 4016

HUNTINGDONSHIRE
COUNTY ARCHITECT'S DEPARTMENT
APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment at a salary in accordance with A.P.T. Grade V, £1,175—£1,325 per annum. (This salary may be affected by N.J.C. for Local Authorities Administrative, etc. Services Circular No. 145).

Candidates should be Associate Members of the Royal Institute of British Architects or hold equivalent qualifications and have had considerable experience in the design of schools, police, and other County buildings.

Further details and application forms may be obtained from the County Architect, County Buildings, Huntingdon. Completed application forms should be returned to the undersigned by Friday, 22nd May, 1959.

A. C. AYLWARD,
Clerk of the County Council.

County Buildings,
Huntingdon. 4014

BOROUGH OF HORNSEY

Two Temporary ARCHITECTURAL ASSISTANTS required for the Architects' Section of the Borough Engineer and Surveyor's Department. Grades A.P.T. I and II, salaries (new scales) £610—£765 and £765—£880, plus London weighting. Commencing salary according to experience.

Application form from Borough Engineer and Surveyor, Town Hall, Crouch End, London, N.8, to be returned by Wednesday, 20th May, 1959.

H. BEDALE,
Town Clerk.
4013

CITY ARCHITECT'S OFFICE, Manchester. Application invited for appointments on the permanent staff of (*a*) ASSISTANT ARCHITECT/ARCHITECTURAL ASSISTANT. Salary Special Scale at present £750/£1,030, is under review. Commencing salary will be fixed according to qualifications and experience; and (*b*) ARCHITECTURAL ASSISTANT, salary A.P.T. I, £610—£765. Five-day week. Removal expenses allowed. Housing accommodation for a limited period may be provided for the successful candidate for the senior appointment. Forms of application from the City Architect, P.O. Box 488, Town Hall, returnable May 11, 1959. 4006

CITY OF LEEDS
CITY ARCHITECT'S DEPARTMENT

1 ASSISTANT ARCHITECT, Grade A.P.T. III, Salary scale £845—£1,025.
2 ASSISTANT QUANTITY SURVEYOR, Grade A.P.T. III, Salary scale £845—£1,025.
3 ASSISTANT QUANTITY SURVEYOR, Grade A.P.T. I, Salary scale £575—£725.
4 ASSISTANT SURVEYORS, Grade A.P.T. I, Salary scale £575—£725.

Preference will be given to applicants who have had experience in surveying and measuring up of buildings with a view to their conversion.

5 LANDSCAPE SUPERVISOR, Grade A.P.T. I, Salary scale £575—£725.

Preference will be given to candidates who have had experience in the supervision of horticultural work on large Estates.

6 INSPECTOR (Heating & Ventilating), Grade A.P.T. II, Salary scale £725—£845.

Candidates must have had experience in the supervision of the installation of heating, domestic hot water and ventilating systems. The duties will be full-time site supervision of jobs being carried out by contractors in various parts of the City.

7 CLERK OF WORKS, Grade A.P.T. I, Salary scale £575—£725.

Applicants are asked to clearly indicate the post for which they wish to be considered.

Medical examination. Superannuation payable.

Application forms from the City Architect, Priestley House, Quarry Hill, Leeds, 9, to whom they should be returned by 12 noon on Saturday, 16th May, 1959.

Canvassing disqualifies.

R. A. H. LIVETT,
City Architect.

Priestley House,
Quarry Hill,
Leeds, 9.
17th April, 1959. 3957

BOROUGH OF WALTHAMSTOW
ASSISTANT ARCHITECT

Applications are invited for the above appointment in the Borough Architect, Engineer and Surveyor's Department (F. G. Southgate, A.R.I.B.A., M.I.Mun.E., A.M.T.P.I., Borough Architect, Engineer & Surveyor) at a salary in accordance with Grade III, A.P.T. Division (£845—£1,025, exclusive of London weighting) with the commencing salary according to qualifications and experience.

Applicants must be Registered Architects and have had experience of housing schemes.

Applications, stating age, qualifications, experience and present occupation, together with the names of two referees, one of whom should be the present or former employer, are to be received by the undersigned not later than noon on Friday, 15th May, 1959, endorsed "Assistant Architect."

G. A. BLAKELEY,
Town Clerk.

Town Hall,
Walthamstow, E.17.
20th April, 1959. 3991

CORPORATION OF KIRKCALDY
BURGH ENGINEER'S DEPARTMENT

Applications are invited for the following posts:—

(1) ASSISTANT ARCHITECT / PLANNER: Applicants should be Associates of the R.I.B.A., qualified or experienced in Town Planning matters, able to prepare neighbourhood and site layouts, including central area redevelopment schemes.

(2) ASSISTANT ARCHITECT: Applicants should be Associates of the R.I.B.A., and experienced in all forms of housing and public buildings.

(Both posts are on scale A.P. VIII, £1,005—£1,085.)

(3) JUNIOR CIVIL ENGINEERING ASSISTANT (Salary scale A.P. III/IV, £665—£760). Applicants should be qualified to Higher National Certificate Standard with some experience in Civil and Municipal engineering.

Posts pensionable; medical examination. Canvassing direct or indirect disqualifies. Declare relationship to member of Council or chief official.

Applications, giving full details of experience, qualifications and names of two referees, to Burgh Engineer, Town House, Kirkcaldy, by 8th May, 1959. 4003

LANCASHIRE COUNTY COUNCIL

Applications are invited for the posts of SENIOR ARCHITECTS, Senior Officers Scale "A," £1,225—£1,390.

Applicants should possess a keen design sense, and a sound working knowledge of modern techniques in building construction.

Successful applicants will be required to work at all stages in the drawing office, and the site supervision of major building projects.

Application forms from the County Architect, P.O. Box 26, County Hall, Preston, returnable by 4th May, 1959, quoting reference A/AJ. 3963

ADMINISTRATIVE COUNTY OF LEICESTER

ASSISTANT ARCHITECTS £750—£1,030 according to experience. Candidates must have passed parts I and II of the R.I.B.A. Examination, have had office experience and be capable of taking charge of small contracts. Lodging allowance and removal expenses may be paid to a married man. Apply on forms obtainable from County Architect, 123 London Road, Leicester. 3911

GOVERNMENT OF BRITISH HONDURAS
ARCHITECT, PUBLIC WORKS DEPARTMENT

To design houses and public buildings, prepare sketch plans and working drawings, specifications and quantities for carrying out work both by contract and direct labour, under the supervision of the Director of Public Works.

Contract appointment for one tour of two years. Salary £2,000 per annum. Gratuity of 12½ per cent. of salary. Free passages. Furnished government quarters at moderate rent. Generous leave.

Candidates, between 30 and 50, must be A.R.I.B.A. with considerable general experience.

Write Director of Recruitment, Colonial Office, London, S.W.1, stating age, qualifications and experience, quoting B.C.D. 112/31/07. 3944

BOROUGH OF OLDBURY
BOROUGH SURVEYOR'S DEPARTMENT

Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT in the Architectural Section of the above Department in Grade A.P.T. I Scale of Salaries (£575—£725 per annum).

The appointment offers, to a competent draughtsman, experienced in the preparation of working and detail drawings, an excellent opportunity of being engaged on a wide range of architectural projects.

The appointment will be superannuable subject to the National Scheme of Conditions of Service and to the selected candidate passing a medical examination.

Applications, giving particulars of age, qualifications, experience and the names of two referees, should be delivered to the undersigned not later than the 6th of May, 1959.

KENNETH PEARCE,
Town Clerk.

Municipal Buildings,
Oldbury.
21st April, 1959. 3982

GOVERNMENT OF NORTHERN IRELAND
QUANTITY SURVEYOR

Applications invited from CORPORATE MEMBERS OF THE ROYAL INSTITUTION OF CHARTERED SURVEYORS (QUANTITIES) for unestablished post in Chief Quantity Surveyor's Branch, Ministry of Finance. Candidates should have several years' experience, particularly in "taking off" for large building works, since obtaining their professional qualifications. Salary scale £1,210—£1,550. Prospects of establishment. Preference for ex-Servicemen.

Application forms obtainable from Director of Establishments, Room 271, Stormont, Belfast, to be completed and returned by 20th May, 1959. 3980

BERKSHIRE COUNTY COUNCIL
ARCHITECTURAL ASSISTANT, A.P.T. GRADE II (£765—£880)

Preference will be given to applicants who have passed the Intermediate Examination of the R.I.B.A.

Application forms and further particulars can be obtained from J. T. Castle, A.R.I.B.I., A.M.T.P.I., County Architect, Wilton House, Parkside Road, Reading, to whom they should be returned not later than Tuesday, 12th May, 1959. 3968

COUNTY COUNCIL OF ESSEX
ASSISTANT ARCHITECTS

For the extensive development in this County, a large programme of public building work is in progress. Assistant Architects are required who are interested in taking part in the design and building of Health Centres and Clinics, Ambulance, Fire and Police Stations, Libraries, Colleges and Schools.

Previous Local Government experience not essential. Applications from students in their fifth year considered and interviews arranged at convenient times.

Salaries from £750 to £1,030 (under review).

Forms of application from County Architect, County Hall, Chelmsford, Essex. 3959

CITY OF MANCHESTER HOUSING DEPARTMENT
DEPUTY CHIEF ASSISTANT ARCHITECT

Applications invited for the above appointment from Qualified Architects, preferably with experience in the design and construction of all classes of Municipal Housing development, including Multi-storey flats.

The appointment will be in accordance with JNC Scale "A" (£1,220—£1,390).

Housing accommodation may be available.

Forms of application from the Director of Housing, Town Hall, Manchester, 2, returnable by 1st June, 1959. 3989

BOROUGH OF TOTTENHAM

Applications are invited for the following posts:—

ARCHITECTURAL ASSISTANT (Estab.), A.P.T. II—£765 to £880 p.a. Applicants must have at least passed R.I.B.A. Intermediate Examination or equivalent.

ARCHITECTURAL ASSISTANT (Estab.), A.P.T. I—£610 to £765 p.a. Applicants must have at least passed R.I.B.A. Intermediate Examination or equivalent.

Consideration will also be given to applications from candidates awaiting the results of recent examinations.

London Weighting Allowance of £20 or £30 p.a., according to age, and commencing salaries within grades according to ability and experience.

Application form and conditions of appointment from the Borough Engineer (AJ), Town Hall, Tottenham, N.15. Applications to be delivered by Monday, 25th May, 1959. 3988

DERBYSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Vacancies exist for SENIOR ASSISTANT ARCHITECTS. Salary A.P.T. Grade IV, £1,025 × £50 to £1,175 per annum (under review). Applicants must be fully qualified. National Joint Council Conditions of Service. Pensionable post. Canvassing disqualifies. Application forms from The County Architect, County Offices, Matlock, to be returned by 20th May, 1959. 3990

PRISON COMMISSIONERS require ARCHITECT (unestablished post) in Prison and Borstal Service, based on London. Candidates must be qualified architects with good professional experience. Duties, mainly design, for all types of buildings. Salary scale £805—£1,260 p.a. Forms from M.L.N.S. Technical and Scientific Register (K), 26, King Street, London, S.W.1, quoting J.153/9A. Closing date for applications, 15th May. 3958

BIRMINGHAM REGIONAL HOSPITAL BOARD
ARCHITECTURAL ASSISTANTS required. Salary scale £545—£765 p.a. Point of entry according to experience. Intermediate R.I.B.A. essential. Superannuable. Apply naming two referees to Secretary, R.H.B., 10, Augustus Road, Birmingham 15, by 8th May, 1959. 3871

EXETER CITY COUNCIL

Applications are invited for the following appointments:

(*a*) JUNIOR ARCHITECTURAL ASSISTANT. Salary within A.P.T. Grade I (£575 to £725 per annum). Applicants must have passed the Intermediate Examination of the Royal Institute of British Architects.

(*b*) ARCHITECTURAL DRAUGHTSMAN. Salary within Miscellaneous Division 4/5 (£565 to £685 per annum).

The appointments which are on the temporary staff are subject to one month's notice on either side and to the passing of a medical examination. Canvassing will disqualify.

Applications in writing, stating age, experience, qualifications and appointments held should reach the City Architect, Municipal Offices, Exeter, not later than the 7th May, 1959. 3926

Architectural Appointments Vacant

4 lines or under, 9s. 6d.; each additional line, 2s. 6d. Box Number, including forwarding replies, 2s. extra

ARCHITECTURAL firm in Home Counties with varied practice, require ASSISTANTS, Intermediate, qualified, or at that standard. State experience and salary required to Box 3089.

ARCHITECTS' co-partnership require ASSISTANTS for working drawings and detailed design. Salary according to experience. Write 44 Charlotte Street, London, W.1, or telephone Langham 5791. 3265

W. H. WATKINS, GRAY & PARTNERS require ASSISTANT for interesting hospital work, pension scheme in operation. Write or phone, 57, Catherine Place, S.W.1. Victoria 7761. 3209

ARCHITECTURAL ASSISTANTS required. Starting salary £915 per annum. Glasgow office, five-day week. Schools, Offices, etc. State Experience. D. Harvey & A. Scott, 2, Lynedoch Place, Glasgow, C.3. 3368

ARCHITECTURAL ASSISTANTS required. Starting salary £750 per annum. Glasgow office, five-day week. State experience. D. Harvey & A. Scott, 2, Lynedoch Place, Glasgow, C.3. 3369

ARCHITECTURAL ASSISTANTS required about Intermediate standard. Opportunities for good all round experience. Please write stating age, experience and Salary required. Box 3386.

ARCHITECT'S ASSISTANTS required. Intermediate and Final standard, also Surveyors. Salaries from £600 to £1,000 per annum. Offices in Stroud and Dursley, and site office in Bristol. Write giving details of qualifications and experience to Ellery Anderson, Roiser & Falconer, Imperial House, Stroud, Gloucestershire. 3463

EXPERIENCED SENIOR MEN required for interesting commercial projects in London. Holiday arrangements will be recognised. Five-day week. Salary according to experience. Phone City 8811. 3694

ASSISTANT of Intermediate/Final standard required in Croydon office. Varied and interesting work. Five-day week, holiday this year. Apply by letter to Hugh Macintosh & Partners, 33/35, High Street, Croydon. 3683

J. W. POLTOCK & ASSOCIATES require Intermediate standard ASSISTANT with office experience. Phone Victoria 6100. 3820

WELLS, HICKMAN & PARTNERS need a keen ARCHITECTURAL ASSISTANT capable of working without supervision. Several years' experience, sound knowledge of construction and very good draughtsmanship are vital. Salary £750—£850. Please ring TER 1404 for appointment. 3801

ARCHITECTURAL ASSISTANTS required for small London office. High standard of draughtsmanship required. Salary by arrangement. Write to Box 3739.

JUNIOR ARCHITECTURAL ASSISTANT required in Manchester for Bank Architect's Department to work on extensive programme of modernisation and new construction. Apply, giving details of age, experience and salary required, to Box 3931.

ASSISTANT of about Intermediate standard required by small, busy, but interesting practice. Friend, Kelly & Friend, 102, Boutport Street, Barnstaple, Devon. 3975

FIRM of private architects in the Bahamas require two male or female JUNIOR ASSISTANTS on three-year Colonial-Office-type contracts. Applicants must be single, preferably Student Members of the R.I.B.A., should be good draughtsmen and must have a good general knowledge of construction and office procedure. Return passage to Bahamas would be paid and the salary is £1,200 per year. Applicants will be interviewed in London during the third week in May and should be prepared to take up employment not later than July. Please reply to Box 3771.

ARCHITECTURAL ASSISTANTS required for small St. Albans office. High standard of draughtsmanship required. Salary by arrangement. Write to Box 3740.

SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS required for varied range of contemporary work. Write with full details of previous experience, age, nationality and salary required to: Michael Lyell, A.R.I.B.A., 16, Yeoman's Row, London, S.W.3. 3826

TWO ARCHITECTURAL ASSISTANTS, Intermediate standard, required for very large scheme. Considerable office experience is essential. Office West End. Good salary and bonus. Box 3869.

ARCHITECTURAL ASSISTANTS, Final and Intermediate, required by progressive firm of Birmingham architects. Work involves preparation of designs, working drawings, site supervision, etc., on numerous types of work. Salary by arrangement. Box 3834.

ASSISTANT required, R.I.B.A. Intermediate standard, for varied and interesting work. Successful candidate will frequently visit work upon which he is engaged, in and out of London. Salary to £750 according to ability. Poulton and Freeman, F./F.R.I.B.A., 6a, Wyndham Place, W.1. Phone: Ambassador 2211. 3836

ARCHITECTURAL ASSISTANTS of Final and Intermediate standard, with good industrial experience, required for work on Atomic Power Stations. Excellent opportunities in an expanding London office. Apply stating age, experience and salary range to The Secretary, Nuclear Civil Constructors, 52/55, Carnaby Street, London, W.1. 3837

SENIOR ASSISTANT required of Intermediate/Final standard. Sound training, experience private practice. Accommodation difficult, single man therefore preferred. Busy private practice, Jersey, Channel Islands. Apply, stating salary required, when free, etc., to Box 3895.

QUALIFIED ASSISTANT ARCHITECTS required, minimum three years' office experience, preferably in London. Salary according to ability and experience. Theo. H. Birks, 38, Portland Place, W.1. LAN. 7236. 3900

INTERMEDIATE standard ASSISTANTS required, minimum two years' office experience. Salary according to ability. Theo. H. Birks, 38, Portland Place, W.1. LAN. 7236. 3899

ASSISTANT about Intermediate standard to work directly with Architect of Development Company in London on new projects. The position carries responsibility and opportunity to gain sound knowledge of all aspects of an architect's practice. Box 3907.

QUALIFIED SENIOR ASSISTANTS and ARCHITECTURAL ASSISTANTS of Intermediate standard required for contemporary practice in the London, Leeds and Chatham offices. Apply in writing, stating age, experience and salary required, to H. A. Halpern, A.R.I.B.A., 26a, High Street, Chatham, Kent. 3893

PLAYNE & LACEY immediately require ARCHITECTURAL ASSISTANTS (Final and Intermediate) in office with varied practice. Write 19, Queen Anne's Gate, Westminster, S.W.1, or telephone WHI. 2552, stating salary required. 3892

ARCHITECTURAL ASSISTANT required. Age 25—35. Full qualifications not as essential as experience in an architect's office and ability to produce working drawings. Apply in writing, stating qualifications, to Oliver Law & Partners, F/F.R.I.B.A., 36, Ebury Street, S.W.1. 3890

ARCHITECTURAL ASSISTANT required for North Devon Office. Box 3886.

ARCHITECTURAL ASSISTANT of Intermediate/Final standard required for interesting general practice; good light offices; holiday arrangements with pay will stand. Salary according to ability and experience. Full details to Bowden Son & Partners, 3, Adelaide Terrace, N.1. 3881

JAMES A. ROBERTS, Chartered Architect, Chanelle House, 86, New Street, Birmingham, 2 (MIDland 4315/6), requires Intermediate and Final standard ASSISTANTS. 3880

FREDERICK GIBBERD'S London office requires two ARCHITECTURAL ASSISTANTS, Intermediate and Final standard. Write, giving experience and salary required, to 8, Percy Street, London, W.1. 3977

SENIOR and INTERMEDIATE ASSISTANTS invited to join an expanding Architect's practice in Edgbaston, Birmingham, which offers exceptional prospects. Box 3906.

REQUIRED immediately, SENIOR ARCHITECT, salary about £1,000 depending on experience. Apply: Fitzroy Robinson & Partners, 3, Gray's Inn Square, W.C.1. CHAncery 7751. 3857

HARRY S. FAIRHURST & SON have a vacancy for a SENIOR ARCHITECT in their Manchester office. The work is interesting and varied including academic, scientific, commercial and domestic buildings. Applicants should be experienced and able to take responsibility. There is also a vacancy for an ASSISTANT ARCHITECT; a qualified graduate, not necessarily with extensive experience. Please write, giving the usual details, to 55, Brown Street, Manchester, 2. 3859

URGENTLY required, ASSISTANT capable of taking responsibility. Salary according to ability and experience. F. C. Levitt, F.R.I.B.A., Biggleswade, Bedfordshire. 3860

THE manufacturers of "Middlesex" Timber Prefabricated Buildings require an Intermediate R.I.B.A. ASSISTANT. Apply to Architect's Department, J. E. Lesser & Sons, Ltd., Green Lane, Hounslow, Middlesex (HOU. 7281-7). 3862

SCHERRER & HICKS, 19, Cavendish Square, London, W.1, require immediately several ASSISTANTS of post Intermediate standard for work on industrial and commercial projects. Apply giving age, qualifications, experience and salary required. 3846

INTERMEDIATE standard ASSISTANT with experience of industrial work required for Architects' London (City) Office. Salary by arrangement. Write Box 3965.

THE following staff required: SENIOR ASSISTANT, Final standard, preferably qualified and with some office experience; able to work on own initiative; to fill a vacancy at PETERBOROUGH. Salary up to £900 according to experience, or by arrangement. ASSISTANT, Intermediate standard, to fill a vacancy at SPALDING. Salary £400/£500 according to experience. Apply in writing in first instance giving full details to: Ruddle & Wilkinson, F./L./A.R.I.B.A., Long Causeway Chambers, Peterborough. 3943

BERKSHIRE Architect requires keen ASSISTANT for small but expanding practice. Qualifications: practical contemporary outlook; recently or nearly qualified; willing to tackle small or large jobs with equal enthusiasm. Good prospects for right man. Would consider amalgamation or arrangement with existing small practice. Replies treated in strict confidence. Box 3938.

KEEN ASSISTANT, with few years' office experience, required by medium-sized practice engaged upon varied and interesting projects, mainly contemporary. Happy conditions and good salary offered to successful applicant. Please apply soonest possible to Arthur Farebrother & Partners, 99, Seymour Grove, Manchester 16. 3939

ARCHITECTS' ASSISTANT required, capable of handling jobs from beginning to end. Work varied, but mainly Commercial, Factory, and Alterations. Excellent prospects for the right man in an old established practice within 40 miles west of London. Apply Box 3940.

TEMPORARY ARCHITECT'S ASSISTANT urgently required. Good draughtsmanship and a sound knowledge of building construction essential. Application in writing, giving full particulars, to Alfred H. Howard, L.R.I.B.A., West Way House, St. Thomas Street, Winchester, Hants. 3946

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