

FROM ROAD TO ROOF



FOR every type of work in which asphalt can be employed the name Val de Travers stands supreme for product and service. As the largest mine owners in the world and as the greatest producers of factory-made asphalt in the country, Val de Travers' unrivalled resources are destined to play a great part in the reconstruction which lies before us.

ACTIVITIES

of the Company and its Associates.

- ASPHALTE MINE OWNERS in France, Germany and Sicily
- QUARRY OWNERS
- ASPHALTE CONTRACTORS
- TAR-PAVIORS
- TARMACADAM MANUFACTURERS
- ASPHALTE GROUT MAKERS
- TAR SPRAYERS
- ROAD LINE PAINT SPECIALISTS
- HARD TENNIS COURT and PLAYGROUND CONSTRUCTORS
- VALCOTHERM TILE MANUFACTURERS

VAL DE TRAVERS

The Largest Producers of Asphalt in the World

THE VAL DE TRAVERS ASPHALTE PAVING COMPANY LIMITED

21-22 OLD BAILEY, LONDON, E.C.4. Telephone: City 7001/5. Telegrams: Traversable, Crouchway, London.

ASSOCIATED COMPANIES

- A. C. W. HOBMAN & CO. LTD.
- TARROADS LIMITED
- THE DIAMOND TREAD COMPANY (1938) LIMITED
- THE LONDON ASPHALTE CO. LTD.
- SICILIAN ROCK ASPHALTE CO. LTD.
- UNITED LIMMER & VORWHOLE ROCK ASPHALTE CO. LTD.
- THOS. FALDO & COMPANY (1929) LTD.
- W. G. WALKER (GLASGOW) LTD.

BRANCHES

BIRMINGHAM • CANTERBURY • EXETER • ELY • GLASGOW • LINCOLN • LIVERPOOL • MANCHESTER • NEWCASTLE-ON-TYNE



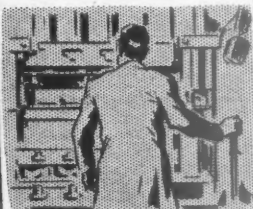
FIRST THINGS

What is the article required? Which plastics will give it the best style? What must be the colour, finish and degree of lightness? Then there are the dimensions, limits, metal parts to be moulded in, lettering, packaging, weekly quantities required—all questions which must be discussed and settled before action is possible.



DESIGNING

Here is a real job of work. First the preparation of a fully dimensioned component drawing and material specification. Then moulding tool drawings for the tool-maker, anything from 12 to 20 sheets may be required. The moulds must be accurate, to ensure close limits in the mouldings; hard, to withstand pressure and resist abrasion; polished, to provide the high finish of the moulded article.



MOULDING

Thermosetting materials are put into the mould cavities in the form of powder or compressed pellets. When the tool is closed in the press, the heat and pressure cause the material to become "plastic" and flow. Then the material undergoes a chemical change and takes up the final form of the moulding.

U E L

Present PLASTICS News Reel

No. 8

A COMPLETE SERVICE ★

In our News Reel No. 7 we touched upon the sources in Nature from which plastics materials are derived. Of these materials there is a wide range, and if we add to them rubber and the synthetic rubbers, there is a choice of almost unlimited possibilities.

If you are considering plastics for a new product, you will need guidance in choosing the best materials. You will expect good design—attractive form, colour, texture and good engineering.

Our technical service provides the expert advice of designers, engineers and chemists. Our production facilities include presses from 12 tons to 400 tons, extruders, calenders and all the accessories needed to make fine plastic products.

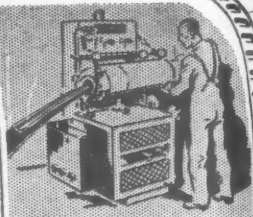
This edition of our News Reel aims at giving a brief glimpse of the principal activities involved.

★ *Manufacture of Plastic Products including Rubber and Synthetic Rubbers.*

LORIVAL PLASTICS

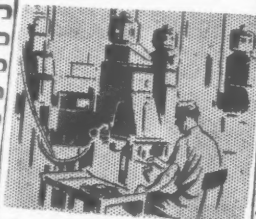
UNITED EBONITE & LORIVAL LTD.
LITTLE LEVER, NEAR BOLTON

Telephone: FARNWORTH 676 (four lines)
Telegrams: EBONITE, LITTLE LEVER



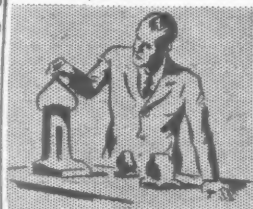
EXTRUSION

This method of production enables a large number of shapes of uniform section such as rod, tube, strip and angle pieces to be produced economically. Amongst the materials which may be extruded are soft rubber, ebonite and synthetic rubbers. Polyvinyl chloride, in brilliant colours or pastel shades, is an especially suitable material for this process. It can be supplied rigid or in varying degrees of flexibility.



FINISHING

After the article has been moulded some finishing operations may be necessary. These may include drilling, lettering, fitting metal parts and assembly to bring the component to its final specification. Often metal parts are moulded integrally in the article. All are operations which require the greatest care and most skilful workmanship.



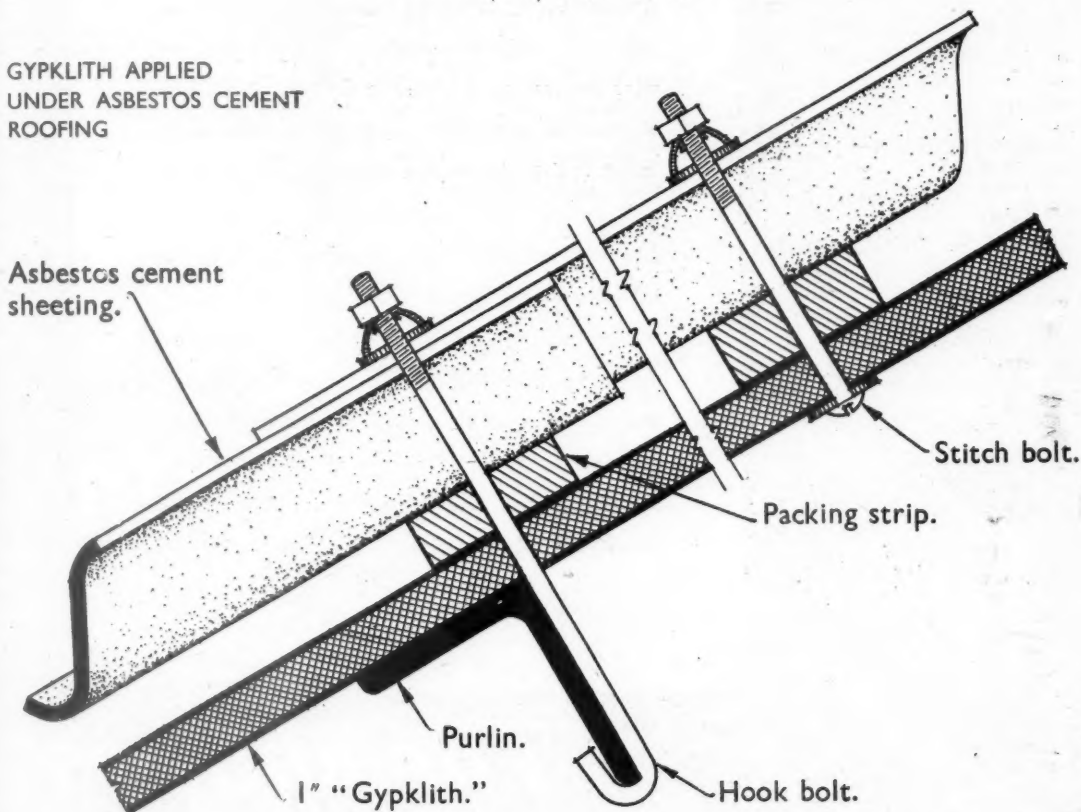
INSPECTION

At different stages of manufacture testing and inspection take place. This is to ensure that the correct quality of materials and manufacture, the accuracy of dimensions and other features are maintained. Collaboration between customer's inspection organisation and our own ensures satisfaction.

"When a temperature difference exists between the two sides of a roof or wall, every square foot that remains uninsulated is wasting heat and therefore fuel."

Extract from Bulletin No. 12 issued by the Ministry of Fuel and Power.

**GYPKLITH APPLIED
UNDER ASBESTOS CEMENT
ROOFING**



Heat losses through inadequate insulation should not be tolerated in a country in which the efficient use of every available ton of fuel is vital to economic recovery—particularly since the provision of efficient insulation is such a simple and inexpensive matter. Comparative thermal transmittance figures published in Bulletin No. 12 issued by the Ministry of Fuel and Power indicate that the use of 1 inch GYPKLITH as permanent shuttering to 4 inch concrete gives a fuel saving

of 55% for roofs and 53% for walls. The suitability of GYPKLITH for the insulating of modern buildings is indicated by the statement in the same Bulletin, under the heading "Wood Wool Cement Slabs," that "this material is particularly suited for use as permanent shuttering to concrete and may be used when the fire risk would render the more combustible materials unsuitable."



Gypklith

WOOD WOOL BUILDING SLABS

GYPKLITH wood wool building slabs consist of petrified wood fibre compressed and bound with cement. Are light in weight, structurally strong, and highly resistant to fire, dry rot, and vermin infestation. Can be chased and cut with wood-working tools. Rough open texture of surface provides excellent key for plaster or cement. Thermal conductivity is 0.57 B.Th.U./sq. ft./hr./°F./in. Full technical information on request.

GYPROC PRODUCTS LIMITED

Head Office: Westfield, Upper Singlewell Road, Gravesend, Kent. Tel: Gravesend 4251-4 'Grams: Gyproc, Gravesend
Glasgow Office: Gyproc Wharf, Shieldhall, Glasgow, S.W.1. Telephone: Govan 614. Telegrams: Gyproc, Glasgow
London Office: 21 St. James's Square, London, S.W.1. Telephone: Whitehall 8021

Makers also of Gyproc Plaster Board, Gypstele Partitions and Ceilings, Plaxstele and Acoustele Ceilings



EXTRUSIONS

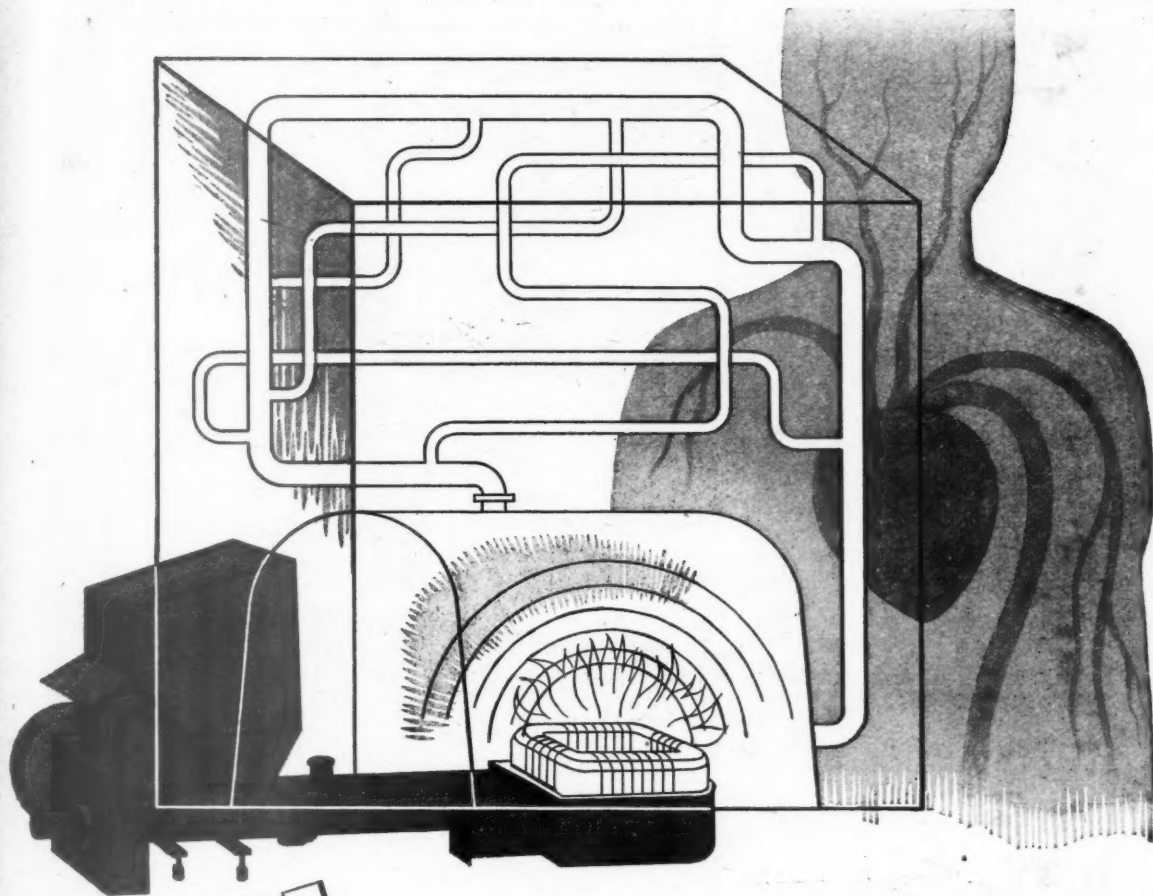
Aluminium alloy extrusions are a most important addition to the traditional materials of construction. No other process can produce the intricate shapes that eliminate the complication and weight of riveted rolled sections. Extrusions can be made for stressed shapes such as spar booms for aircraft, or for non-stressed shapes like casement sections. They come in long lengths for hand-rails, or can be cut into slices for door furniture. We shouldn't even think it fanciful—or impracticable—if complicated hollow sections were specified. We can produce these, too! The uses for extrusions are legion, and many are as yet unsuspected. If you have a construction problem drop a line to our Development Department. Maybe you will find the answer . . . an extruded section.

*The Shapes
for Things
to Come*

BIRMETALS

BIRMETALS LIMITED BIRMINGHAM-3

BIGWOOD UNICALOR COAL STOKER



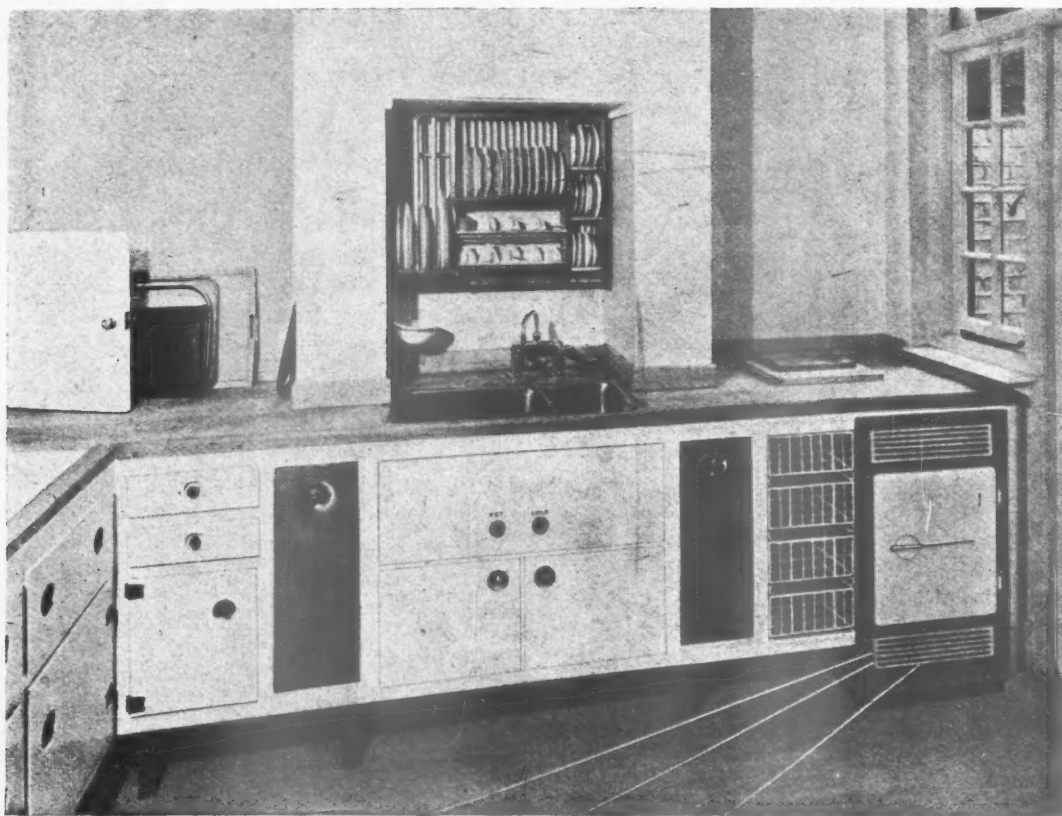
THE HEART OF THE HEATING SYSTEM

The heart of the heating system is the stoker. Efficiency there affects the "tone" of the whole building. The Bigwood "Unicalor" Coal Stoker gives trouble-free dependable firing, automatically controlled by thermostatic devices to keep a constant temperature regardless of atmospheric conditions.

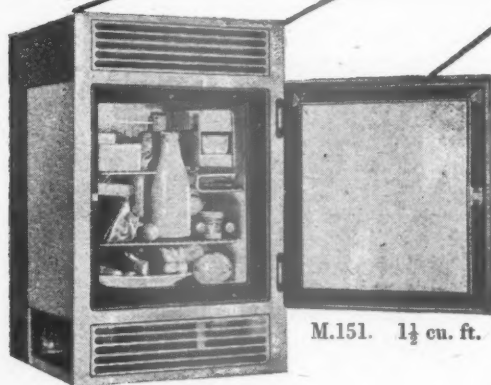
The method of feeding the fuel and the air supply gives maximum efficiency and heat-transfer to the boiler, labour costs are practically non-existent, and maintenance charges are negligible.

To keep a heating system in "good heart," specify a "Unicalor" Stoker.

JOSHUA BIGWOOD & SON LIMITED · WOLVERHAMPTON



Bucks' Rural Demonstration Economy Post War Kitchen in conjunction with "Good Housekeeping."



M.151. 1½ cu. ft.

Kitchen equipment must satisfy the housewife's needs and, by its adaptability, meet the requirements of the kitchen planners. That is why Electrolux 'built-in' refrigerators are so popular. The M.151 shown fulfils the needs of the average small family, and like all Electrolux 'built-in' cabinets, fits in to any kitchen design. Moreover, it is noiseless, has no moving parts, and does not interfere with wireless reception.

Electrolux 'Built-in' Refrigerators operate equally well by Gas or Electricity. Free Standing Models operate by Gas, Electricity or Paraffin.

ELECTROLUX LIMITED

Works: LUTON, BEDFORDSHIRE

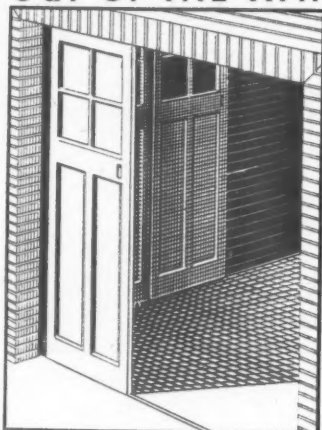
'Phone: LUTON 4020



THE VALUE OF SLIDING



OUT OF THE WAY



In these days, to slide on a banana skin can be considered as something approaching a luxury. But that, of course, is only one way of sliding—and not very pleasant. The real pleasure of sliding comes from a sense of travelling swiftly and smoothly between one place and another with rare economy of time and effort. Now apply this perfect principle to doors and what do we find? Without a doubt we should be led to consider a door fitted with King Sliding Door Gear—and it is worth considering. A door that's hinged is a door that needs a lot of room; but with a sliding door it's different. If it's fitted with King Door Gear a touch of the hand takes it out of the way, gliding easily and quickly to nestle snugly against the wall, completely and unobtrusively out of the way. Doors that slide mean doorways that allow free passage all around them.

KING SLIDING DOOR GEAR

For ante rooms, cloak rooms, garages, lifts, etc., and places where space is limited or traffic congestion is likely to occur, sliding doors are the perfect application.

WRITE FOR ILLUSTRATED BOOKLET

GEO. W. KING LTD. HITCHIN. HERTS

TELEPHONE HITCHIN 960 (10 LINES)

Information on REINFORCED CONCRETE

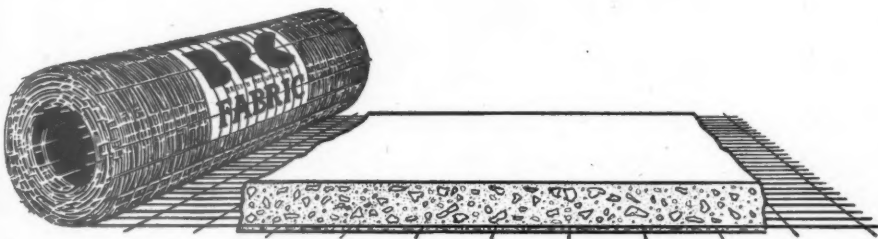
No. 7 CUTTING & LAYING FABRIC

When BRC Fabric has to be cut on the site this work can be done easily with double action shears. The sizes of all the sheets are shown on the detail working drawings. Before commencing to cut a roll of fabric the free end should be secured by weighting or spiking. When unrolling has been carried out sufficiently far for cutting to be commenced, a heavy plank wedged against the unrolled portion will prevent it from re-rolling, and another board placed under the fabric will lift it to facilitate cutting.

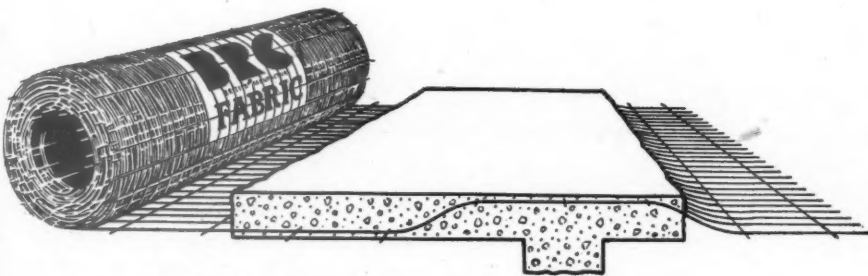
The fabric must be laid with the main wires in the direction shown on the working drawings. The fabric reinforcement in suspended floors should be placed with half an inch of cover above the underside of the slab and should be waved up to give half an inch of cover below the top of the slab over supports. It is recommended that a fabric bender should be used for forming the wave. In the case of ground floor reinforcement the cover, which is usually one inch, can easily be given by placing a pipe under the fabric, drawing it along as concreting proceeds.

Issued by **THE BRITISH REINFORCED CONCRETE ENGINEERING CO. LTD.** STAFFORD
LONDON, BIRMINGHAM, BRISTOL, LEEDS, LEICESTER, MANCHESTER, NEWCASTLE

CONCRETE CONSTRUCTION

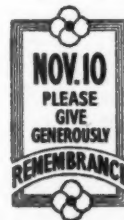


Ground Floors



Suspended Floors & Roofs

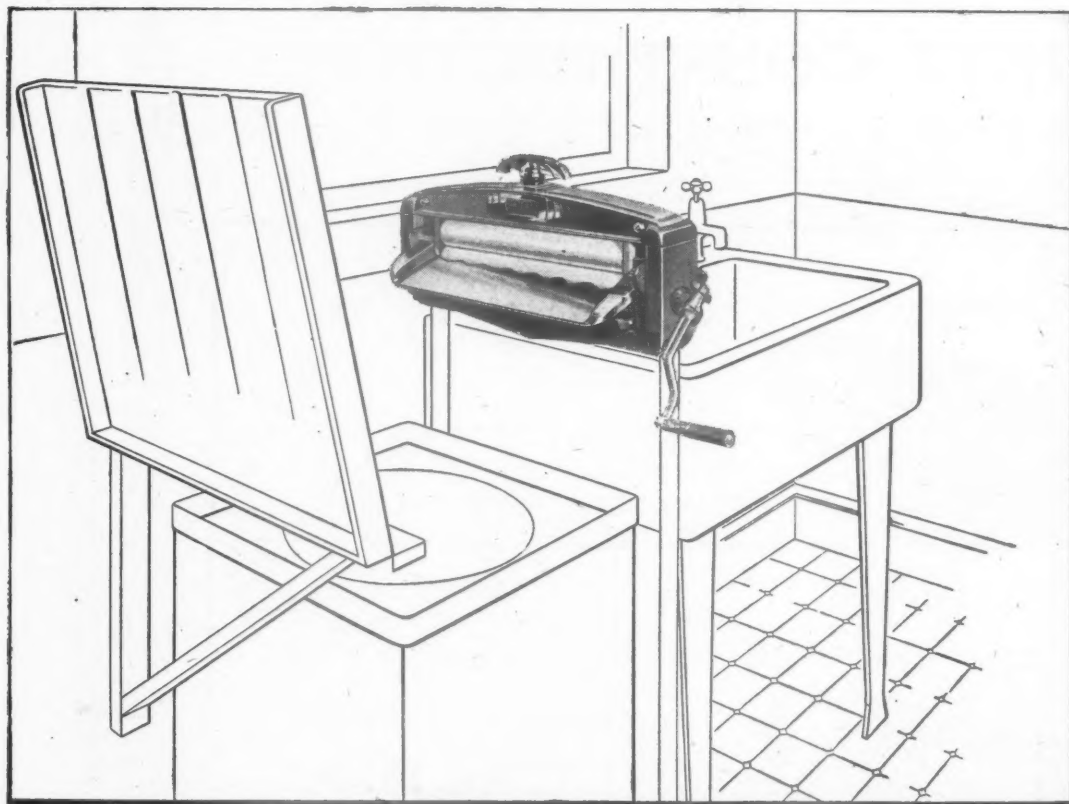
BRC



STAFFORD Specialists in Reinforced Concrete Design & Suppliers of Reinforcement
NEWCASTLE, SHEFFIELD, CARDIFF, GLASGOW, DUBLIN, BELFAST



Fairy Tales brought bang up-to-date



"WHY GRANDMOTHER — what a bent back you have!"

"Because for years I stooped over a sink much too low for me, my dear."

"Why Grandmother — what a bad skin you've got!"

"That comes from a lifetime's toiling away on washdays, with a huge fire in the hottest weather to boil up my copper, my dear."

"Why Grandmother — what rough, red hands you have!"

"If you used the huge, heavy mangle I had to use, you'd have rough red hands, too, my dear."

But no. Grand-daughter is going to have no ugly hands, no bent shoulders, no ruined complexion. For she will run her new home in a new world. A world which plans kitchens for its housewives as it plans the most up-to-date factory for its workers.

A recent survey which has given careful thought to this question lays down the minimum requirements of a home-keeping woman. A sink of the worked-out correct height and depth, a removable or hinged draining board, a wash-boiler

adjoining the sink and under the draining board. It lays stress, too, on the importance of always making space for a rubber-roller wringer, which ensures a perfect wash, with no aching backs or sore cramped hands. That means, of course, the finest of Wringers — the Acme.

A plan for a post-war home which did not include as its most important part kitchen-planning would be a poor plan. And kitchen-planning which did not give careful attention to the home laundry, would not be kitchen-planning at all.

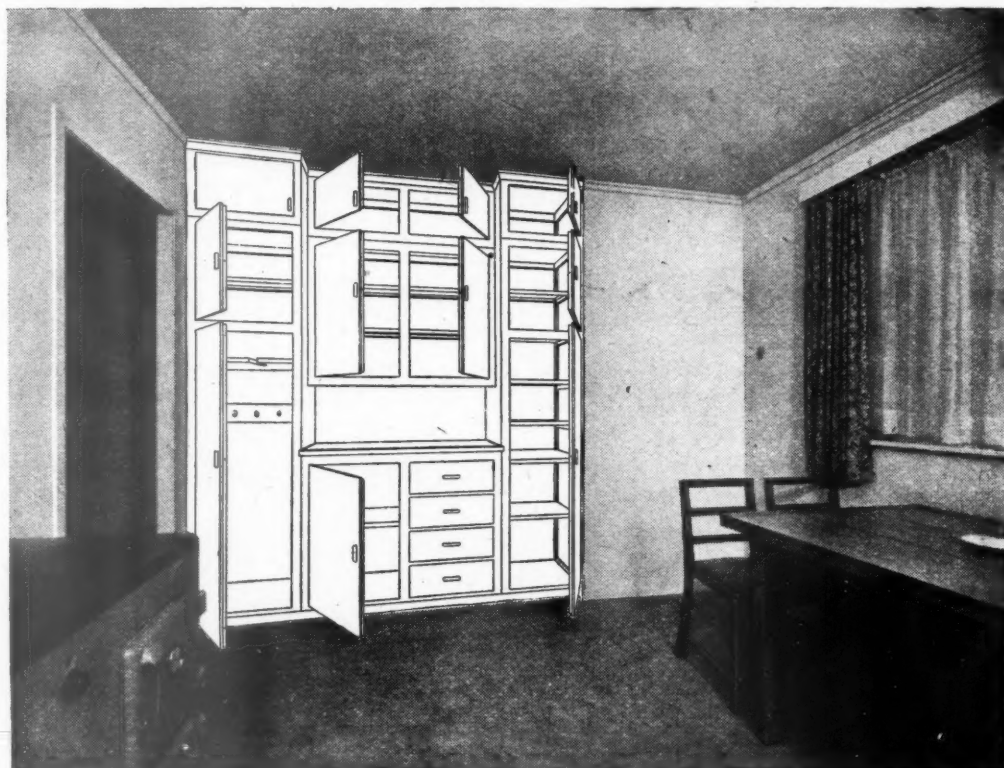
Home laundry conditions are laid stress on in surveys accepted and supported by Ministries and local authorities. One primary condition is that space should always be provided for a rubber-roller wringer. The wringer the housewife herself knows from experience is the best, is the Acme. That is the cleanser-wringer she will demand as part of the sink-unit in her future kitchen.

If your work brings you any problem in connection with the fixing of wringers, please get in touch with us for advice or assistance. We will have much pleasure in helping you.

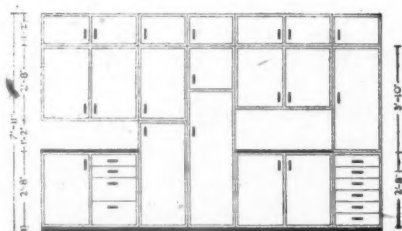
ACME

EJMA
CERTIFICATION TRADE MARK

STANDARD KITCHEN UNITS



Each single unit is 1' 9" wide
Each double unit is 3' 6" wide
Each wall unit is 1' 0" deep
Each floor unit is 1' 7" deep



The EJMA range of kitchen units is designed to give a work top 3 ft. high, 1 ft. 9 ins. deep, wall cupboards 13 or 18 inches above this top, with dead storage space above to make up the remaining ceiling height. Large or small, new or old, any kitchen can be equipped with an efficient and unified arrangement.

**THE
ENGLISH JOINERY MANUFACTURERS ASSOCIATION**

SACKVILLE HOUSE, 40 PICCADILLY, W.1 REGENT 4448 [INCORPORATED]

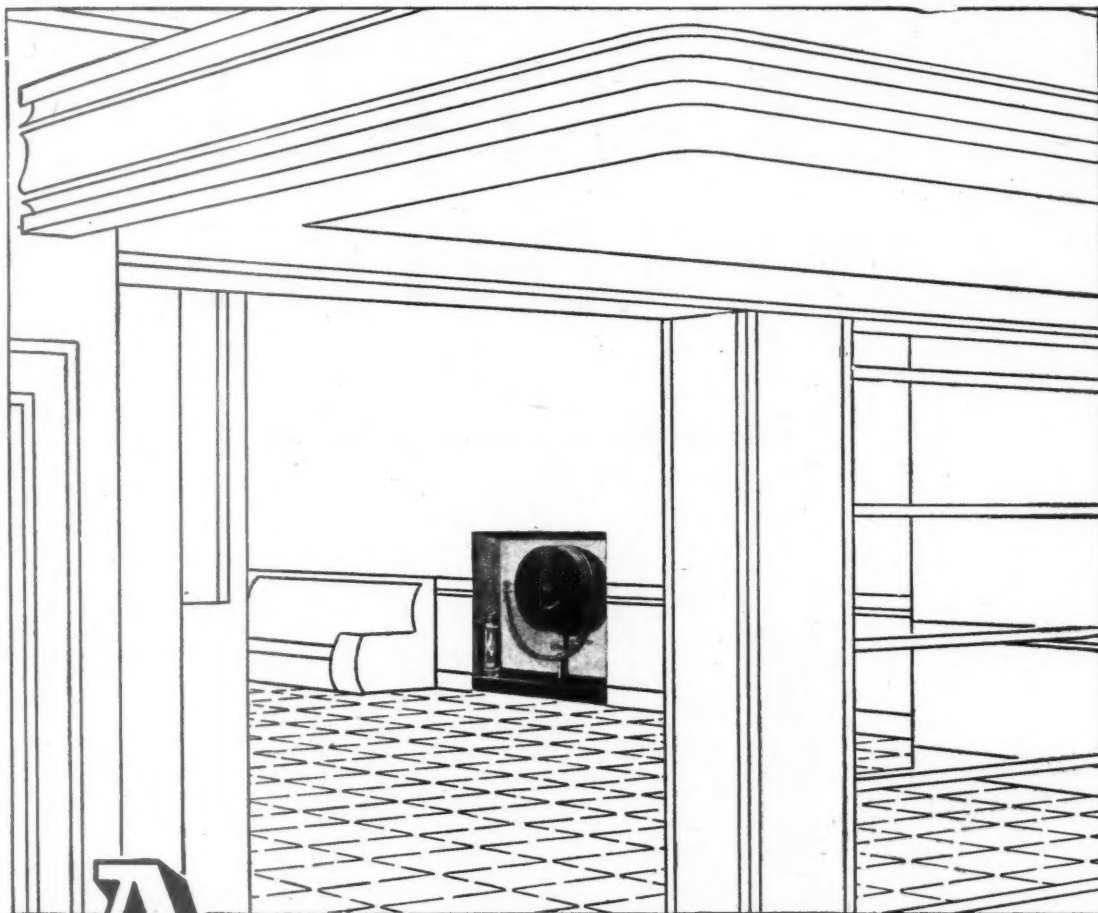
Stonham & Kirk



TRINIDAD LAKE ASPHALT
IS USUALLY REGARDED AS THE
STANDARD ASPHALTIC CEMENT
FOR ALL FORMS OF ASPHALT
IN ROAD AND BUILDING CON-
STRUCTION BECAUSE OF ITS
UNVARYING CONSISTENCY; it is
STANDARDISED BY NATURE

THE LIMMER & TRINIDAD
LAKE ASPHALT CO. LTD.

19, GROSVENOR PLACE, LONDON, S.W.1
SLOANE 7123



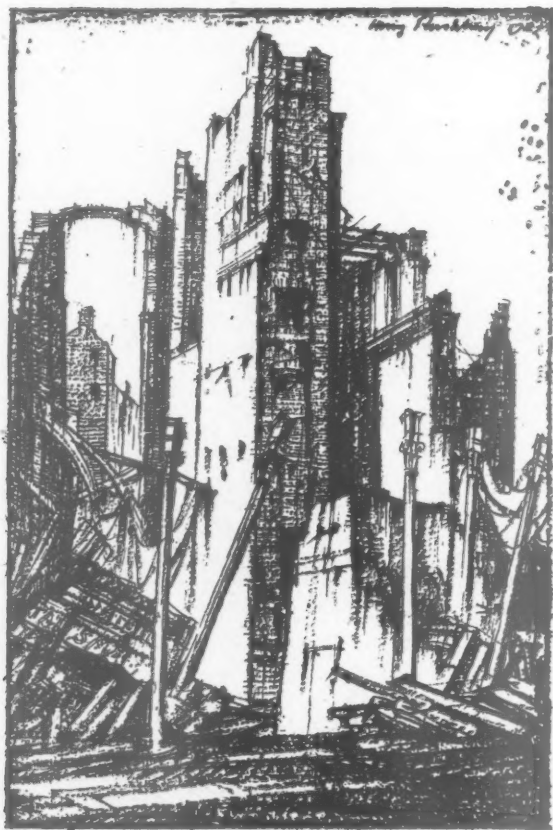
Architects blackprint [*Information Sheet No 951*] on application

The Pyrene "Everyway" Hose Reel and the Conquest Soda Acid Fire Extinguisher—each is pre-eminent in its class—can be accommodated in a recess 14in. deep. Full dimensional details are given in Information Sheet 951 (105 Revised). New building calls for modern equipment and copies of the revised Information Sheet will therefore gladly be sent on request.

THE PYRENE COMPANY LIMITED
GREAT WEST ROAD, BRENTFORD, MIDDLESEX
Telephone: EALing 3444.



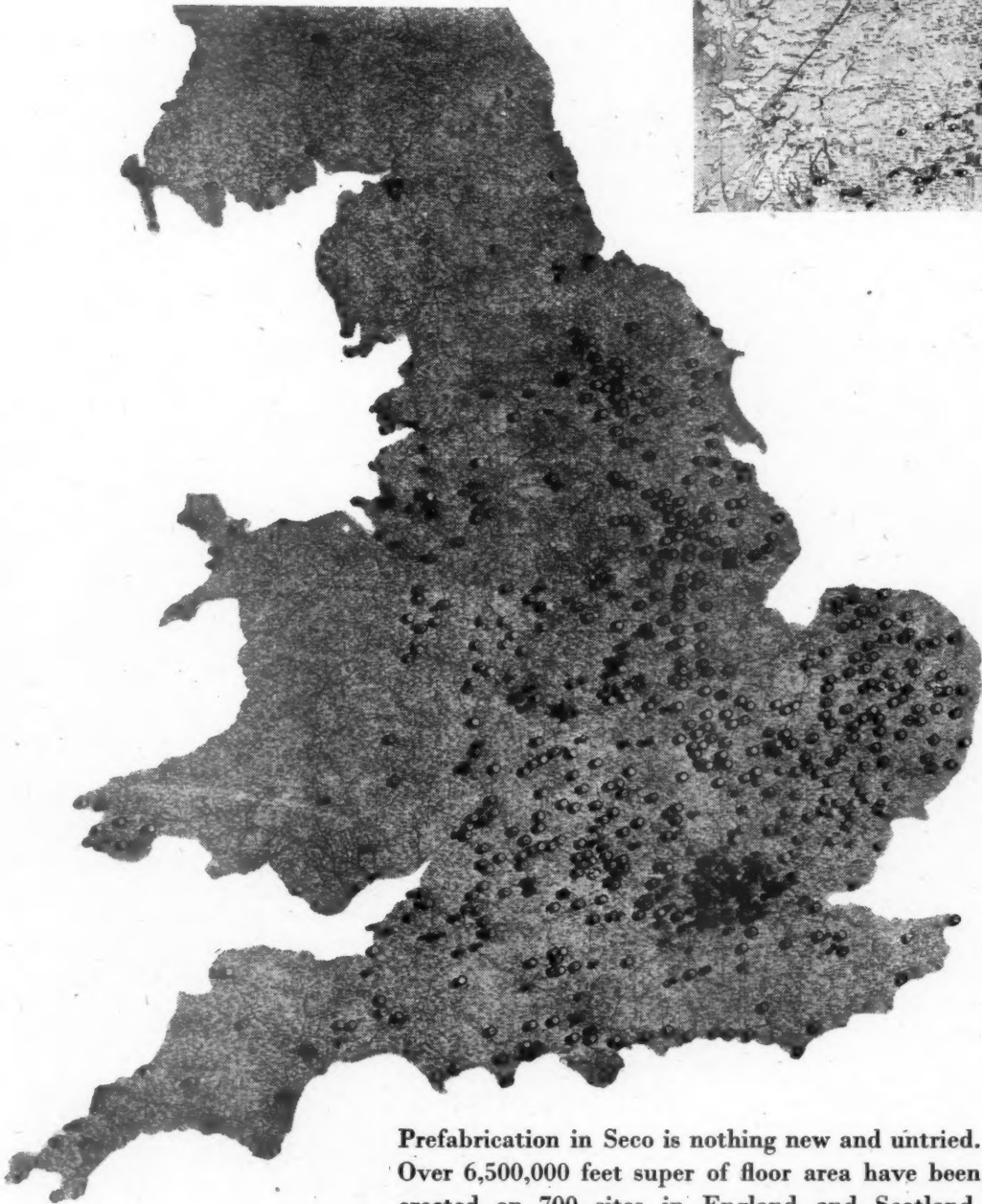
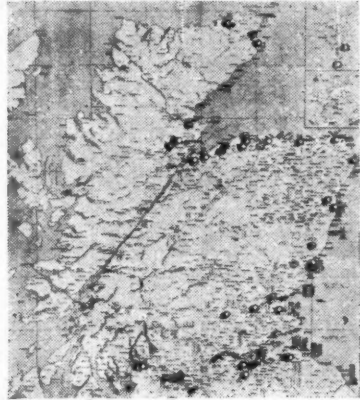
CRITTALL WINDOWS



WHEN YOU
REBUILD

THE CRITTALL MANUFACTURING CO. LTD., 210 HIGH HOLBORN, W.C.1.

SECO have EXPERIENCE



Prefabrication in Seco is nothing new and untried. Over 6,500,000 feet super of floor area have been erected on 700 sites in England and Scotland. Some of these sites have as many as 250 buildings of different types and sizes.

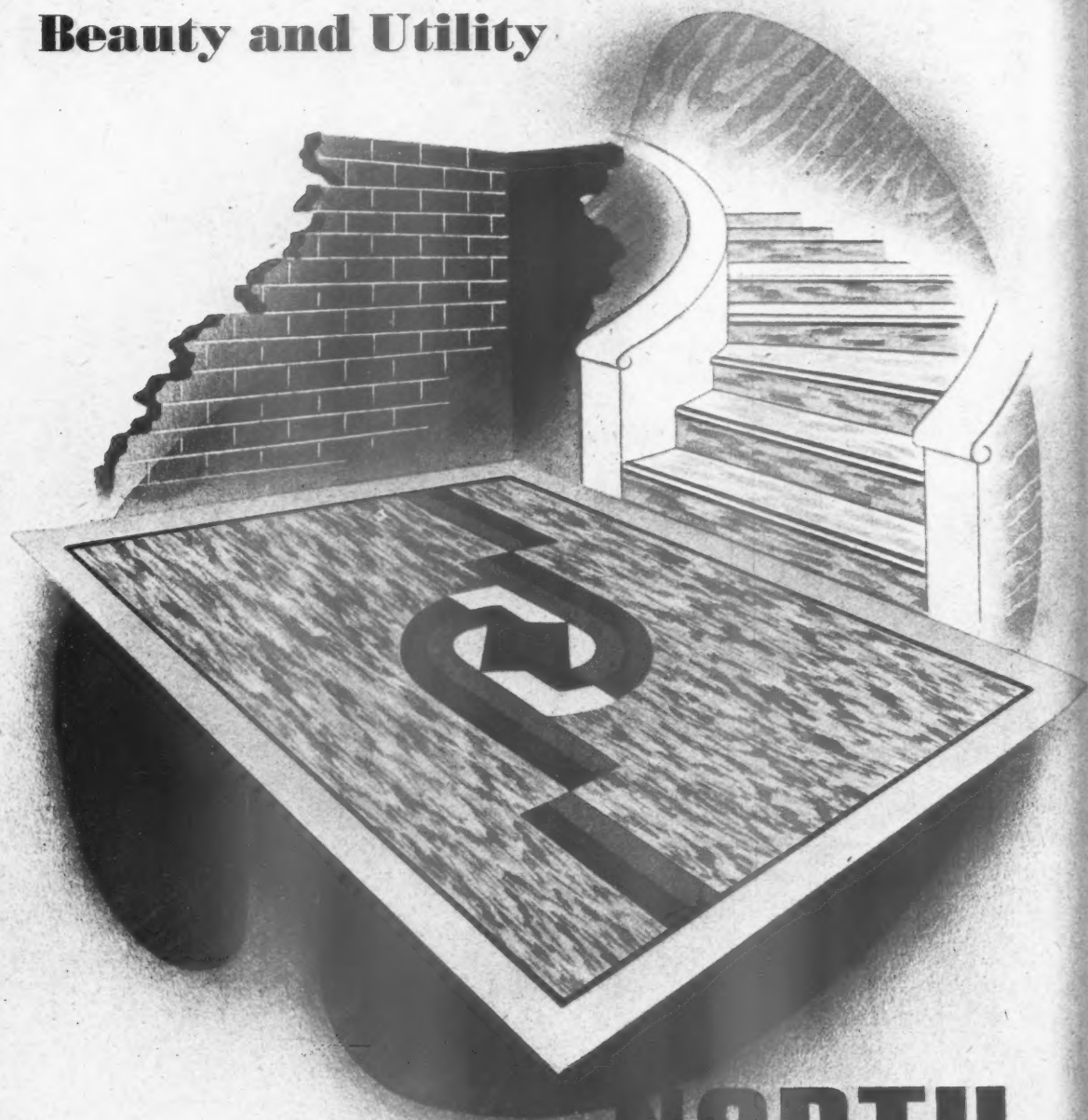
"Seco" and "Uni-Seco" are the Registered Trade Marks.

UNI-SECO STRUCTURES LIMITED

25, Upper Brook Street, Park Lane, London, S.W.1.

Mayfair 908c

Beauty and Utility



When restrictions are removed from the manufacture and distribution of rubber flooring, the decorative and utilitarian qualities of this versatile covering material will suggest many interesting applications in the reconstruction of old or the planning of new buildings.

Pending relaxation of control, Architects are invited to write for particulars of the many forms in which North British Rubber Flooring has been and will be supplied.

NORTH BRITISH RUBBER FLOORING

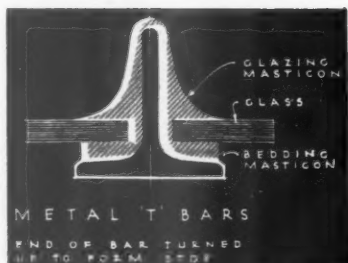
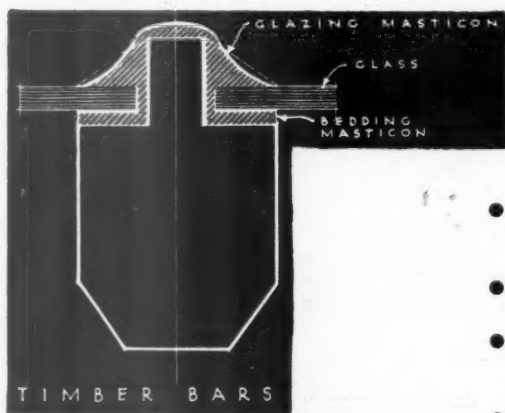
THE NORTH BRITISH RUBBER COMPANY LIMITED · EDINBURGH AND LONDON

THE MASTICON PROCESS FOR MODERN FACTORY GLAZING

by
INDUSTRIAL ENGINEERING LTD.

THE MASTICON PROCESS is a service for the glazing of roofs of Industrial premises. It combines the supply and fixing of special type metal T. bars, the glass being cushioned on

resilient Bedding MASTICON. The bars are sealed against the weather by the application of plastic GLAZING MASTICON over the exposed cap of each bar.



ADVANTAGES OF GLAZING BY THE MASTICON PROCESS

- Ensures permanently sound glazing which will withstand roof movement and vibration.
- Makes glazing joints which remain watertight.
- Protects metal bars against corrosion and timber bars against decay.
- Eliminates painting costs.
- Is unaffected by changes in temperature.

Our technical service is at your disposal to conduct surveys and submit estimates willingly and without obligation.

INDUSTRIAL ENGINEERING LTD.

Head Office: Mellier House, Albemarle Street, London, W.1

Provisional Telephone Number: Regent 1411 (P.B.X. 4 lines)



IT is positively staggering what some folks will put up with—the inconvenience and discomfort they will patiently bear—rather than bestir themselves to look round the corner or to observe how the factory down the street has solved the window problem. We do not for a moment suggest that you are in the same predicament as the gentleman in our funny drawing. But it is just possible you may not have heard of ARENS.

ARENS are the Window Control specialists. Their job is the planning and perfecting of neat, silent, unobtrusive mechanical devices that make window opening and closing the smooth, easy thing it should be, and is in many a modern factory and municipal building. You may depend upon it that Arens can show you a way to put your unruly windows under a nice uniform discipline, that answers to your wishes—instantly!

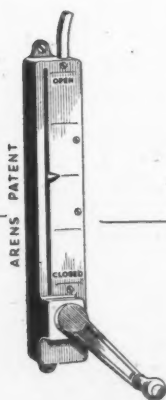
ARENS

REMOTE CONTROLS

ARENS CONTROLS LTD., TUNSTALL ROAD, EAST CROYDON, SURREY

Telephones: ADDISCOMBE 3051/4
831/3 WARWICK ROAD, BIRMINGHAM, 11

Telegrams: UNICONTROL, "Phone, London
Telephone: ACOCKS GREEN 0786



ARENS COMPACT GEAR BOX requires only one third of the space of a standard Worm Gear operator. Worm and sliding members are totally enclosed. Has a pleasant streamlined appearance. Four turns provide one inch of movement on the control. An Indicator which can be engraved to suit customer is incorporated.



big - with big advantages . . .
built in, by **PRESTCOLD**

This built-in Prestcold refrigerator, as shown, installed in the kitchen designed by the Wessex Electricity Co., has the following important advantages :

Storage capacity of approximately 4½ cubic feet, which will hold all the perishable foodstuffs for a family of four.

Larder space rendered unnecessary. Dry goods and non-perishable foodstuffs would be kept in kitchen cupboards.

Waist-high door, allowing access to interior without stooping. Height adaptable by varying position of supporting frames.

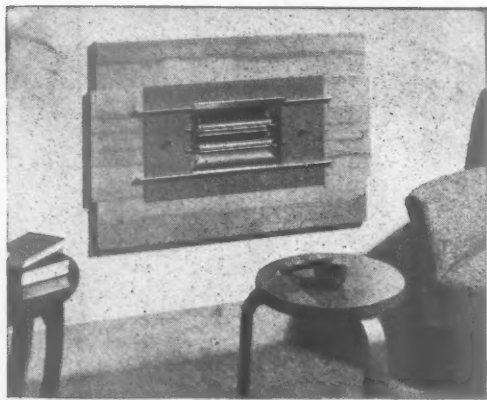
It can be built into kitchen fittings with cupboard space above and below it.

Design provides for adequate ventilation of mechanism without the necessity for special air-bricks or ducting.

Ice making and 'cold cooking' facilities.

Most important too, is the fact that this Prestcold refrigerator provides the food storage temperatures necessary for the proper safeguarding of perishable foods — for instance 35°F for fresh fish and poultry; 40°F for milk — and even the lower temperatures needed to store the frozen foods which will be available later on. In addition, it will be most economical in current consumption, using only one unit a day.

PRESTCOLD *Refrigeration*



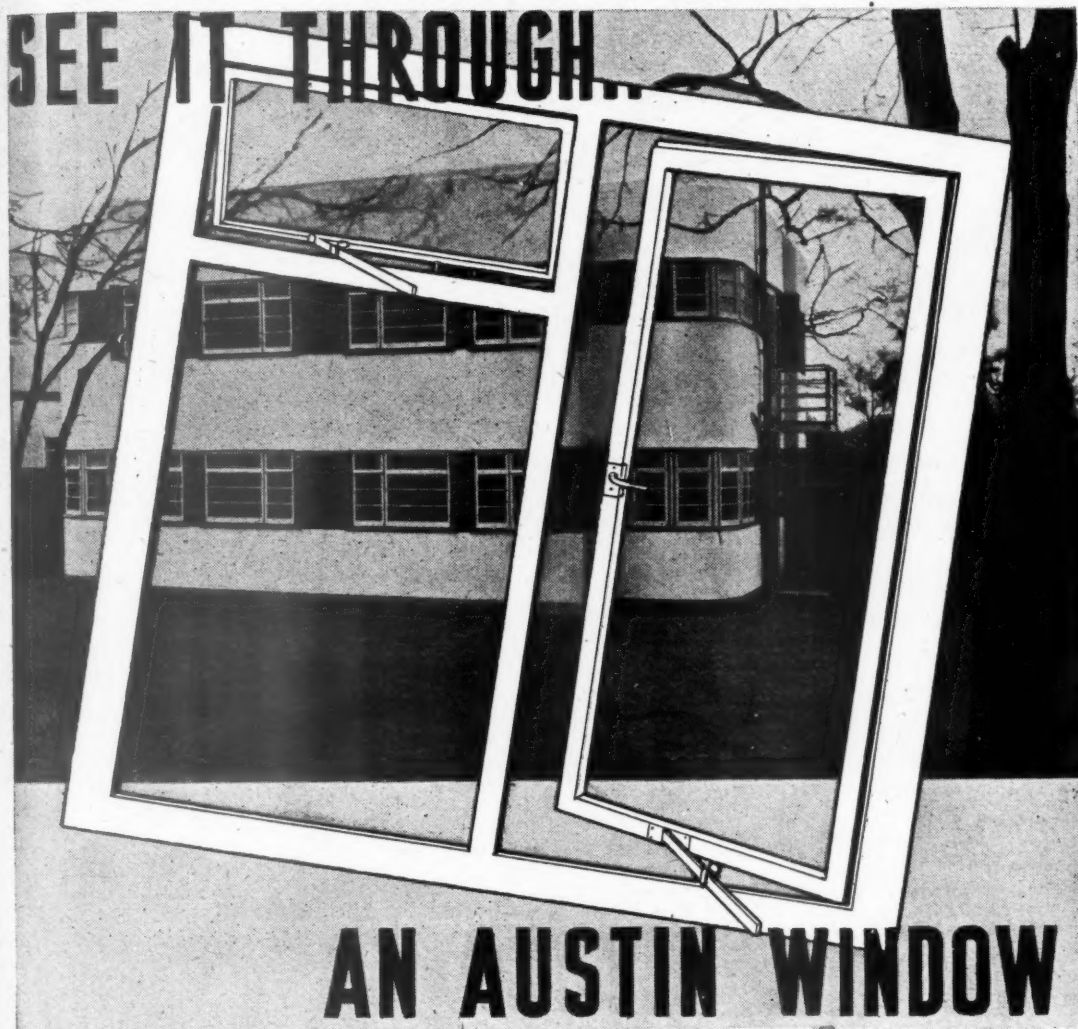
"SOLECTRA" ELECTRIC PANEL RADIATOR

*Design of unusual merit
associated with advanced
technical efficiency will
continue to be characteristic
qualities of the products of
Pratt Colbran when peace-
time manufacture is resumed.*

*Pratt Colbran
Limited*

Ten, Mortimer Street, London, West One

SPECIALISTS IN SOLID FUEL, GAS AND ELECTRICAL HEATING



Good design and skilful seasoning make it possible to use window sections which are slighter than they used to be whilst still retaining the sturdiness for which Austins Windows have always been famous.

Our post war windows are made to the **EJMA** design which is simple to produce, good looking, uses a minimum of timber, and can now be supplied from stock.

AUSTINS
OF EAST HAM

LONDON, E.6.

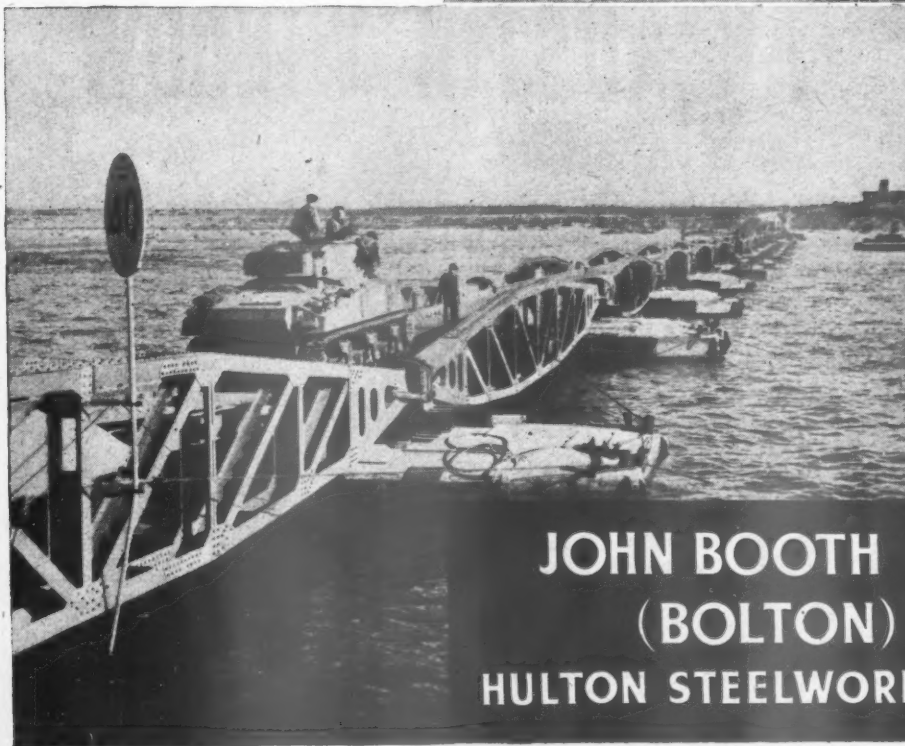
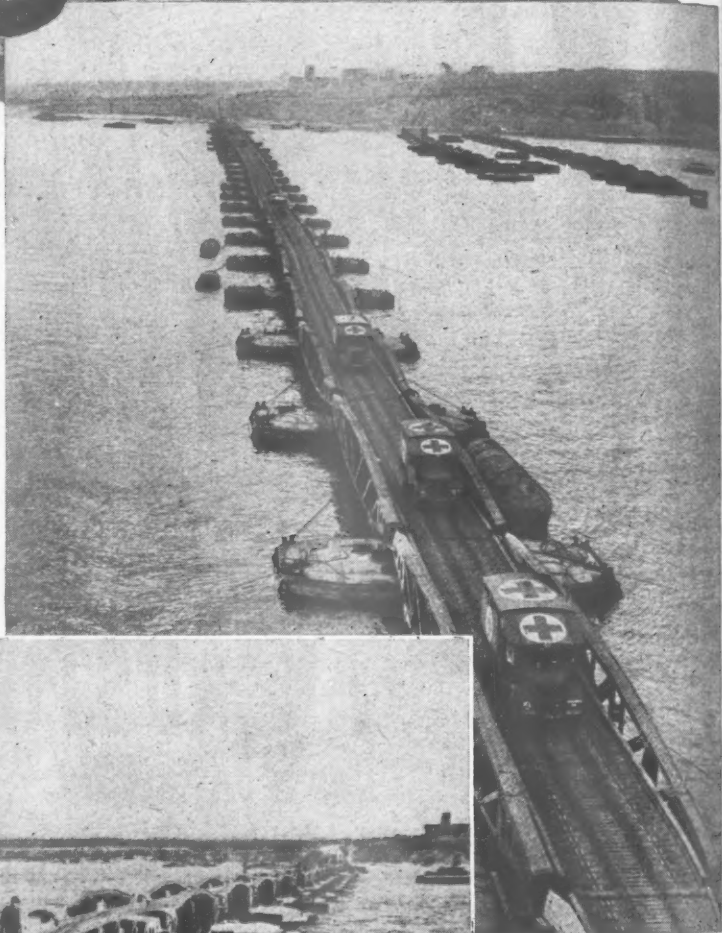
[LIMITED]

GRAngewood 3444



***The answer to the
Germans' "Impossible"***

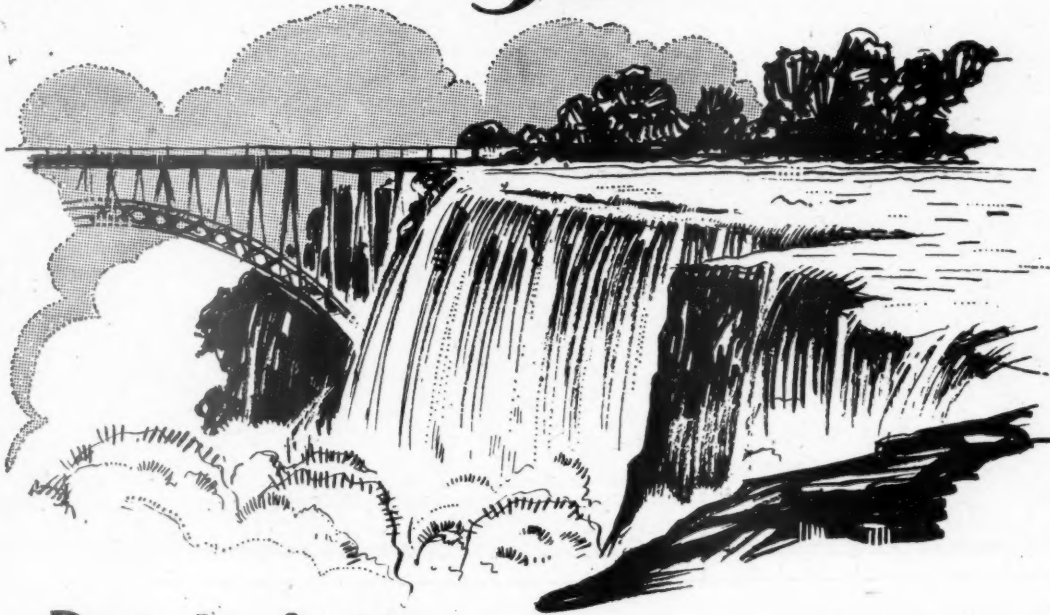
John Booth & Sons (Bolton) Ltd. was one of the parent firms entrusted with the construction of the floating bridges. There were 50 of them each 80ft. span. The unique design was tested by erecting one at Hulton Steelworks and twisting it 15 degrees in its length.



The Ministry congratulated Messrs. John Booth & Sons on the successful performance on time of their share of this remarkable engineering project.

**JOHN BOOTH & SONS
(BOLTON) LTD.
HULTON STEELWORKS, BOLTON**

Niagara Falls



But buildings supported
by **FRANKI** ...
... Don't!

THE FRANKI COMPRESSED PILE CO. LTD

Head Office:

39 VICTORIA STREET, LONDON, S.W.1

Telephone: ABBey 6006/9.

Telegrams: "FRANKIPILE, SOWEST, LONDON."

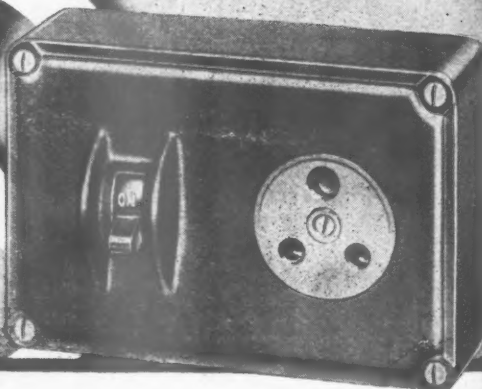

FRANKI PILES

Carry MORE TONS per pile!



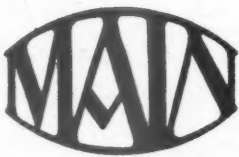
 **Mellowes** "ECLIPSE"
PATENT GLAZING

MELLOWES & CO LTD **SHEFFIELD & LONDON**



M. K. ELECTRIC LTD.
EDMONTON N.18

A robust range of industrial switch sockets with protected handles. Interlocking—Anti-Flash—Open Types. 2, 5, 15 amps. Single or Double Pole. Page 60 of 1939/40 catalogue.



*Large Scale Apparatus
for the Cooking and
Serving of Food.*

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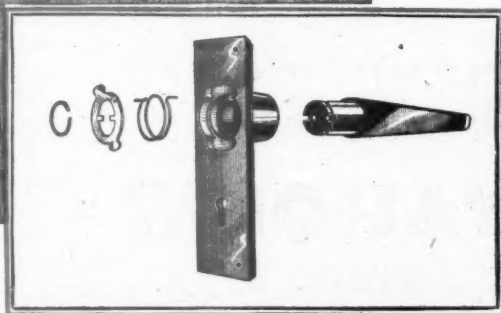
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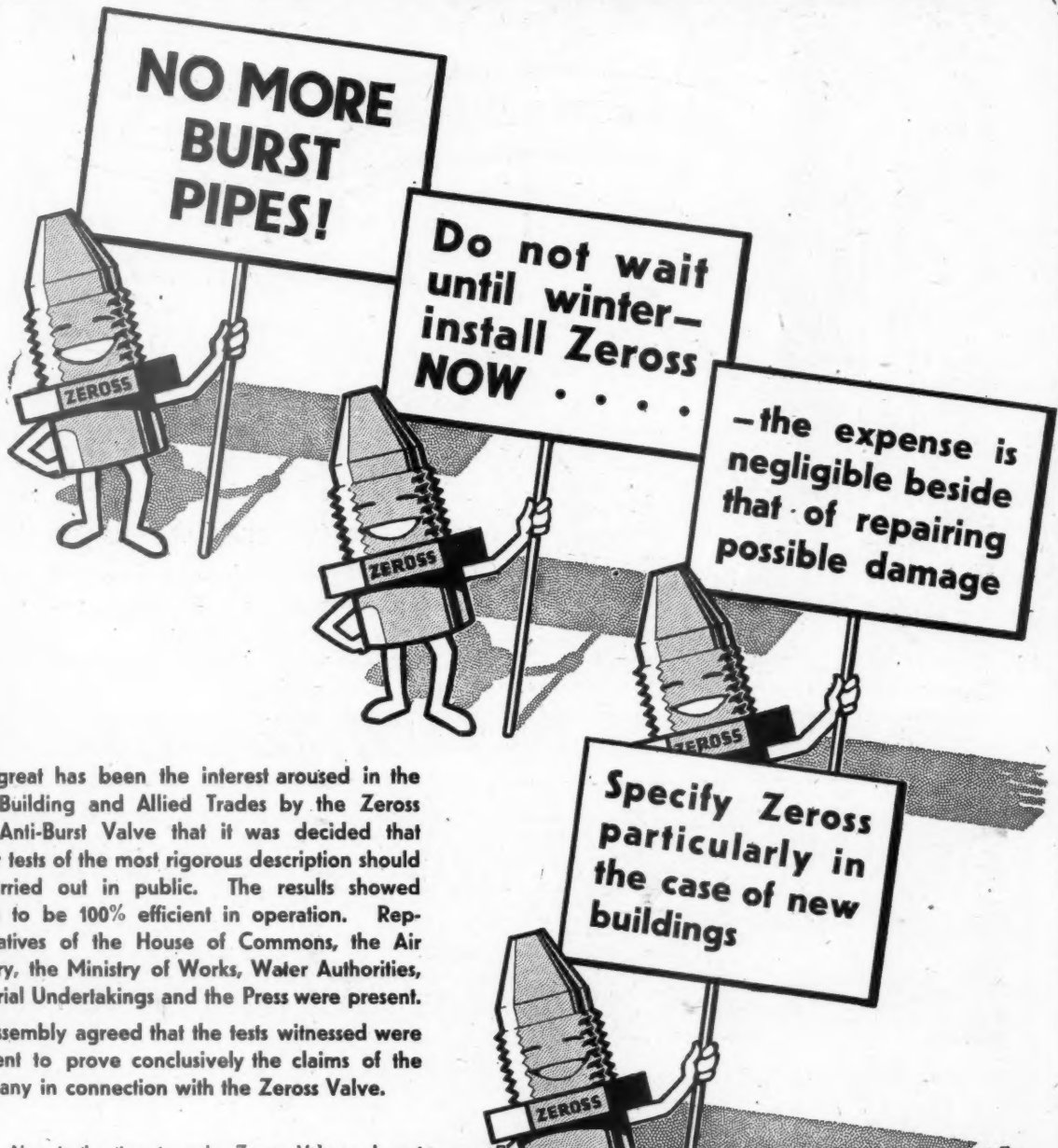
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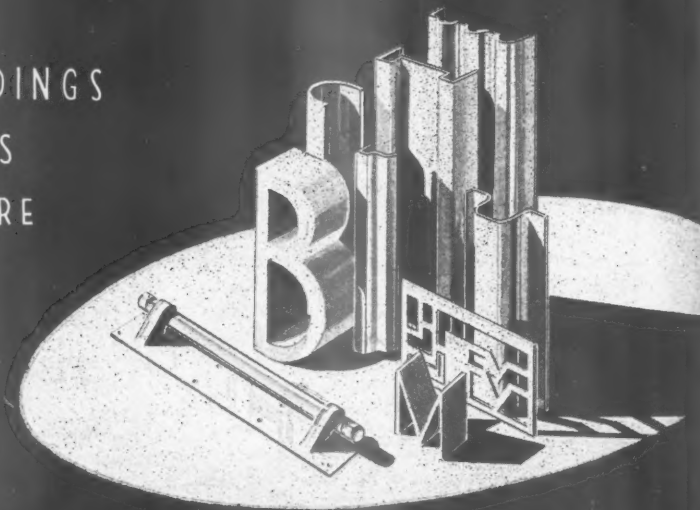
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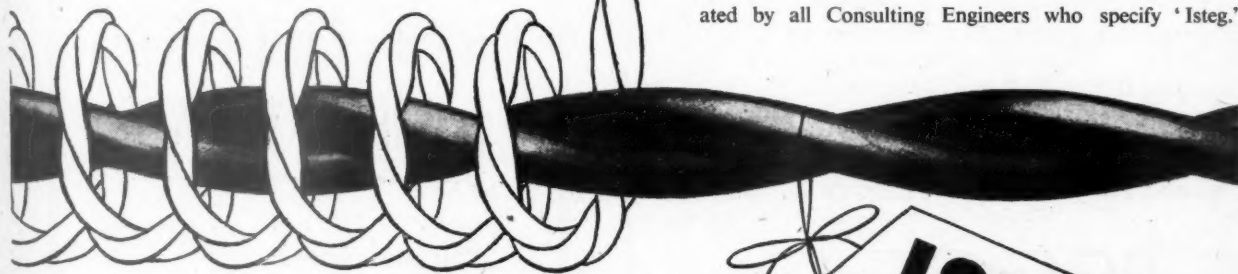
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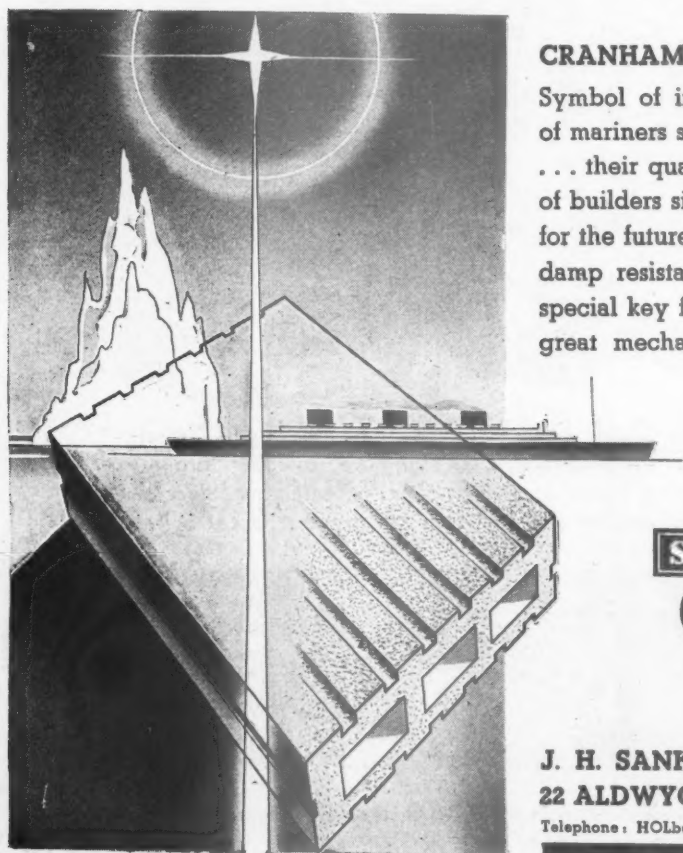


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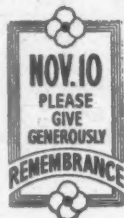
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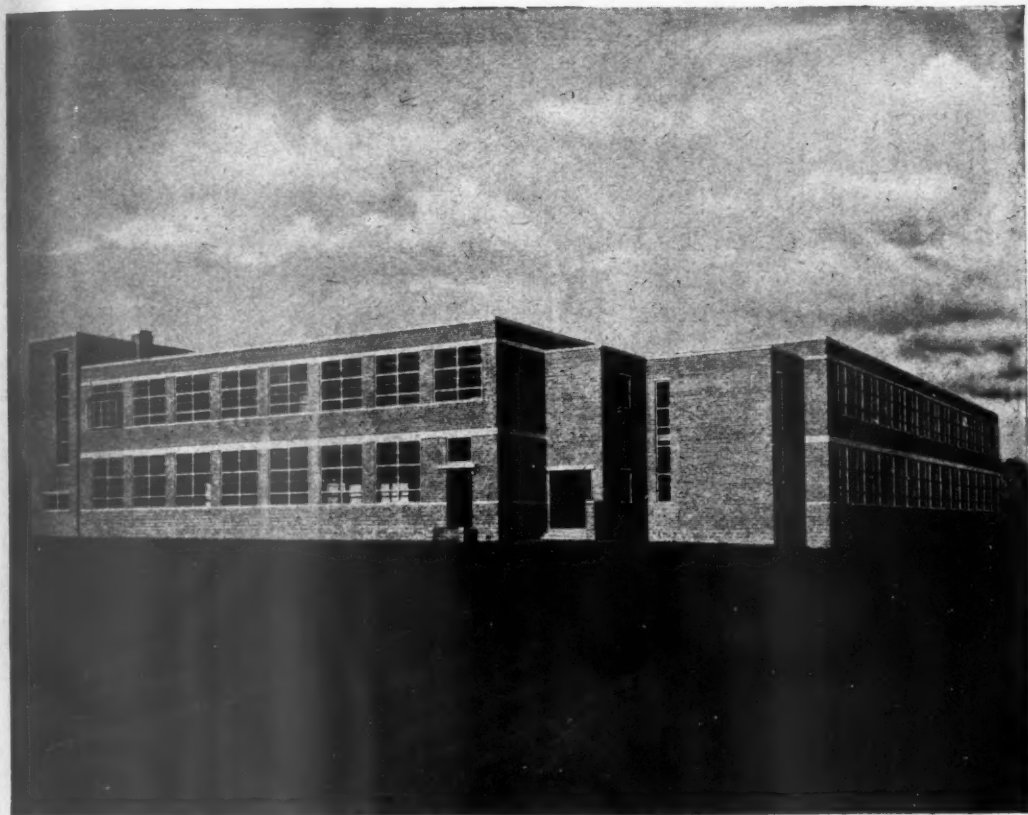
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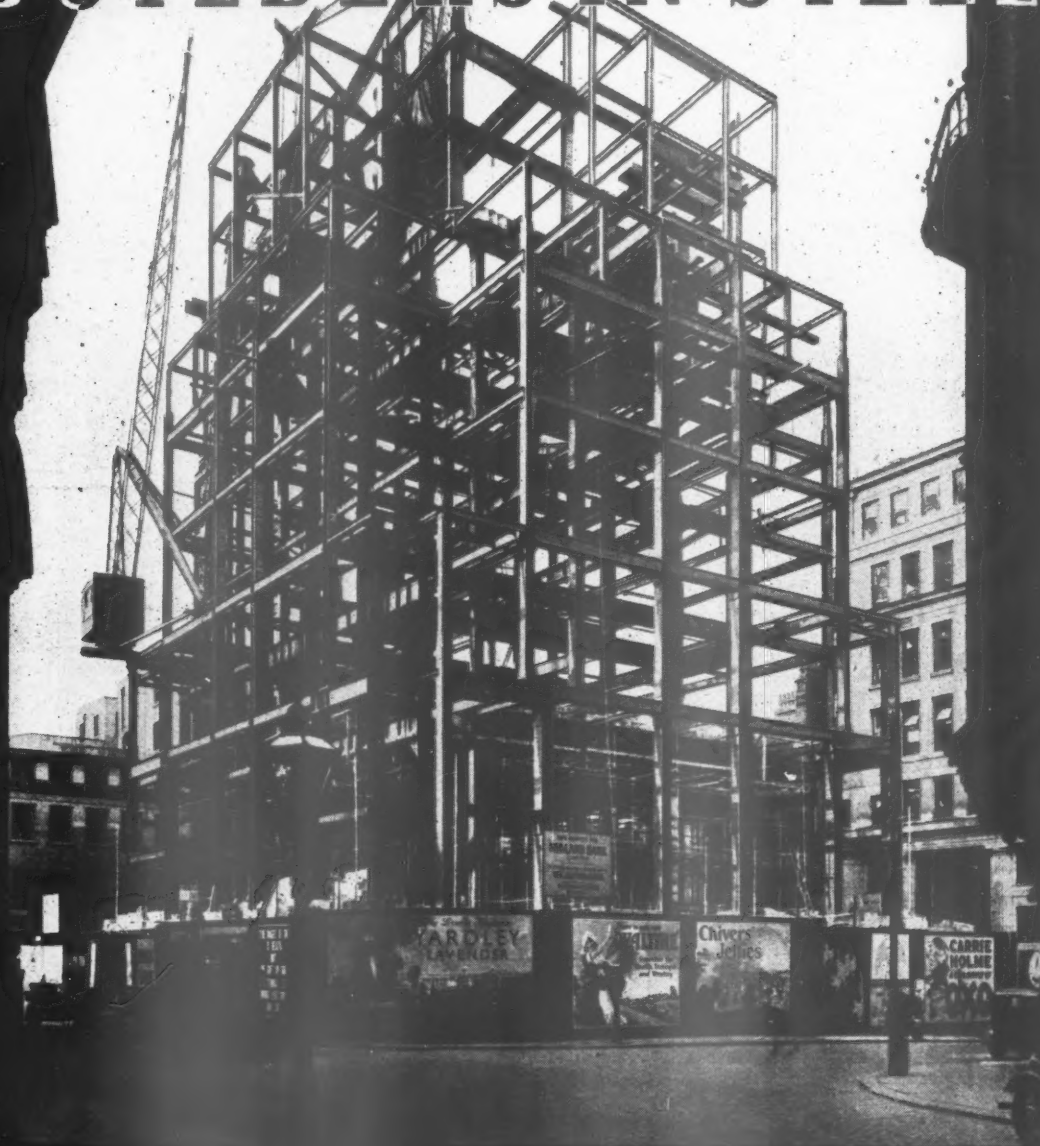
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DIARY FOR NOVEMBER DECEMBER AND JANUARY

Titles of exhibitions, lectures and papers are printed in italics. In the case of papers and lectures the authors' names come first. Sponsors are represented by their initials as given in the glossary of abbreviations on the front cover.

BIRMINGHAM. R. Dore. *Review of the Application and Development of Oxygen Cutting.* At the John Watt Memorial Institute, Great Charles Street, Birmingham. (Sponsor, Institute of Welding, Birmingham Branch.) 6.30 p.m. Nov. 9

LEICESTER. F. J. Samuely. *Steel.* At the College of Art, The Newarke, Leicester. (Sponsor, Leicester and Leicestershire Society of Architects, in association with Leicester School of Architecture.) 6.30 p.m. Nov. 1

P. O. Reece. *Timber and Plywoods.* At the College of Art, The Newarke, Leicester. (Sponsor, Leicester and Leicestershire Society of Architects, in association with Leicester School of Architecture.) 6.30 p.m. Nov. 13

LONDON. Sir Charles Tennyson, Chairman, Central Institute of Art and Design. *The Place of the Artist in Industrial Design.* At the Polytechnic, Regent Street, W.1. (Sponsor, The Polytechnic.) 6.30 p.m. Nov. 21

Conference on Housing. At the London School of Hygiene and Tropical Medicine, Keppel Street, London, W.C.1. First session, 2.30 to 4.45 p.m. Address by the Rt. Hon. Aneurin Bevan, Minister of Health. Discussion opened by Thomas Sharp, President of the Town Planning Institute, and Frederick Gibberd. Subjects for session include neighbourhood and site planning, the planning of dwellings and the organization of building works. Tea, 4.45 to 5.30 p.m. Second session, 5.30 to 8.0 p.m. Discussion opened by D. E. E. Gibson, Coventry City Architect, and Professor J. D. Bernal, Chairman of the Scientific Advisory Committee of the Ministry of Works. Subjects include methods of construction, experimental building, and research. Summing-up of the Conference by Kenneth Campbell, President ABT. Tickets from General Secretary ABT, 5, Ashley Place, London, S.W.1, price 2s. (including tea). 2.30 p.m. to 8 p.m. Nov. 3

Aluminium and Plastics in Building. Exhibition at Runcolite, Ltd., 3, Vere Street, W.C. (Sponsor, International Plastics, Ltd., in conjunction with Plastic Spray, Ltd., British Artificial Resin Co., Ltd., and the Gas Light and Coke Co.) Nov. 1

Exhibition of Water Colour Drawings by Tom Waghorn, at the Batsford Gallery, 15, North Audley Street, London, W.1. Daily 10 to 5.30 p.m. Saturday 10 to 12 noon. Nov. 1-10

Exhibition of Pencil Drawings by R. Myerscough-Walker. At the Building Centre, Maddox Street, W.1. Exhibition free. Nov. 5-17

Dr. F. Saxl. *The Borgia Apartments.* At the Courtauld Institute of Art, 20, Portman Square, W.1. (Sponsor, Courtauld Institute of Art.) 5.30 p.m. Nov. 7

H. V. Lobb. *Construction of an Underground Factory.* ASB Lecture. At the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA Architectural Science Board.) 5.45 p.m. Nov. 7

Herbert Woodman. *Design and Textiles.* At the London School of Hygiene, Gower Street, W.C.1. Chairman, Dr. Herbert Read. (Sponsor, DIA.) 7 p.m. Nov. 7

H. S. Goodhart-Rendel. *Modern Architecture.* At the Polytechnic, Regent Street, W.1. (Sponsor, the Polytechnic.) 6.30 p.m. Nov. 7

Geoffrey Clark. *Planning an Agricultural Centre.* At the Planning Centre, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) Buffet lunch 12.45 p.m. to 1.15 p.m. Talk and discussion 1.15 p.m. to 2.15 p.m. Nov. 8

E. C. Lennox. *Street Lighting.* At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE.) 5 p.m. Nov. 8

E. B. Gillett. *Presidential Address.* At the Chartered Surveyors' Institution, 12, Great George Street, Westminster, S.W.1, 2.30 p.m. This will be the first time since 1938 that a president has delivered an inaugural address, and the hour of the meeting has been specially arranged to enable country members to attend. New members attending a meeting for the first time are invited to meet in the Library at 2 p.m. prior to the meeting for introduction to the President. Those intending to avail themselves of this opportunity are requested to notify the secretary beforehand. (Sponsor, CSI.) Nov. 12

Lt.-Col. Sir Leonard Woolley. *The Preservation of Historical Architecture in the War Zones.* At the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA.) 6 p.m. Nov. 13

Dr. Joan Evans. *Medieval and Renaissance Art in 15th Century France.* At the Courtauld Institute of Art, 20, Portman Square, W.1. (Sponsor, Courtauld Institute of Art.) 5.30 p.m. Nov. 14

NEWCASTLE. *News of the World Housing Exhibition.* Architect for the Exhibition, Frederick W. Haygard. Nov. 5-DEC. 8

RUGBY. *NALGO Exhibition.* At Percival Guildhouse. (Sponsor, BIAE.) Nov. 1-3

WATH-UPON-DEARNE. *NALGO Exhibition.* At the Grammar School. (Sponsor, BIAE.) Nov. 1-4

NEWS

THURSDAY,
NO. 2649.

NOVEMBER 1, 1945
VOL. 102

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Though no feature in the JOURNAL is without value for someone, there are often good reasons why certain news calls for special emphasis. The JOURNAL's starring system is designed to give this emphasis, but without prejudice to the unstarred items which are often no less important.

★ means spare a second for this, it will probably be worth it.

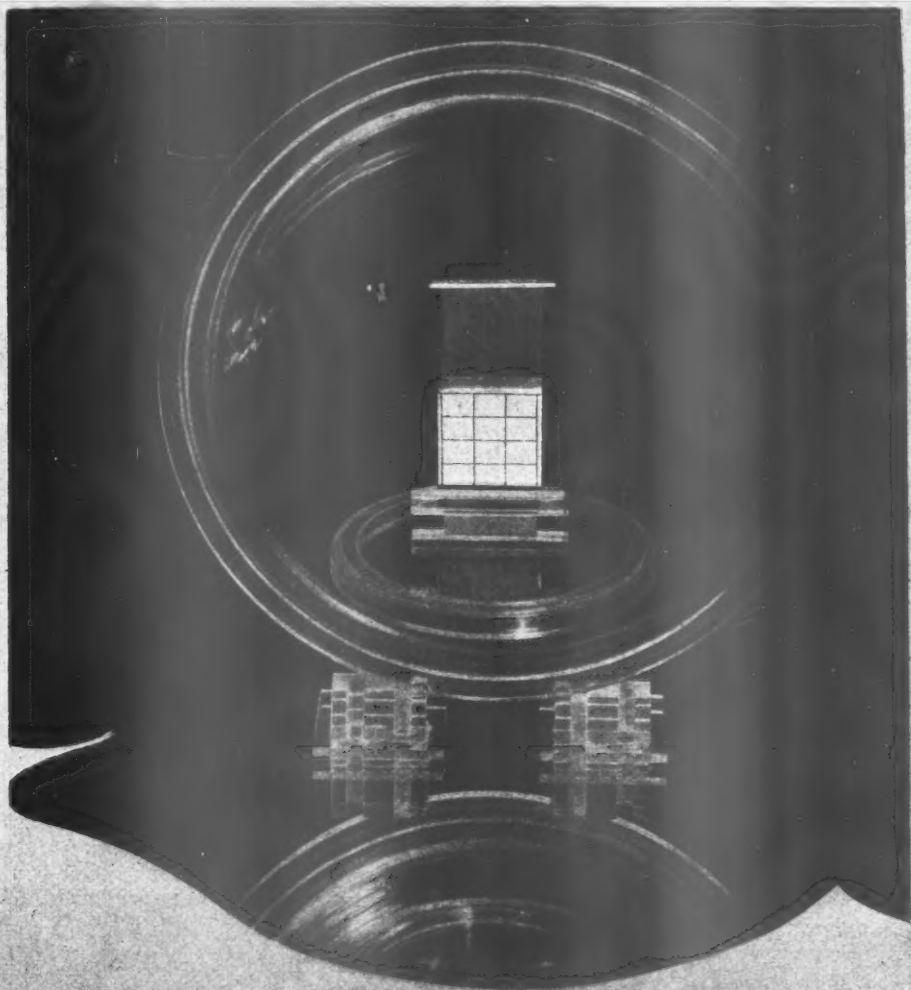
★★ means important news, for reasons which may or may not be obvious.

Any feature marked with more than two stars is very big building news indeed.

★★

The Workers' Travel Association, anxious to preserve rural amenities whilst helping to provide greatly needed new holiday facilities at reasonable cost for workers, announces an architectural COMPETITION FOR A COASTAL AND INLAND HOLIDAY CENTRE.

The WTA, registered under the Industrial and Provident Societies Acts, had, before the war, already established a number of Holiday Centres and Camps, the latter through a subsidiary company called Travco Camps, Ltd. The wider application of Holidays with Pay now means that some 24 million workers would be in a position to take holidays away from home, many for the first time, were they not prevented by lack of accommodation and by the price of such accommodation where it is available. The WTA hopes, by means of self-supporting holiday centres, to be able to offer a complete vacation with every reasonable amenity and in a choice of beautiful places at an inclusive charge within the reach of this new holiday public. As a first step the Association is promoting a competition for two Holiday Centres on hypothetical sites for an Inland and for a Coastal Centre. The Assessors are Sir Patrick Abercrombie, J. H. Forshaw, and C. G. Kemp. Awards for each design will be £250 for the first prize and £100 for the second. It is the hope of the Promoters to proceed with schemes within three years, in which case the authors of the designs placed first shall be employed to carry out the work. Each Centre is to provide for 500-550 guests and 50 resident staff. Full details, conditions and site plans can be obtained from the Workers' Travel Association, 34, Gillingham Street, S.W.1, against a returnable deposit of 10s. Any questions must be addressed to the Promoters on or before December 15.



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From AN ARCHITECT'S Commonplace Book

THE HOUSES OF PARLIAMENT FIRE: HOW IT STARTED. [*From The Houses of Parliament, by Hans Wild and James Pope-Hennessy (Batsford).*] One of the many objections to the old Palace was the great cold which legislators were forced to endure. . . . It was thus especially incompetent of Mrs. Wright, the deputy housekeeper of the Lords, not to notice, on that Thursday in October, 1834, the unusual heat in the Court of Requests. It was afterwards declared that the thermometer of the House of Lords reached, that afternoon, the unprecedented height of sixty degrees. . . . It was patent that something had gone wrong. Mrs. Wright, however, thought otherwise and retired to her snug little room. At six o'clock the wife of the doorkeeper, Mullencamp, saw a sinister glitter beneath the doors of the House of Lords. She ran to the negligent housekeeper, screaming: "Oh, good God, the House of Lords is on fire!" The handful of persons who could be immediately assembled was quite insufficient to stay the course of the flames (which had originated in the careless burning of old tallow-sticks in the stoves beneath the Lords' floor). The corridors, lobbies and staircases which had been built and rebuilt, panelled and plastered through the centuries became mere passages for the onrush of the flames. And soon, in the prim, affected language of Brayley and Britton: "The progress of the fire afforded a *tableau vivant* of not inferior interest."

★ A competition entitled **THE SHAPES OF THINGS TO COME** has been organised by the Central Institute of Art and Design.

The competition is open to all British subjects under 30 years of age, of either sex, including members of H.M. Forces, and there are £1,500 in prizes presented by W. H. Smith and Sons Advertising Agency. The competition is divided into six sections. I, Kitchen; II, General Domestic Equipment; III, Dining and/or Living Room; IV, Bedroom; V, Bathroom and Lavatory; VI, Nursery. Competitors are at liberty to redesign any article used in the home, or to design entirely new articles of domestic equipment which they think will add to comfort and labour-saving in the home. All designs must, of course, be practical. Entries must be made on a sheet of paper, size 13 inches by 8 inches. Drawings should be as neat and workmanlike as possible. The entries will not be judged on the standard of draughtsmanship, but solely on the merit of the idea portrayed. No technical knowledge or art training is necessary. Closing date March 31. The judges are G. E. Crowe, N.R.D., T. A. Fennimore, Mrs. Grace Lovat Fraser, Sir Charles Tennyson, C.M.G., Grey Wormum, F.R.I.B.A., and F. R. Yerbury, Hon. A.R.I.B.A. A first prize of £100, a second prize of £40, and a third prize of £20 will be awarded in each of the six sections, and 108 merit awards of £5 (to be spread over the whole competition).

Though this loss has probably left fewer visible marks on Moscow than the war has on London, it is reflected in every aspect of life in the regions the enemy entered—in shortages of machinery, man-power and shelter; in overcrowding on trains and overworking of women; in the lack of school teachers, and the spread of weeds. Away from the capital, in ruined Smolensk, Voronezh, Bryansk, and Stalingrad, there is nothing to relieve the picture of ruin, for the efforts that are being made to rebuild so far serve only to emphasize the vastness of the task ahead.

Bombed out of their home in London, Mr. and Mrs. J. C. Hancock have built their own HOUSE FOR EIGHTY-TWO POUNDS.

It stands in Hannington Road, Clapham Common, and has been built out of materials salvaged from bombed sites. Before it was cleared the site was a sand pit. Plaster, cement and window glass were the only new materials used. It took Mr. and Mrs. Hancock a year to build the house. Twice during that time Mr. Hancock had to go into hospital for operations for an injury he received from a shell fragment. Mr. Hancock was formerly a clerk of works to Wandsworth Borough Council.

The King, accompanied by the Queen, recently opened the LADYBOWER RESERVOIR, in the Derwent Vale of Derbyshire.

The reservoir is situated roughly equidistant from Sheffield, Chesterfield, and Buxton. The route followed by Their Majesties took them over the new Ashopton viaduct, which crosses the new reservoir at the spot where Ashopton village lies beneath the water, at present about 88 ft. deep. Ladybower is the third and largest reservoir of the Derwent Valley Water Board. The other two—Howden and Derwent—are at present supplying water in bulk to Derby, Leicester, Nottingham, Sheffield, and certain smaller local authorities in Derbyshire. This third reservoir, on which before the war as many as 600 men have been employed at one time, will eventually take its part in that task. The three reservoirs have cost in all about £6,000,000 to construct.

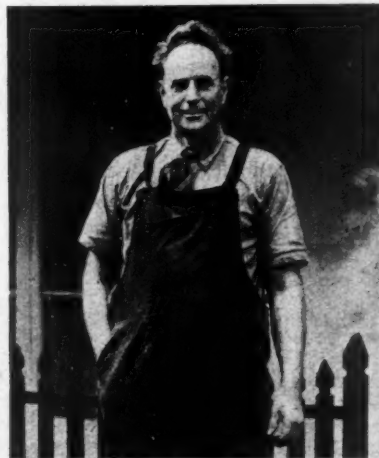
Alderman Charles Hartley (Conservative), architect and surveyor, has accepted an invitation TO BECOME MAYOR OF STOCKPORT, Cheshire, for the next municipal year.

★ In the Soviet Union invading armies damaged more than 1,700 towns and 7,000 villages and rendered TWENTY-FIVE MILLION PEOPLE HOMELESS.

The findings of the State Commission set up to estimate the total damage inflicted on the Soviet Union by the invading armies have been published. Statements by a vast number of people were examined. According to *The Times* correspondent, the report states that an area inhabited by 88,000,000 people was overrun by the enemy, and that this resulted in the damaging of more than 1,700 towns and 7,000 villages and in 25,000,000 people being rendered homeless. The total direct loss is estimated to be 679 billion roubles at their value before the war, which is about £32 billion. Eighty-six per cent. of the loss was suffered by the three Russian republics of the Union.



House in Hannington Road, Clapham Common, (left) built out of material salvaged from bombed sites at a cost of £82 by Mr. J. C. Hancock (right) with the help of his wife. See news item.





City Glade

In Epping Forest. One of the illustrations to *Greater London Plan, 1944*, by Sir Patrick Abercrombie, "A Report prepared on behalf of the Standing Conference on London Regional Planning at the request of the Minister of Town and Country Planning" (HMSO, 1945, price 25s. 0d.), to an analysis of which this issue of the Journal is devoted. Not the least important chapter in the Report is that on Open Spaces, in which the town-dweller's motive of urban escape is stressed—"the centrifugal urge to fly from bricks and

mortar and get into the country." Within the Region there are areas of special scenic beauty: they may consist of a single great feature (possibly in public possession) with its farmland setting, or may be made up of a variety of features which contribute to the particular effect. "Special measures will be necessary for the protection of such areas." Epping Forest, one of the best known, belongs to the City itself. With its approaches, detailed fragments and easy accessibility, it is "London's finest piece of forestal scenery."

The Minister received a LESS Houses Advisory The Minister, Mr. Bevan, re Women's Fuel, organisation deputations placed before of mass-appliances search at Unless the rapidly, to use the schemes in the value which would give continuity that he would mass production component he looked Minister of orders. points put

★ The Minister Country SPONSOR DELA Mr. Claiming Country delay in Silkin, to ham that is for the programmes. application Replying tion with houses, Mr. the Minister in places environment on that a make its there is a the matter

Mr. Anderson's question on the purchase of built with

PEOPLE, PLANS AND PRIDE

TO many readers the recent spate of discussion on Town Planning will have become wearisome. The public would rather see something accomplished than listen to proposal after proposal. Moreover, they would like to have the comfortable feeling that planning is an established science run by experts who are beyond criticism. But the many divergencies of opinion of, and the countless conflicting plans put forward by, these "experts" must tend to shake the belief in the omniscience of the planner. Yet planning, once the need for it is accepted, has to go through this stage of development so that all its aspects may be clarified and so that, in every case, the compromise which we call the Best Plan can emerge.

Planning must not be regarded merely as a game for experts for it will condition the lives of each one of us. Every individual will be deeply affected by the results of planning and he should know what town plans are all about; and through the exercise of his democratic rights, he can, and should, take a hand in influencing them.

We know that community life in our towns has decayed—decayed to such an extent that many urban areas have become vast, chaotic districts of stone, dirt and noise. While civilization can only flourish on the concentration afforded by the city, towns have developed in such a way that there is no longer a pride in living in them and many people have come to believe in a doctrine that advocates the abolition of organized townships altogether. London, because of its colossal size is the worst offender, and yet London as a Capital City is essential, not only to the cultural and economic life of this country and the Empire, but to that of other countries as well.

To-day, apart from the fortunate few who can enjoy London purely as a cultural centre, to most Londoners living in the capital is an economic necessity, and involves many wasted hours in trains, buses, and traffic jams, amongst unhealthy conditions of noise, smoke, and overcrowding. Who can take pride in all that? To disentangle the vast conglomeration that is London is not an easy task and yet, only when pride of place is restored will the town planner know that he has succeeded. The Plan for Greater London is the first officially sponsored plan for the London Region. That it is dealt with apart from the plan for the LCC area is to be regretted, but as Professor Abercrombie is responsible for both plans (along with Mr. Forshaw on the County Plan), there is at the moment, at least, a basis for co-ordination.

Many readers will by now have seen the book of the *Greater London Plan*, 1944 and we hope will have enjoyed it. Whatever merits or drawbacks of detail are brought to light by the analysis which appears in this issue, there can be no doubt that it is a thorough investigation into all the problems concerned and, what is more, it is a well-produced and well-written book that speaks clearly and pleasantly to expert and layman alike. At present, Town Planning is almost a popular science

The Ministry of Health has received a deputation on SMOKELESS APPLIANCES for New Houses from the Women's Advisory Committee on Solid Fuel.

The Minister of Health, Mr. Aneurin Bevan, received a deputation from the Women's Advisory Committee on Solid Fuel, representing women's national organisations and housing experts. The deputation, which was led by Lady Egerton, placed before the Minister the urgent need of mass-producing the new solid fuel appliances now developed by scientific research after many years of experiment. Unless these were put into production very rapidly, local authorities would not be able to use them in connection with their housing schemes now being planned. They stressed the value of tested standard appliances which would consume their own smoke and give continuous burning. The Minister said that he was fully alive to the advantages of mass production of standardized building components. This was a matter on which he looked to the Ministry of Supply and Minister of Works to advise him and place orders. He promised to bear in mind the points put to him by the deputation.

★
The Ministry of Town and Country Planning is NOT RESPONSIBLE FOR ANY DELAY IN HOUSING.—

Mr. Lewis Silkin.

Claiming that the Ministry of Town and Country Planning is not responsible for any delay in housing, the Minister, Mr. Lewis Silkin, told a Press conference at Birmingham that sanction to plans now being given is for third and fourth year housing programmes. There are no outstanding applications in respect of the first two years. Replying to a question about co-ordination with those responsible for erecting houses, Mr. Silkin said it is the business of the Ministry to see that houses are built in places where people can live in the best environment, but there will be no delay on that account. The Ministry is able to make its decisions in about a fortnight. If there is any planning delay it will take up the matter at once.



Mr. Aneurin Bevan, Minister of Health, questioning housewives from the entrance porch of one of the two experimental houses built with concrete blocks at Birmingham.

as it has no professional jargon of its own, and this book does much to keep it on this desirable plane.

The many photographs remind us that there is still much beauty left in this area only waiting to be enjoyed. Many theoretical considerations have to be followed up, but that the happiness of the Londoner must always be the ultimate aim has never been forgotten.

It is to be hoped therefore that the book will be very widely read and discussed and so stimulate that wide public interest which is essential if the shadow is not to fall between the idea and the reality. Indeed, the realization of the Plan itself will need the active and creative participation of the public, for only thus can the citizen develop at least the dynamic pride of place without which the Great Wen must for ever seem as though no "heart were in its stone."



The Architects' Journal

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N O T E S

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T O P I C S

SATURN AND THE SATELLITES

Abercrombian Greater London has four rings, and like Saturn, ten satellites, of which eight are suggested as being necessary to house the overflow population for whom the expansion of existing ringside towns cannot provide. We are told that the ancient Romans regarded Saturnus as the deity who suppressed the savage mode of life that then existed, and established civilization and social order. According to a classical dictionary the whole country was thereupon called *Saturnia*, or the land of plenty.

There the allusion ends; for the prosperity of *Saturnia* was based on agriculture and had no urban bias. And, curiously enough, although to be saturnine is to be of a gloomy, leaden disposition, the *Saturnalia*—revels which lasted for a week towards the end of December, and were probably the precursors of our Christmas festivities—are described as bringing with them scenes of unbridled licence.

Classical allusions apart, the satellite idea as presented in the Greater London Plan has already led to the most varied speculations. The Minister of Town and Country Planning is evidently in favour of it, for he has appointed a committee of ways and means, under the chairmanship of Lord Reith, to report on the administrative and executive problems involved in the foundation of new towns. On the other hand, those who live in Crowhurst or Meopham are beginning to wonder whether they will enjoy the process of aggrandisement to a town of fifty or sixty thousand inhabitants.

Some oppose the satellite idea *in toto*; others support the principle, but disagree with the proposed locations. And Londoners in general, who are themselves larger in numbers to the tune of nearly a million and a half as compared with a year ago, are ruminating as they stand in their fish queues on the pro's and con's of decentralization.

Opponents of the satellite idea argue that a new town almost anywhere in the country would be dependent on some large city, and that in the case of London the range of attraction is so wide that even Birmingham is in some respects a satellite to it—or was in the days when a comfortable shopping expedition could be made between breakfast and dinner. As for towns a mere 20 or 30 miles away, these would quickly become dormitories, as they are in most cases quite unsuited to large-scale industrial expansion. Therefore, why spoil good agricultural land, rural scenery, and comfortable country retreats by importing more straphangers from the teeming millions of the metropolis?

This idyll of the peaceful village and the small country town recalls the picture painted by Tennyson in *The Palace of Art*:

"Still as, while Saturn whirls, his steadfast shade sleeps on his luminous ring."

The answer seems to be that London will spread anyhow; and neither the steadfast shade nor the luminous ring will remain secure from invasion. If the spread is not allowed for in directions and to places already determined, it will occur indiscriminately, along the roads and circumferentially, wherever means of passenger transport are available. The more solid the spread, the more difficult it will become to relieve congestion at the centre and to hasten the process of reconstruction. Nor will restrictive planning and ribbon development control be an effective deterrent.

The acid test will evidently be the balancing of population and employment. This makes me just a little doubtful of the Greater London satellites south of the Thames. None of them are on the Industrial Axis and all of them are in what was fast becoming before the war Commuter's Country. It would be fatally easy for any of them to become a large Metropolitan estate and nothing more, peopled by house-hungry civil servants, artisans, and ex-Service men, all intent on buying their own houses (selling price not more than £1,200), over a period

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of twenty years, and all—in Mr. Bevan's phrase—with gravestones round their necks. While this would be an advance on present conditions, when there is a total absence of reasonably-priced houses to be owned under any terms, it is probably not what the Saturnians have in mind.

Which all seems to emphasize the need for a Greater London Planning Authority, to handle in a businesslike way the whole problem of metropolitan growth or decentralization, to determine how many satellites Saturn should have, and to create the most favourable conditions for bringing them up.

A VOICE OF THE BUILDING INDUSTRY

Among the regular delights of *Scope*—that admirable pocket-sized *Vogue* of the packaging and industrial design business—is the *Man of the Month* feature, in which is presented every month one of our Captains of Industry in a couple of thousand sympathetic words.

Star of a recent issue was Mr. Richard Costain, owner-builder of Dolphin Square, fanatical supporter of the multi-floored territory as the solution of our urban planning problems, and plus one amateur golfing champion. Mr. Costain, who comes from Liverpool and studied architecture in Rome—ah, that well-trodden road—is amused by the housing promises of politicians, and frankly horror-struck at official housing policy—or what is recognizable as policy.



Mr. Richard Costain. See Astragal's note.

In a lively interview packed with common sense and prejudice, he outlines his views on personnel management, the training of craftsmen, tea-breaks, and Government control—or, as he calls it, Stranglehold. Like all able and successful business men he is nervous of officialdom and trots out all the old turnip-heads about inefficient bureaucracy, passing the buck, etc., of which he, like everyone else, has had plenty of experience during the war.

But to infer from this that controls are therefore unnecessary is of course an elementary error. Everybody—including the present Minister of Labour—is against industrial conscription and all its attendant evils, but control of labour and materials within a national plan there must be. Only a central Government—as the United States quickly discovered during their war-housing programme—has enough information before it to produce a housing plan which will—doubtless at the cost of many apparent injustices and stupidities—in the end ensure that houses are built where they are needed most and for the people who need them most.

This is not achieved, with due deference to Mr. Costain's experience, by asking each of the 80,000 small builders in the country to build three houses each and letting them all scramble for the labour and materials. Further, since we, as citizens, must pay directly or indirectly part of the cost of these houses, we are surely entitled to have some say through our Government as to what sort of houses they shall be, and, within limits, where they are to go.

Once the housing programme, short-term or long-term, is laid down, and the flow of materials and labour assured, then it is the responsibility of private enterprise to build the houses as well and quickly as they know how. To let them all loose in a free-for-all would lead to certain chaos. Mr. Costain, as one of the Mulberry contractors, should know what a jam that would have been cooked into, had there been no directing policy and plan to control it.



LETTERS

Warnett Kennedy,
D.A., A.R.I.A.S., A.M.T.P.I.

J. G. G. Stone

George C. Oldham, L.R.I.B.A.

There Always be an Ad-man

SIR,—May I correct Astragal's note headed "There'll always be an Ad-man"?

The firm of Sir William Crawford and Partners, Ltd., are Industrial Design Consultants. Their function is purely that of product design, package design, and the actual making of prototypes of new designs; they have no power whatever to act as Advertising Agents; they are quite distinct and separate from the firm of W. S. Crawford, Ltd., who are Advertising Agents.

If Astragal's comments are allowed to pass without correction, many thousands of readers will continue to believe that this company is a department of the advertising agency. They may also erroneously believe that there is some basis in fact for Astragal's comments, which were based on this wrong assumption. Would you be good enough to correct this mistake?

Incidentally, Astragal may be interested to know that we have obediently taken his advice. We included with the brochure a copy of the journal containing his commentary.

WARNETT KENNEDY,
Director of Research,
London Sir William Crawford and Partners

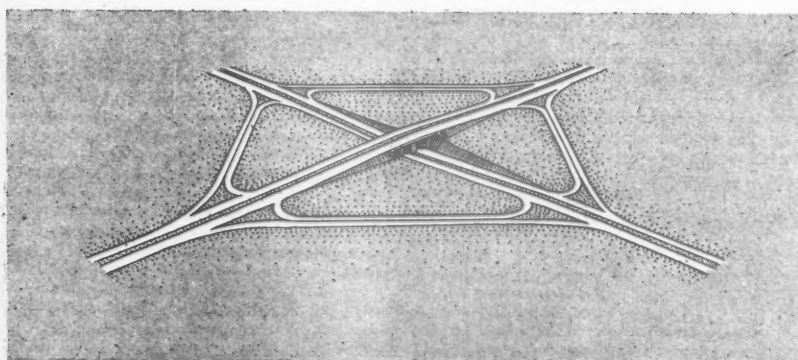
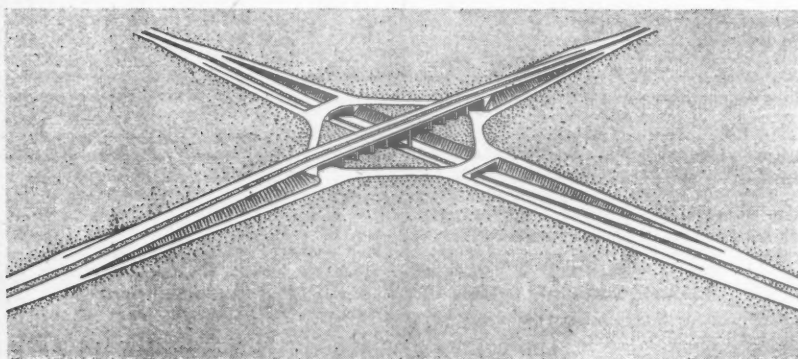
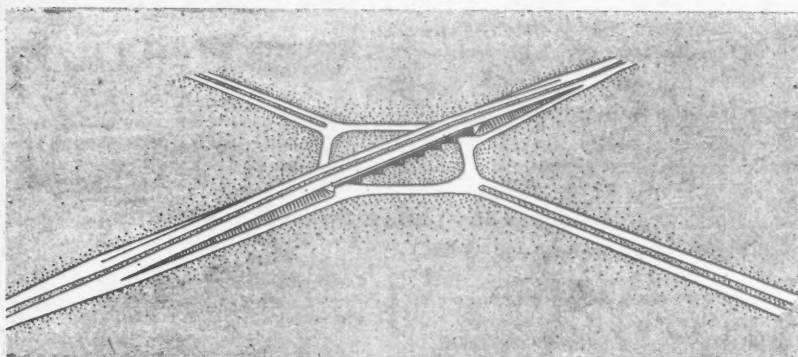
Thermal Conductivity

SIR,—Mr. H. H. Bruce fails to answer the main point of my letter, i.e., "Why is there such a striking difference between the recommended average figures for the thermal conductivity of concrete in this country and the USA," and, similarly, "Why is the heat loss through concrete stated to be slightly less than through brick, whereas, in the USA, the opposite is very much the case."

	IHVE (k)	ASHVE (k)
Brick ..	8.0	5.0 (low density)
Concrete ..	7.0	9.2 (high density)
		12.0

ASTRAGAL

THREE ROAD JUNCTIONS



An illustration from The Greater London Plan, 1944, of three types of arterial road junctions. Top, flyover and roundabout: arterial over sub-arterial road. Centre, flyover and roundabout: arterial over arterial road. Below, modified clover-leaf: arterial over arterial road. As the Report states: "It is considered essential to the express arterial system that the intersection should provide for free flow in both directions: this can be effected by a roundabout with both under and over passes (i.e., at three levels) or by the clover-leaf method. We favour the former owing to the greater amount of land required by the latter. It is hoped to avoid the more complicated intersections if the distinct system of express highways is adopted. Where an arterial and sub-arterial road intersect, the general principle will be to provide an over-pass (or under-pass, according to topographic convenience) for the through traffic on the more important of the routes, and to circulate the traffic from the less important by a roundabout. It is perhaps dangerous to lay down any definite distance between points of access to the express arterial highways: these will doubtless vary between the built-up suburban ring and the outer country ring: but in the latter it should not be necessary to provide them at closer intervals than 5 miles."

I gather that the Institution of Heating and Ventilating Engineers is satisfied that its published figures are substantially correct, but I mentioned two points in my previous letter which must surely give food for thought:

(1) General experience would lead one to suspect that concrete has a higher conductivity than brick.

(2) Dr. Oscar Faber's practical experience at the Bank of England is that the conductivity of concrete is considerably higher than that of brick.

I consider that Mr. Bruce has now added another point:

(3) The American Society of Heating and Ventilating Engineers changed their recommended average figure for concrete in 1932 from 8.3 to 12.0, and twelve years' additional experience has not brought about a further amendment, as this figure 12.0 appears in the 1944 edition of their guide.

In conclusion, may I state that my object in raising this matter in your journal is solely in the hope that further investigation will be carried out so that these fundamental scientific facts may be fully established. The entire post-war building programme is, presumably, being based on the figures published in this country, and it is of paramount importance that these figures are as accurate as possible, which, in the case under discussion, is, I feel, open to reasonable doubt.

J. G. G. STONE,

Director,

London

Pharaohs (Distributors) Ltd.

Architectural Competitions

SIR.—Mr. Kenneth Cross' reply to your leading article on Architectural Competitions does not strike one as a very able defence of the present system.

Much of what he says in his last two paragraphs is true, but it does not answer your criticisms.

When Mr. Cross informs us that the Competition Committee is fully aware of the importance of reducing the work of competing architects, in every possible way, one is not impressed. To cite only one example, the Northants W.I. Rural Housing Competition held in 1943, for which over 500 entered, 1-in. scale plans and sections, and a perspective, besides all four elevations, were asked for. The result was a welter of drawings which staggered the promoters and presumably overwhelmed the only assessor.

The most damning indictment, to my mind, of the present system, came from the winner of the West Wycombe National Trust Competition of 1944, in a letter published in your issue of May 18, 1944.*

I would suggest that there is confusion in Mr. Cross' statement: "The Competition Committee of the RIBA includes the most experienced competing architects in the country." Most of those competing architects are well known winners. I would not agree that winners of architectural competitions are the most experienced, or necessarily the most gifted architecturally. One has only to study, as a non-competitor, the exhibited entries in any competition to realize that the "best" design is purely a matter of opinion.

GEORGE C. OLDHAM

*[The letter referred to by Mr. Oldham reads as follows: Sir, As authors of the winning design in the West Wycombe Cottage Competition, we feel we ought to reply to Astragal's criticism in the ARCHITECTS' JOURNAL for May 4. As enthusiastic and consistent advocates of contemporary architectural design, we have for quite a long time enjoyed the purely academic exercise of submitting modern designs in architectural competitions. We recently decided it would be a pleasant change to win something. (Signed) Tom Mellor, G. Grenfell Baines, John Ashworth.]

PHYSICAL PLANNING SUPPLEMENT

L O N D O N

THE REGIONAL PLAN

An Analysis of Sir Patrick Abercrombie's Scheme

by E. C. Kent and F. J. Samuely



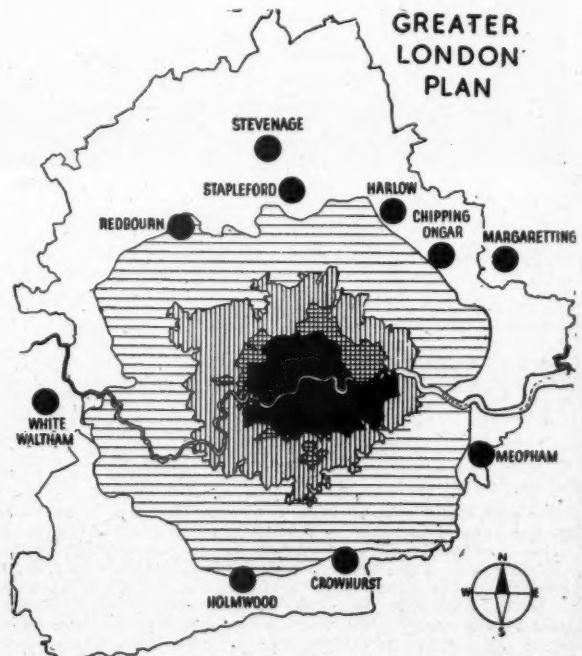
Sir Patrick Abercrombie, the author of the Plan.

In the March 15 issue of the Journal a synopsis of the planning proposals contained in the Greater London Plan was published. At that time only a preliminary edition of the report was available, which was distributed mainly among the Local Authorities concerned and the Press. Since then the Plan has been exhibited to the general public and the Report, lavishly illustrated with maps and photographs, has appeared in book form. (The Greater London Plan 1944 by Sir Patrick Abercrombie, M.A., F.R.I.B.A., P.P.T.P.I. H.M. Stationery Office, 25s.) This book, which provides most interesting and instructive reading matter to everybody, the lay public and the technical professions alike, was prepared with the assistance of a team of collaborators, of whom the following are named: Research and Design:—Harry Stewart, Gordon Stephenson, T. C. Coote, P. W. Macfarlane, L. F. Richards, P. F. Shephard, V. N. Prasad. Preparation of maps and diagrams:—Miss C. Chubb, B. Fleming, M. Greenhill, Mrs. H. Lewis, Mrs. C. Luke, Mrs. J. Mardall, Miss J. Owen Jones, Miss R. Garo. At this stage in the public discussion of the Plan it may be of value to attempt a scrutiny which is not influenced by any local bias, such as might easily affect the reactions of Local Authorities, but which tries to embrace the Plan as a whole in all its aspects. The Architects' Journal has therefore asked the authors of an earlier analysis of this kind (a Method of Comparative Analysis demonstrated on four London Plans, The Architects' Journal, August 10, 1944) to apply their method of investigation to the Greater London Plan. The Diagrams accompanying the text are not the work of the authors; they are an artist's impression of the proposed changes and are not strictly true in scale.

A diagram which provides a key of the whole Plan.

It shows London's four concentric rings and the location of the ten proposed new satellites.

The inner Urban Ring is shown cross hatched. It is from this ring that the greatest decentralization from areas covered by the Report is proposed. In the Suburban Ring (vertical lines) the only increase to be allowed will be the building up of vacant frontages. The Green Belt Ring (horizontal lines) will primarily provide for the recreation of Londoners and will prevent further suburban growth, therefore only small increases to existing towns are to be allowed. The New Satellites (black spots) are all sited outside the Green Belt Area.





INTRODUCTION

The Region Defined

Although the usual definition of Greater London is an area of 693 square miles, identical to the Metropolitan Police Area, the area dealt with in this plan is a much larger one, alleged to be dependent on London, and it comprises roughly a quadrangle having corners at Haslemere in the South West, Gravesend in the East, Royston in the North, and High Wycombe in the North-West. The area covers approximately 2,500 square miles, and does not coincide with any of the numerous known administrative districts of London.

North of the Thames it coincides with the Metropolitan Traffic Area, and South of the Thames it follows, in general, the London Traffic Area, but it also includes the whole of the County of Surrey and the Urban District of Gravesend, while excluding those parts of the London Traffic Area which are in the County of Sussex. This area is only partly built-up, and contains large stretches of agricultural and woodland, most of which is in private hands.

Content of the Plan and Machinery Proposed

In order to do justice to this plan it must be remembered that it is not, and cannot at present be, a worked out plan, but is merely a setting out of the principles to which the planning of the region should conform, together with a more detailed investigation into those aspects which can only be considered for the region as a whole, such as road and rail layout, principles of decentralisation, open spaces, and so on.

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Unless new legislation is forthcoming, aiming at more centralized direction, the actual planning of each part would be left to the Local Authority. The Planner appreciates that this is a hopeless state of affairs, and, while the collection of information should still be left in the hands of the Local Authority, it is suggested that a Planning Board be set up by Act of Parliament to deal with the Plan as a whole and in its every detail. This approach is the only possible one under present circumstances, because the principles can be evolved in a comparatively short space of time, whereas the detailed layout of every district will take much longer. It is for this reason that the plan provides very much more reading matter than the LCC Plan did.

The Present Analysis

While the following analysis is set out to give those interested an idea of the plan as a whole, we would like to emphasize that everybody should study the plan itself, which is particularly well presented and could almost be considered as an up-to-date text book on Town and Regional Planning in general. Any analysis of the Greater London Plan must be based on the assumption that the principles set out will be implemented later on in the detailed plans.

This analysis is a sequel to an article that appeared in the ARCHITECT'S JOURNAL on August 10, 1944, in which a general questionnaire was developed and applied to the four London Plans then available. The same questionnaire is now used to attempt an appreciation of the Greater London Plan. In this former article it was suggested

that "by formulating definite questions grouped in tables and answering them for each of the plans considered, the essentials of each plan can be discovered on a comparative basis." And further, "that such an analysis will serve to determine whether the whole structure is sound or whether a plan is merely a mirage."

A Very Human Picture

A Region is obviously a far more complex planning unit than even the largest town. Yet, on consideration, one finds that all the main planning principles are just as applicable to a Region as to smaller planning units, though the form in which questions are asked may here and there have to be varied. In trying to answer the questions which follow, it is possible, we hope, to obtain a fuller knowledge of this newest work of Sir Patrick Abercrombie's, to understand that all the manifold details which underpin its proposals are subordinated to, and governed by, a few great planning principles. The picture aimed at is at bottom a simple and a very human one. At the same time the student of the plan may find at his disposal the means of judging the implications of the assumptions and premises made more independently and to see alternative possibilities, wherever these premises or assumptions may leave him with certain doubts. In this way there will be achieved not only better appreciation of the plan itself, but also formulation of constructive comments, the kind of criticism which may not be unwelcome to the plan's author.

THE SIX MAIN QUESTIONS*

1. Does the plan fit into a national and regional pattern of reconstruction?
2. Does the plan preserve and develop the individual character of the region's various parts?
3. Does the plan establish an organic pattern of development?
4. Does the plan provide for the private life of the citizen?
5. Does the plan cater for the collective needs of the community?
6. Does the plan stand up to the test of practicability?

I Does the plan fit into a national and regional pattern of reconstruction?

A. Has a total survey been carried out, and does it give a complete picture of the London Region as it now exists?

- (1) Has a survey been made of population, as regards
Present numbers and density?
Fluctuations in growth and density?

A very detailed survey has been made and presented both in tabulated and mapped form.

- (2) In relation to the needs of housing,
What is the sociological structure?

Size of family—without reference to age and sex composition has been abstracted from the 1931 Census and one 1937 source of information. More detailed surveys are to be compiled by Local Authorities under regional guidance.

- How many families live in houses with gardens?
- How many families have enough, too much, or too little living space?
- What percentage of the Regional area is covered by residential buildings of different height categories?
- What is the area of private gardens and of private open spaces around flats?

* These Questions correspond to the six sections A to F in *The Architects' Journal* for August 10, 1944. For explanatory notes in regard to them, reference should be made to that article.



STRUCTURE. Before: the planner, analysing the Region as it exists, perceives an indication of concentric rings. After: the planner, having decided to keep the circular structure but to revitalize it, uses the four rings for carefully differentiating population densities.

No information exists to date. Local Authorities are being requested to provide it.

(3) In relation to the need of a park system, what are the facts about

Existing Parks, Commons and Public open space generally?
Existing Sports Grounds and Playing Fields?

Any other natural features that could be used for recreation such as lakes, rivers and sea coasts?

A special map shows clearly the existing open spaces. A more detailed and well-classified survey is referred to although not published.

(4) What facilities for Religion, culture and entertainment such as Churches, theatres, cinemas, concert halls, libraries, public houses, hotels and so on, exist at present?

No information existing to date. Local Authorities are being requested to provide it.

(5) Education and Health. (Nursery and Junior Schools, Senior and advanced Schools, General and specialised hospitals, clinics, private medical services)?

A survey under these heads has neither been undertaken, nor is it recommended among the other aspects for detailed investigation demanded from the Local Authorities.

(6) What are the occupations, working conditions, travelling times, of the citizens?

The occupations of the citizens are described in great detail for various localities, but all figures are based on the 1931 census, which in this respect particularly is hopelessly out-of-date and is also not sufficiently differentiated as to localities. The aspects relating to working conditions, travelling times, etc., are critically surveyed in a general way and detailed investigations asked for from Local Authorities.

(7) What are the Existing transport facilities regarding:

Road and rail layouts?

Traffic densities?

These have been very carefully surveyed.

Sectional economies of transport systems?

Congestion of vehicles?

Accidents?

The purpose of travelling?

Goods transport?

Position of Warehouses?

Reloading of goods?

As far as roads are concerned the necessary surveys are expected to be furnished by Local Authorities.

The equally necessary surveys for the railways could be abstracted from existing statistics of the Ministry of Transport, but this is not stipulated. Nor is there any indication of the need for a comparative analysis of road and rail problems within the region.

(8) What places are there of general cultural and recreational interest and use, such as:

Historic buildings?

National Parks?

The importance of preserving wherever possible historic monuments and places of scenic interest is stressed generally and the need for surveys to be undertaken by Local Authorities is underlined.

B. Have definite assumptions been made as to the future population numbers, and the part to be played in the national economic set up?

(1) Population: What changes in numbers and composition of population can be expected within the next 50 years? What changes will there be in average size of family. Will present trends of migration in and out of the country, and within the

country, affecting growth of London, as alluded to in the Barlow Report, continue?

(2) Foreign Trade: Will Britain continue to export manufactured goods and import the bulk of her foodstuffs? Will her export trade be mainly with European countries, or with the Empire, China and/or South America? Has not this consideration great bearing on the future of London?

(3) Staple Industries: Will coal remain of paramount importance? How will cotton, shipbuilding, steel, and machine tools be affected?

(4) Location of Industries: Where will the main industrial centres be? Will rearrangement have any influence on Port of London traffic or on any other transit traffic?

(5) Transport: How will this be organized in this country, and what part will Britain play in the world system, particularly with reference to air lines? What will be the development of the ports and where will the principal airports be situated?

The following five general assumptions are laid down in the preamble which forms the basis of the plan:—

(a) That new industry will not be admitted except in special circumstances.

(b) That existing population will be decentralised within the region.

(c) That the total population of the area will definitely not be increased, but slightly reduced.

(d) That London will continue to be a world Port.

(e) That new planning powers will be available.

Another set of assumptions laying down programmatic details introduces the chapter on Industry.

There are a number of further assumptions contained in the body of the Report, which are implied though not explicitly mentioned as such. These refer to the right method of dealing with specific problems, such as the resettlement of the decentralized population.

It is obvious that these assumptions, in particular the basic five, largely determine the character of the solution proposed. All of these are in general rather than in specific terms, and lack reasoned explanations.

Conclusion drawn from Question Group I

In so far as the report aims at an implementation of the Barlow Commission's recommendations it is designed to fit into a national pattern of reconstruction. But these recommendations deal with the location of industry and the industrial population only, while London, in fact, is even more a commercial and administrative centre than an industrial one. The bare assumption that London will continue to be one of the world's great ports is surely somewhat vague without more precise data, for the type and volume of its future trade will have the greatest influence on the numbers of London's population. On the other hand, the present world political situation encourages the general belief that the importance of the Port of London is likely to increase considerably in the post-war period, and the statement that the total population of the area will be somewhat reduced might therefore be contradicted by actual developments, however desirable in theory. The whole problem of decentralization will have to be reviewed, if the numbers to be decentralized and yet kept in the Region are varied to a considerable extent. If the principle of reducing the population is to be upheld, a much more drastic removal of industry from the London area than might be palatable to the public would have to be attempted.

2 Does the plan preserve and develop the individual character of the region's various parts?

A. Has an investigation been made into the outstanding and lasting characteristics of the Region?

(1) Has any such research been undertaken?

No. The picture given of the basic structure of the Region is a system of concentric rings around the central core of London. This is largely in the nature of an assumption rather than the result of a scientific investigation, for neither historical nor geographical and occupational facts seem necessarily to support the ring shape idea.

(2) Have the following aspects been duly stressed:

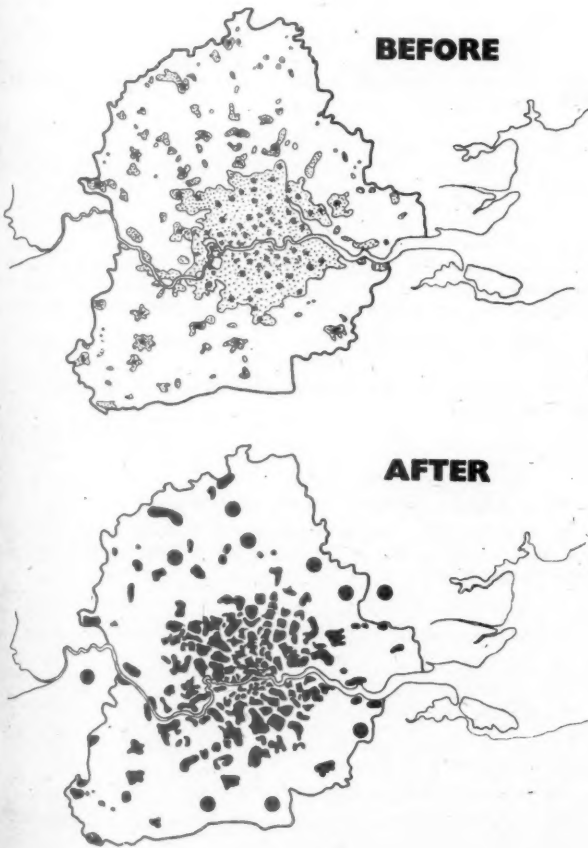
The aspect of London as the unique centre of Shipping, Finance and Commerce, as typified in the Port of London and the City?

The importance of the Region through London as a centre of shipping and commerce has been acknowledged by making it one of five governing assumptions that the Port of London will continue to be one of the world's great ports, but as the County of London is not the subject of the present plan, the question is not answerable in the strict sense.

The aspect of London the Metropolis, Seat of Government, and Capital of Empire, as typified in Westminster, the West End and Theatreland?

The attraction which London will continue to exercise as the great administrative and cultural centre is expressed in the reluctance to reduce the population of the area drastically; only 100,000 people or 1 per cent. of the 1938 population of the Region are supposed to go outside a radius of 50 miles around London.

The aspect of London, from the viewpoint of History, as typified in its architectural and other monuments, and in its Royal parks?



COMMUNITIES. Before: in spite of the haphazard sprawl, the old individual centres were still not quite dead. After: the old centres have been rounded off, tidied up, and separated from each other, some by parks. New satellite towns are added, and the pattern is no longer chaotic but coherent.

The plan suggests that the still unspoilt remains of good historical periods, as seen in old villages, farm houses and manor houses, landscaped parks and so on, wherever they occur in the Region, should be preserved if they can at all be fitted into the pattern of planned development.

The aspect of London as a region of natural amenities, such as the River Thames and the hills of the Northern bank?

The Thames, the lesser waterways and other scenic areas are given close attention as components of a Regional park system.

(3) What is the planner's reaction to the peculiar cellular growth of London, the Metropolis of sprawling overgrown villages?

As in the County of London Plan the recognition of the community structure of the built-up area is also the basis of every re-planning scheme in the larger area; it is applied not only to those parts nearer the centre from where population is to be decanted, but also to additions to outlying old centres and to the proposed new satellites.

B. Does the plan develop the character of the town or does it run counter to it?

(1) Does the Planner consciously aim at developing a feeling for London as a whole, based on a clear conception of its essential characteristics? In order to achieve this does the planner

Introduce zoning for use?

Within use-zoning build up a system of integrated units?

Bring to better effect natural amenities and historic monuments?

The region as a whole is consciously developed as one large unit, zoned according to use in concentric rings around London, and stressing that natural and man-made amenities should be looked upon as assets of Regional importance.

Alternatively, does the planner reduce the feeling for the town to parochial loyalties?

The creation of physically separated satellite towns is bound to promote dissolving rather than unifying tendencies within London—seen as a Regional unit—although these new developments are so much more dependent on their mother town than older centres with a tradition and history of their own. They would feel cut off and for decades would remain unable to produce a sufficiently independent life of their own.

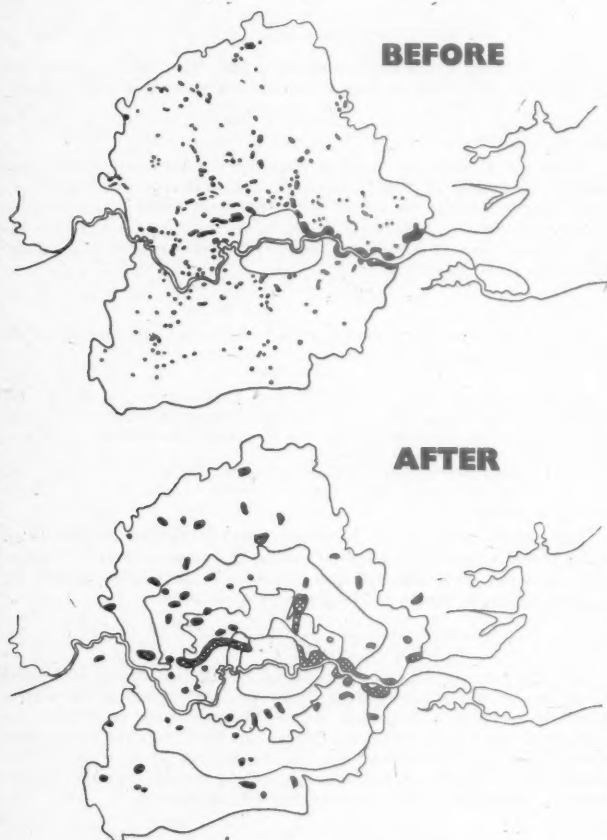
(2) Is there any approach from the social angle to the problem of urban character, or does the planner rely for consciousness of civic pride on the effect of past and modern architectural achievement?

Detailed studies of all the more important populated centres in the area, with particular regard to their occupational structure and tendencies, illustrate the Planner's intention to aim at a balanced distribution of the population throughout the Region, but the London Region is necessarily affected by the occupational structure of London itself, even if the L.C.C. area is not included. The predominance of administrative and commercial types of occupation determines the structure and character of London and of the Region as a whole. This, however, has not been mentioned, nor taken into account.

Conclusions drawn from Question Group 2

A Region, being a far larger unit than a town, must naturally have a far more complex character than even a Metropolis like London. Never until recently was it possible to plan on a Regional scale or even to see an area of that size as one planning unit. In dealing with the London Region the only possible general idea is obviously to relate it in all respects to the capital city in its heart. And the basic suggestion of thinning out the centre, and of dealing with the surplus population in a number of strictly controlled outlying units—leaving the main extent of the region as open background—is certainly a clear and theoretically commendable approach. Considerable doubt remains whether a solution of this kind—which even with a perfect communication system tends to cut off large portions of the Region's population from Inner London—will eventually provide what London and its region naturally requires. What if the centripetal forces should prove to be stronger than the centrifugal ones? Would it not in that case be better to look for a solution which allows for some systematic and properly planned further growth—at least as a possible alternative? Furthermore, should London continue to be increasingly a commercial and administrative centre it is doubtful whether such distant and separated units will solve its population problem, irrespective of the fact that satellite towns of 60,000 inhabitants are controversial solutions in any case. The lack of a proper investigation into the real causes of population movements may lead to a serious misjudgment of the relative importance of centripetal and centrifugal forces.

INDUSTRY. Before : the intermingling of thousands of factories with residential development was the major cause of untidy neighbourhoods and of unhealthy and inconvenient living throughout the Region. After : the separate factories have been gathered into various distinct groups and some of them have been moved into the outer belts along with the 680,000 workers.



3 Does the plan establish an organic pattern for development?

A. Has any attempt been made systematically to divide the town into clearly defined units?

- (1) Has an attempt in this direction been made at all?
Yes.

- (2) Has a definition of such units been given
In the geographical sense of green spaces, railway lines, main roads and waterways, all acting as boundaries?
In the functional sense, using zoning within units or special purpose units?
Has through traffic been diverted from units?

It is clearly stated that communities, each consisting of one or more neighbourhood units, defined both topographically and functionally, are the basic units of this regional plan. Standards of density for residential neighbourhoods, differing according to the distance from the centre, have been laid down. Traffic has been designed so as to avoid, or only touch the fringe of, these communities.

- (3) Has correlation and integration of units been sought, and have public services been distributed among them according to the needs of the town as a whole?

Correlation and integration of social and public services is strongly advocated, though not worked out in detail, as this obviously would be the job of the suggested Regional Planning Board.

B. Does the proposed cellular structure permit any extended growth of the town or can the new structure be maintained only on the basis of rigid control?

- (1) Is the system of units proposed possible only under conditions of control of industrial development and of population numbers?

As in the County of London Plan the proposals of the Regional Plan are based on the assumption that the Planning Authority will have powers to control the location of industries and the movement of population.

- (2) If continued growth is possible, would such control of industry and population become ineffective in a measurable space of time
Within each precinct?
For the whole town?

Tendencies to continued growth can be met only to a limited extent within the inner core of London, but outlying centres, either old or newly created, are to be the nuclei for continued future development. It must be remembered that the plan assumes a more or less static population for the Region as a whole.

- (3) If continued growth is impossible or must eventually come to an end, within the suggested framework of development, what method, if any, is proposed for dealing with any surplus population, with satellite towns, with migration to other parts of the country, or with emigration overseas?

As it is assumed in the plan that by banning new industry continued growth can be checked, this question has not been dealt with.

- (4) Would the system proposed remain workable with very different population numbers from those now assumed?

The suggested pattern is based on a more or less static total population number for the whole Region. With very different population numbers the basic ideas of the plan would not be found to be workable.

Conclusion drawn from Question Group 3

It is certainly one of the greatest merits of the plan that a general Regional pattern of development and the methods to achieve it have been so clearly conceived and described. One may argue about some of the assumptions on which it is based and about such details as the size of the component units or the degree of decentralization proposed, but the Author does not himself regard these as definite and static proposals. The salient fact remains that the Region has been conceived and developed as one organic unit.

4 Does the plan provide for the private life of the citizen?

A. Has an investigation been made into the social structure of the community with a view to providing for each individual the kind of dwelling best suited to him?

- (1) Has a social survey been specially undertaken or has some existing survey been used?

Local authorities are requested to make such surveys as are necessary, but none has so far been undertaken. It may be inferred that the allocation is the same as with the L.C.C. area.

- (2) Has an allocation of definite dwelling types for definite categories of households been proposed?

No obstacles to such an allocation should be encountered in the outer rings.

- (3) Upon what housing standards has the plan been based regarding
Net density of population?

No standard is required for the outer rings.

In the suburban ring a standard of 50 persons to the acre has been adopted, and in the inner urban ring 75 and 100 persons to the acre.

Size of dwellings?

The same standard as the L.C.C. is to be inferred.

Size of private gardens?
Open space around flats?

No details are given.

- (4) Has a suitable mixture of dwelling types been suggested within every residential unit?

All densities allow a suitable mixture.

- (5) Is there to be a segregation of classes in separate neighbourhoods or in parts of a neighbourhood?

Segregation of classes does not appear to be ruled out.

B. Have general principles of an educational policy been assumed and a clear programme of sites, types and effective ranges of schools been worked out, with the aim of giving equal opportunity to every individual?

(1) Has school siting been considered?

For the different areas it is intended to provide a variety of types of schools.

(2) Have outlying centres been provided?

Yes, and in the outer belts.

(3) What provision is made for the movement of population?

From the inner core to the outlying centres, and from the outlying centres to the outer belts, as the need arises.

C. Does the plan provide for the individual?

The plan provides for the individual in a number of ways. Services of a Whitehall type are provided in the inner core, and services of a more local type are provided in the outlying centres and outer belts. Large spaces are provided for recreation and sports.

RAILWAYS. From the centre to the outer belts, the Southern Railway is complete, and provided with a variety of services.

(1) Has a definite educational set-up been assumed to govern school siting?

For the new satellite towns a very detailed schedule of the different types of schools has been worked out, and for existing areas it is recommended that similar figures be used.

(2) Have ranges of influence for each type of school been worked out?

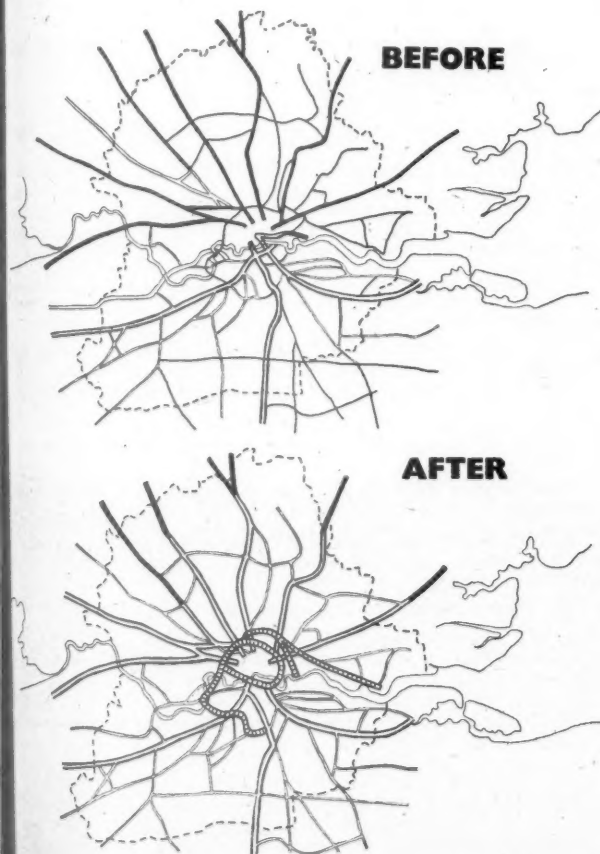
Yes, and these ranges will determine the social groupings.

(3) What average size of classes in schools has been assumed?

From the reference made to the Education Act, 1944, it can be inferred that the standards given in the L.C.C. Plan will be applied. In this case, a maximum of 30 children per class would be fixed.

C. Does the plan provide, on the basis of a definite policy, for preventive and curative health services available to every individual?

The plan assumes that the proposals for the National Health Services put before Parliament in February, 1944, in the form of a White Paper, will be the basis for an organised system of hospitals. Expert advice on the requirements for these health services is not available at present, and all implementation, therefore, has to be left for later. The suggestion that certain large special hospitals might be placed in the green belt ring should be welcomed. But why not many general hospitals as well?



RAILWAYS. Before: for relief of train congestion, speed of access to and from the centre, quick goods delivery, and general cleanliness and convenience, the Southern main lines had been electrified by 1939. After: electrification is completed, plus an inner goods ring. On the northern lines stations are provided where steam engines will take over for the long distances.

D. Have the individual's needs in regard to his work-place and his recreation received consideration?

The need for reducing the time and cost of travelling is emphasised in the plan. The degree of decentralisation is largely governed by the idea of keeping work places as near as possible to residential areas. Satellite towns have been designed to accommodate both residential districts and work places. The need for community centres has been stressed, and a schedule for such items as assembly halls, gymnasia, clubs, libraries, swimming baths and so on has been made. Theatres, cinemas, restaurants and the like have apparently been left to private enterprise.

Conclusions drawn from Question Group 4

It is quite obvious that all the individual's needs have been considered. The character of the plan makes it clear that in every instance it is general advice rather than detailed information which is available. The two questions which have been dealt with in greater detail in the framework of the plan are the relation between the work place and the home, and that of open spaces.

Generally speaking, the decentralization both of industry and of the population is intended to bring work and home nearer together. Decentralization can be made effective in several ways, but only one of them, the use of satellite towns, has been stressed.

The question to be raised is whether or not this remedy is really effective. It has been held that a town of 60,000 people cannot sustain industry of sufficient variety for all, and it would be inevitable for many of the people to travel from one satellite town to another, or from a satellite town to London. The size of a satellite town has been chosen rather arbitrarily and a more detailed investigation may be useful.

Individual needs for recreation have been recognized and open space has been given prominence, although the problem of equitable distribution does not seem to be completely solved. Again, with regard to open spaces, some doubt may be expressed as to the efficiency of the measures suggested. No difficulty is experienced, even now, in obtaining sufficient open space for those living in the outer rings. It is the people in the suburban and inner urban rings, to some of whom little is available, who will, as explained in 5.F, still have a long way to go to find large green spaces.

5 Does the plan cater for the collective needs of the community?

A. Have educational and general health requirements been considered and allowed to influence the plan?

(1) Has a general educational system been defined as a basis for planning, and has such system been co-ordinated with the planning units?

The educational system has been sketched out for the new satellite towns and it may be assumed that, although it is not specifically mentioned, a similar system would obtain for the whole of the Region. The number of schools of every type and the allocation of land is listed.

(2) Have schools been sited consciously

For suitable distances from furthest homes?

For favourable development of all school activities and for healthy location?

For effective separation from living areas?

For avoidance of traffic on all approaches?

These points are left to detailed planning, but certain suggestions are made about location. Nursery schools are to be spread out. Secondary schools would be partly combined with community centres and partly near the periphery so that they could be joined to green spaces. For a technical college a central situation is aimed at, but playing fields would be separate and near the periphery.

(3) Have the effects of siting residential districts been studied, and have these areas been confined exclusively to healthy sites?

The problem has not been given special mention, but all new satellite towns have been placed on healthy sites.

(4) Has the density of the population been arrived at from a consideration of public health or have other points had greater influence?

Various standards for net density, not counting green space, are set out in the four rings. In the inner urban ring 100 and 75 people per acre, in the suburban ring 50 people per acre, and in the green belt and the outer country ring the density will be so low that no special standard is set. The density in the inner urban ring is arrived at as a compromise with existing conditions in order to keep the decentralisation within certain

ROADS. Before : on the problems of coping with traffic congestion, piecemeal beginnings had been made in the form of parts of a ring road and one or two by-passes shown in dark line. After : the Planner has realized that only a complete new road system will solve the problem. This mainly proposes high speed motorways to the provinces, plus completion of central ring roads and connections.



limits. Seventy-five persons per acre allows a reasonable development of terrace houses, or semi-detached houses and four-storey flats. One hundred persons per acre allows a maximum development of semi-detached houses and very high blocks of flats, or terrace houses and four-storey flats. Fifty persons per acre allows for almost complete development of semi-detached houses.

(5) Have any steps been taken to avoid pollution of the air and to keep residential areas free from noise?

Noise and pollution of the air will be avoided by the new road system, which by-passes all existing communities, at least in the green belt and outer country ring. Even in the inner urban and suburban rings, however, complete separation of these roads from the surrounding districts will be very helpful. As far as industry is concerned, any new development is to be planned in trading estates sufficiently far away from residential areas.

(6) Have health services been planned in detail?

They are mentioned but detailed planning is left to a later date.

B. Has the distribution of goods, with all its ramifications, been duly considered?

(1) Has a complete distribution scheme been worked out?

No. It is mentioned that transport for raw material and manufactured goods, distribution centres for goods, etc., should be surveyed and probably replanned by Local Authorities, but goods distribution has not been considered as a whole.

(2) Has a suitable location of industry within the town been worked out, and is the plan efficient in this direction?

Decentralised industry is located partly near existing centres and partly in connection with satellite towns. Decentralisation refers only to industry in the centre of London and no transfer of industry within the outer ring has been planned apart from relocation of industry now existing on unsuitable sites. Detailed research as to the type of industry for specific sites is left to local planning.

(3) Is such location based on
The labour market?
The reception of raw materials?
Good connections to markets?

The principles of location are based on the Barlow Report, which gives prominence to all the above three aspects. The solution must be a compromise as these three aspects very often contradict each other. On the other hand, the labour market, reception of raw materials and goods in connection with markets, depend very much on planning, particularly decentralisation and transport. While the plan definitely asks for proper location it is questionable whether it can be carried out without considerably more guidance than is given.

(4) Has a suitable policy as to location of warehouses for imported goods, goods for export and goods in transit, been worked out, and is it substantiated in the plan?

(5) Have such warehouses been situated so that no goods traffic need go through residential or administrative areas?

The question of warehouses has not been specifically dealt with, but that might be due to the fact that most of the docks are in the L.C.C. area.

(6) Has a distribution scheme for wholesalers and retailers been worked out, assigning suitably sized shopping centres to various units?

Main and secondary shopping centres have been suggested for the satellite towns. It is also mentioned that many of the existing shopping centres have to be completely rebuilt on similar lines, but the details are left to local authorities.

C. Is there a comprehensive scheme, correlating all means of transport, with a view to cutting out as much unproductive effort as possible?

(1) Has the mutual influence of various transport systems been investigated?

The needs of both road and rail traffic inside the area, and of both combined with air and water traffic, have been recognised, but no attempt has been made to apportion the traffic and to determine how the public will be likely in future to use the different kinds of transport available.

(2) The number of people on the roads should be the minimum possible: Has this principle been clearly stated, and what methods have been suggested to obtain such minimum?

The need to reduce road traffic in the centre of London has not been recognised, and the vast improvement of the roads in the Regional area will in fact tend to have the opposite effect.

(3) Has any attempt been made to co-ordinate internal and external traffic?

This question does not arise, as the centre of London is not dealt with.

(4) Have public conveyances of all types been correlated to form a complete traffic net, using every type of conveyance to its best advantage?

The need is recognised but no detailed scheme is put forward.

(5) Has any attempt been made to reduce the time spent by the individual, either on private or business travel, other than by properly organizing the traffic,

By siting of industry and decentralization?

Yes. The creation of eight new satellite towns with their own industry is for this purpose.

By arranging proper rail connections?

It is recognised that the existing railway net is so loosely woven that it can easily be made use of, but no practical suggestions are made for increasing the efficiency of our out-of-date railways, other than by electrification.

By making road and rail systems easily accessible from all places of work?

For new industry this point has been kept very much in mind, but existing industry is not mentioned.

(6) Is the railway net as suggested in the scheme likely to be used to its maximum capacity and with minimum running costs?

The suggested electrification will increase the capacity of most railway lines, but the fact that no unification of the railway system is suggested and also that the chaos in the centre of London is not substantially improved by the L.C.C. Plan, will have their repercussions on the Regional area.

(7) Have arrangements been made to produce an unimpeded traffic flow on the main roads

By separating through traffic from local traffic?

Yes, some separation is very complete, particularly on the express arteries.

By providing fly-over crossings?

Yes, these have been provided lavishly.

By the arrangement of traffic lights?

Not required in the Regional area.

By means of roundabouts?

Yes, roundabouts are used for sub-arterial roads.

D. Has the idea clearly to separate through traffic from built-up areas been accepted and strictly adhered to?

(i) Have roads been classified according to their uses?

Yes. There are (i) Express arterial roads exclusively for motor vehicles, with flyover crossings only and no frontage development, some of them parkways; (ii) Other arterial roads within the L.C.C. area, which are not so strictly separated, although this was promised in the L.C.C. report; (iii) Special

arterial roads for through traffic, but not separated; and (iv) local roads.

(2) Has the principle of separation been accepted?

Very strictly for the express arterial roads.

(3) Has the above principle been implemented in the plan?

All express arterial roads have been entirely separated from local traffic and are accessible by means of flyover crossings only. In order to carry this out completely new roads have been created. The principle has not been implemented in the L.C.C. area except for the B ring.

(4) What effective means of separation have been employed?

Is there any organisation of precincts closed to through traffic, and with as few connections to the main traffic system as possible?

As most of the roads run through country areas the need for precincts does not arise, except in the inner and suburban rings. The problem has not been dealt with in detail, but it is obvious that precincts will have to be created.

Is there complete separation of main arteries by the provision of riparian green spaces?

Riparian green spaces are recommended for a number of express arterial roads, thus creating parkways. It is suggested that the width of the green space should vary to break the monotony, but the minimum width has not been stipulated.

Are riparian frontages avoided?

If the express arterial roads are parkways no frontages abut on to them.

Is there any arrangement of different levels?

Different levels would be avoided wherever possible, but will become necessary at certain points, particularly at main crossings.

E. Has a picture of the future occupational structure of the Region been drawn up, and have all influences determining the siting of all work been duly considered, and its adequate distribution over the given area been worked out?

(1) Has an occupational survey been made referring to pre-war employment?

Some figures have been abstracted from the Census of 1931 and the main occupations of some of the towns have been listed. A more detailed survey is left to the Local Authority, but no material is available for drawing up a policy of resettlement.

(2) Have the influences which tend to change this occupational background been assessed, and have clear-cut assumptions been made for future planning?

The Barlow Report has been taken as a basis inasmuch as it is assumed that no further industries will be allowed to migrate into the Greater London area. No assumptions have been made with regard to the increase and development of those industries already within the area, in particular the public utility undertakings, nor with regard to commerce and administration.

(3) Have the requirements of all industries with regard to markets, sources of raw material, goods transport and labour, been studied, and an optimum siting plan given?

The principles have been stated and the plan follows very closely the suggestions of the Barlow Report. All detailed planning is left to Local Authorities.

(4) Has the question of the relation between industrial and residential areas been considered?

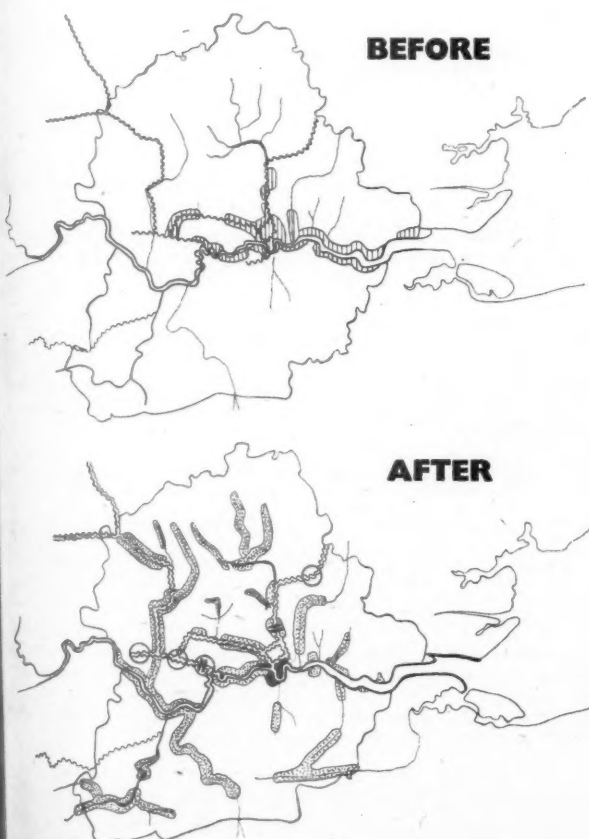
It is accepted in principle that residential areas should be completely separated from industrial areas, but in the satellite towns and the outer rings, industrial areas are to keep very closely to the corresponding residential districts.

(5) In order to improve the layout of industry
Has all industry been separated from residential areas?

For the new satellite towns and where new industry is to be settled near existing centres, residential and industrial areas have been strictly separated, but otherwise it is left to local planning.

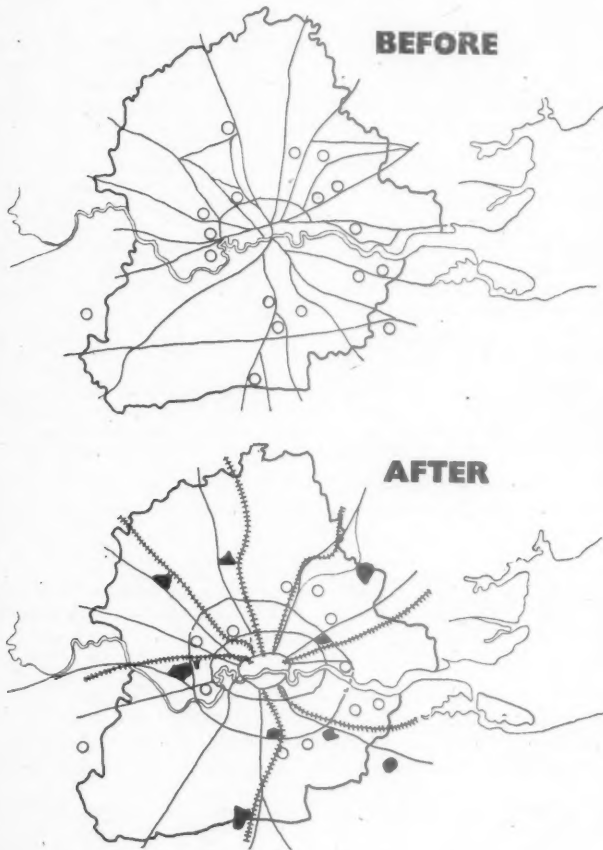
Have industrial estates been visualized for suitable types of industry?

Yes, for most decentralised industry.



WATERWAYS. Before: the original tributary rivers and canals of the Region, shown in line and wavy line, were often obscured by industry and slums which either covered them in or covered them over. After: the Plan proposes to re-open many of these to public view or access through parks and river walks, to overhaul generally, and to encourage suitable new canal industry.

AIRWAYS. Before : there were only a few aerodromes, comparatively small by coming standards, and unable to deal conveniently with main and local flying, and with only indirect connection to central London. After : the Plan proposes a complete system of normal aerodromes and major Air Ports for local and International flying with rail links to the centre.



Has that concentrated industry been placed within easy reach of the goods system, and has allowance been made for the type, weight and perishability of the goods to be moved?

Most new centres and satellite towns are arranged so that they are in the neighbourhood of main railway lines. They can also be connected to the road system quite easily, although this latter point has not been given special mention.

Have measures been taken to provide a sufficient variety of industry on each estate?

Has special transport been planned for workers to reach industrial estates?

This has been left for detailed planning.

(6) Have specific requirements of administration and commerce been investigated? Has it been stated what percentage of this must be local and what percentage central?

This question has no bearing on the Greater London Plan as the L.C.C. area has been dealt with separately.

(7) Has allowance been made in the design of neighbourhood units for local administration?

The principle is set out for the guidance of local planners.

(8) Have adequate suggestions been put forward for centralized administration?

The proposed central planning authority would presumably take over quite a number of the functions now exercised by Local Authorities.

F. Has a clear policy been worked out to cater for leisure requirements, covering the layout of open spaces, provision

and proper planning of community centres and other places of entertainment, recreation and learning?

(1) Has a survey been made by the town planner, assisted by statisticians, medical and education experts, to ascertain the leisure requirements of the people?

No.

(2) Have standards for open spaces been obtained from experts, and has the name of the authority been given for

Public green spaces required?
Recreation grounds generally?

The standards have been arrived at rather arbitrarily, and are given as follows:

7 to 10 acres per 1,000 people in the inner urban and suburban rings. No distinction is made between public green spaces and sports grounds. In the green belt and outer country ring it is left to the Local Authorities to incorporate recreation grounds in local planning.

(3) Have sufficient green spaces been provided, at reasonable distances from residential districts?

For the inner urban and suburban rings, the proposals are rather vague. It appears that there is a deficiency of green space, according to the accepted standards, which must be made up out of the Green Belt Ring. It should be noted that the shortage of 8,273 acres in the L.C.C. area is to be made good from the Green Belt, and not from those areas which adjoin the L.C.C. area, so that some districts will be a good distance from their allotted open spaces.

(4) Has provision been made for people to get out into the open away from the town?

The new road system, outside the L.C.C. area, and the existing railway system, give ample access to the open spaces. They will be of value, however, only if they are supplemented by an adequate traffic policy, particularly for the railways. This has apparently been considered to be outside the scope of this plan.

(5) Have community centres been taken into consideration, combining restaurants, libraries, theatres and so on, and has the planner seen to it that they are reasonably close to residential areas?

This problem has received great attention in the planning of new specimen communities, and is included in the advice given for local planning.

(6) Have sufficient playing fields been laid out and are they in the neighbourhood of schools?

This problem has received great attention in the planning of new specimen communities and is included in the advice given for local planning.

(7) Is there a clear-cut policy giving gardens to those who want them, and allowance for allotment space or communal gardens for those who do not require individual gardens?

The problem has been mentioned and the densities allow ample opportunity for giving gardens to a large proportion of the population.

(8) Have arrangements been made for open-air entertainment, particularly to keep the crowds away from residential areas?

No mention is made of this problem.

(9) Has allowance been made for sufficient variety of entertainment? Has it been appreciated that London is the amusement centre for the United Kingdom and the British Empire, and is an entertainment centre planned?

There is considerable doubt as to whether outlying centres, old or new, will be able to provide sufficient variety and quality of entertainment to satisfy their inhabitants. Although it is doubtful, it has been held that television and travelling repertory companies may change the whole picture.

Conclusions drawn from Question Group 5

There can be no doubt that all the collective needs of the community have been duly considered and advice has been given on how to provide for them. With possibly a few exceptions, this advice is sound, but as it is given in general terms it is too early yet to assess its actual effectiveness.

In detail, it can be stated that if everything is carried out as intended, education and health services will be of a very high standard, satisfying completely the most modern requirements.

The tion is as a worked impossi recent matter now be As f roads benefici a plan ency of plan. respect London arrange the mo and bro A nu The lar serve w should marine suitable This sta cations even if Lack coming, urban r 8,273 ac mately made up and out indicate, while th as a la is even sight. I

OPEN SP taking sh developm recreation footpath

The distribution of goods is referred to as far as detailed application is concerned, but unfortunately is not considered for the Region as a whole. However, it is appreciated that, when the plan was worked out, the uncertainty of the future of transport made it impossible to establish such a distribution scheme. But in view of recent political developments a unified transport scheme becomes a matter of practical policy, and a general distribution scheme should now be drawn up.

As far as traffic in general is concerned, the suggestions for roads, for railways and airfields would in themselves have a very beneficial effect, but it must not be forgotten that the efficiency of a plan of the London Region is very much dependent on the efficiency of the L.C.C. area, although the latter is not dealt with in this plan. The very grave shortcomings of the L.C.C. Plan in this respect will have an adverse effect on the otherwise excellent Greater London Plan. If it were not for this, the ten express arterial roads, arranged regardless of private property interests, would constitute the most modern road system in the world, complete with flyovers and broad strips of green parkland.

A number of aerodromes have been created all over London. The largest is Heath Row, west of Heston, which apparently is to serve world traffic. It is remarkable that such a central aerodrome should have been sited in an area where there are no facilities for marine aircraft, and indeed it is stated in the plan that there is no suitable site for a marine airport in the South East of England. This statement is open to doubt, and for the sake of vital communications it would be useful to select such a place as soon as possible, even if it is outside the actual London Region.

Lack of green spaces in certain areas is still the greatest shortcoming. A deficiency of 4,511 acres in the inner urban and suburban rings, even after decentralization, added to the deficiency of 8,273 acres in the L.C.C. area, is admitted, making a total of approximately 20 square miles. This deficiency, which is only partly to be made up by new public open spaces, and mostly by the Green Belt and outer country ring, is in fact even more serious than the figures indicate, as more than half of it refers to the North East of London, while the South West of London has only a small deficit. Further, as a large part of this green space is scheduled for schools there is even less available for the general public than appears at first sight. It will be found that in the North East area of the inner

urban ring the space that is left is only 5 per cent. of the proposed standard, and, taking the L.C.C. area, the inner urban ring and the suburban ring together, it is still only 32 per cent., even when all the green space promised in the L.C.C. report is really provided.

The suggestions for new public green spaces are very vague, and no exact figures are given for the areas. It is very difficult to take an exact point of view towards the proposals, particularly as the various plans for green spaces do not coincide, but it appears that at the most crucial point, the North East sector of the inner urban ring, only about one-sixth of what is required has been provided.

6 Does the plan stand up to the test of practicability?

A. Has an approximate estimate of the cost of the whole scheme, or the cost in its early stages, been considered and made known, and has any attempt been made to assess the value of the advantages gained?

No answers can be given by a general plan to the detailed questions that are asked in this Question Group. Without going far into detail, some of the advantages which will accrue from improved transport are shown. It is not quite clear whether a more exact economic comparison is intended at a later stage when the details are filled in, but such a balance sheet would be very valuable, if only to prove to the doubters that reasonable planning is invariably economical.

B. Has sufficient thought been given to the working out of reasonable stages for the procedure?

It has been fully realised that many considerations govern the execution of a plan, sociological as well as economic and technical. It has also been noted that a great portion of the improvement in transport will have to be incorporated into the first stage to make the scheme workable. No detailed arrangements for the procedure have been worked out, and as they must obviously depend on political considerations as well as on the working out of the detailed plan, some time will have to elapse before these problems can be approached.

The most promising indication for the realisation of this plan is the suggested administrative machinery, that is, the formation of a Planning Board to supervise all activities and deal with the individual problems through its various branches, such as an Open Spaces Board, a Housing Corporation, and a Regional Public Cleansing Department. Logically the London Passenger Transport Board should be subordinated to this Planning Board as well, but as this is a statutory company the plan is rather vague on this point and concedes that it might be outside this organisation.

It can be assumed that one of the primary objectives of this Board would be to draw up a workable time table for putting the plan into effect in suitable stages.

SUMMARY

In trying to summarise, it may be helpful to consider separately the components of the Greater London Plan, 1944.

(1) Schemes for distribution of population, for transport and for open spaces—in short, for such aspects of the final plan as require to be centrally controlled.

(2) General advice on how to set about planning the London Region—principles which require for their implementation much more research and planning work by the Local Authorities concerned.

(3) A classification of the land and a survey of all the more important towns and villages, including some suggestions about the part they are to play in the future, within the framework of the plan.

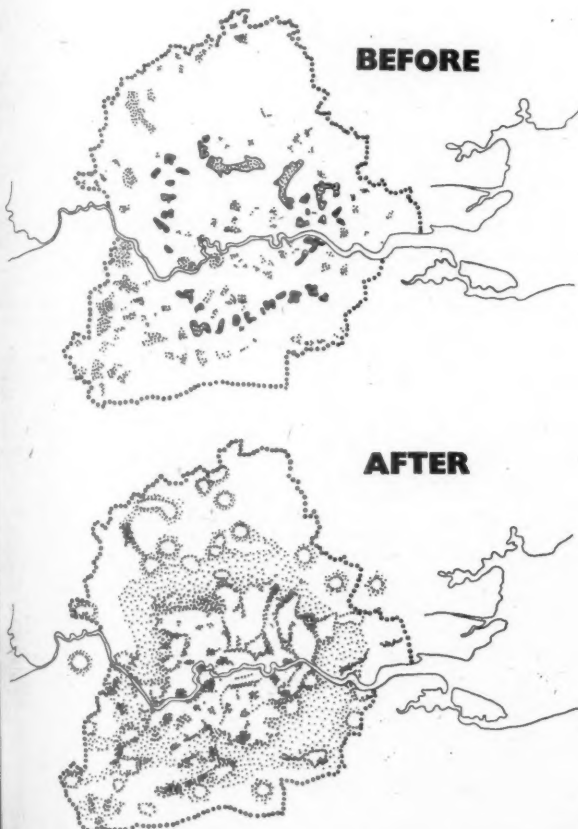
(4) Some examples, worked out in considerable detail, to show the proposed application of the planning principles to typical cases.

Component I

This provides the backbone of the Plan and represents the positive planning actually undertaken. The majority of the suggestions made are sound and will be welcomed, but a number of questions have to be raised, some of them of a principle nature.

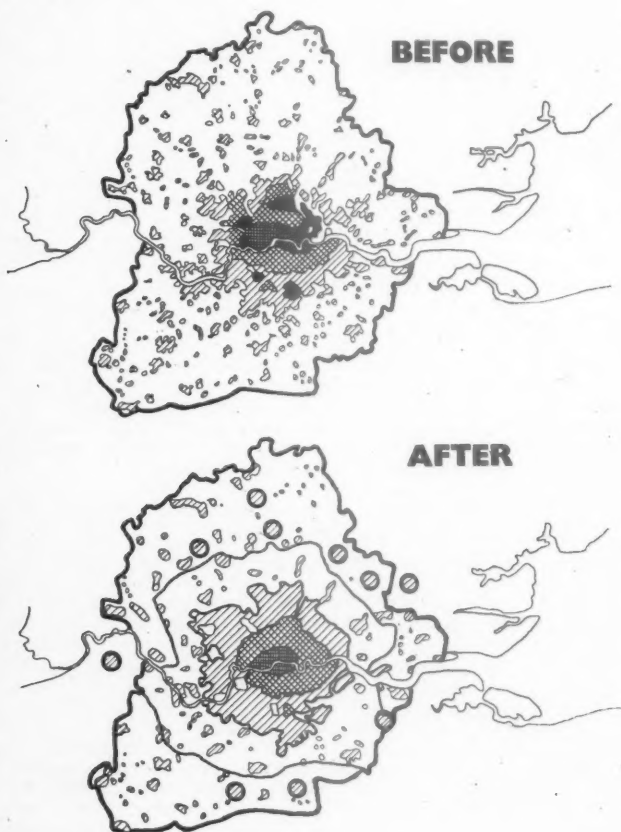
Boundaries of the Region

In the first instance the area selected is defined by an arbitrary set of administrative boundaries, and there appears no justification for treating it as a planning unit. It seems sensible to include any part of the country where a substantial number of people live who either work in the centre of London or spend a considerable part of



OPEN SPACES. Before: by 1939 the idea of the Green Belt was already taking shape round the Regional core. After: by restricting all future building development in the Green Belt zone this will become really effective for recreation. New radial connections are provided as part of a well-conceived footpath system.

DECENTRALIZATION. Before: the centre of the Region is dangerously overcrowded, while large stretches of the outer reaches are sparsely populated. After: a systematic decanting of 680,000 to the outer country ring will give relief.



their leisure time there. Unfortunately, the area this defines does not coincide with the one selected. There is an almost unbroken stretch of industry and housing, with correspondingly good transport facilities, from Maidenhead in the West to Chatham and Rochester in the East, but both these districts are outside the Region planned. On the other hand, towns like Luton and Bishops Cleeve in the North and Guildford in the South, which have almost a complete life of their own and are separated from the built-up area by many miles of unspoiled country, are included in the area. A more logical area could have been chosen for planning, extending further East and West, and not so far North and South, as compared with the London Traffic Area. The northern reservoir of land, which is to contain more than half the proposed satellite towns, may not necessarily provide the best position for them.

The Ring Conception

As to the ring conception of planning, while it is attractive in its simplicity as a principle of growth, its application is only justifiable where there are no topographical features which act either as obstacles or stimuli to force it into a different shape. In the case of London, it must be definitely stated that these rings do not really correspond to the major factors governing its growth. Its geographical position forces London to spread mainly East-West and not equally in all directions. Roman London and Wren's London had this characteristic, and it was only the uncontrolled building of the last 25 years which gave London a circular appearance; but even that is not so circular as the new plan makes out. Consequently, a considerable amount of housing and industry cut right across the areas which are designated as the green belt and outer country ring, and inhabitants of, say, Dartford, Erith and Gravesend in the East, and Southall, Hayes and Slough in the West, will be very astonished to hear that they live in the green belt or outer country ring. Not only are these rings non-existent, but the present trend of industry will never allow them to be created.

If only this idea of rings could be given up the uselessness of ring roads might be appreciated as well. A close study of the traffic density maps given will show that any appreciable through traffic that exists in London runs East-West and is North of the River, while all the other traffic is bound for the centre. Under these circumstances all ring roads, however well planned, will have very little effect on the traffic as a whole.

Occupational Structure.

While it is commendable that the principles of the Barlow Report should be accepted as a basis for dealing with the migration of the industrial population, it has not been recognised—and this, perhaps, is partly the fault of the Barlow Report itself—that London is not, in the first place, an industrial centre, but far more a commercial and administrative one. Even if the recommendation of the Barlow Report not to admit any new industry could be enforced 100 per cent.—an extremely doubtful premise—and even if industries already in London would have no tendency to grow larger—again a hope that will hardly be substantiated—there is still no guarantee that the number of inhabitants can be effectively restricted. If this criticism is considered to be just, a plan must be found which will not collapse if, contrary to expectations, the number of people in London increases, as otherwise, in spite of the best intentions, conditions may soon become as chaotic as they are now.

Alternatively, if it is considered necessary to restrict the number of inhabitants of Greater London, the only way to achieve this would be by more stringent measures than those considered in the Barlow Report and the Greater London Plan, namely by forcibly removing existing industries from the London area, not merely to the outer fringes but to other industrial areas altogether. This, of course, would not only be very unpopular but would completely alter the social structure of London, as its commercial and administrative character would be even more sharply emphasized than before. It is obvious that extensive research is required whatever policy is to be adopted.

Decentralization Trends

The governing principle for the redistribution of the population is decentralization, which here means only relieving the congestion in the centre by settling people near the fringes and decanting some to outlying centres. The degree of decentralization is based mainly on the density figures aimed at in the County of London Plan, figures which have been subjected to considerable criticism. The natural trend of decentralization before the war was such that it might be retarded rather than speeded up by this plan—and it is interesting to note that only a third of the number of people who left London during the war are to be decentralized. If spontaneous decentralization continues or increases, as may be expected, and becomes greater than the number planned for, a new problematic situation will arise which it would be as well to take into account from the beginning.

Satellites and the Traffic Problem

Several methods of implementing the general idea of decentralization can be visualized and their relative success depends very much on transport. Given a suitable transport scheme it is possible to relieve central congestion without artificially limiting the growth and development of London. One alternative is the creation of satellite towns and the development of provincial centres, and this course has been adopted for the Plan; but no research has been published to show that this will, on balance, be the most beneficial solution for the people of the Greater London area, or to prove that such arrangement will in fact result in less time spent in travelling. It is quite conceivable that ever-increasing cross traffic between the satellite towns (due to the fact that they cannot be self-supporting) and between them and inner London, will cause rather more than less waste of time used for travelling.

The road plan would be ideal if only it did not break down in the L.C.C. area. A number of new railway lines have been created which are very useful, but the general problems of goods traffic and of reducing road traffic by the organization of a convenient and adequate railway system which attracts passengers, have not yet been tackled.

Green Spaces

With regard to green spaces, a more radical policy would have been welcome, particularly for the areas in the North-East of London. It is a very dangerous procedure to look at green spaces as a whole, because an abundance in one place can hardly make up for a deficiency in another. To make the North-Eastern areas fit to live in, in a modern sense, one should not hesitate to convert some residential districts into green spaces.

Component 2

This is a very comprehensive statement of planning principles as applied to the London Region, and the planner can be congratulated on the way this task has been discharged. A study of the above questionnaire reveals that there is hardly an aspect of town

planning which has not been given proper attention. All problems are presented in an exceptionally interesting and lucid manner.

Component 3

Part (3) contains first of all a very interesting investigation into the physical qualities of different types of ground and classification according to their agricultural value. If this survey is made the basis of future housing development, always avoiding good agricultural land, the region will benefit in every way. It is rather disquieting to note that almost all the existing industry in London is built on first-class agricultural ground. Furthermore, a thorough and efficient piece of research has been made into the character, problems and future possibilities of the numerous provincial centres in the outer ring of the Region. Such a study is indispensable if justice is to be done both to the Region as a whole and to local aspirations in particular. The general recommendations in each case are naturally coloured by the main principles underlying the Plan.

Component 4

The examples chosen are Ongar, a new satellite; Hatfield, an enlarged existing centre; and West Ham, a suburb properly

redeveloped. They are all based on the principle of community and neighbourhood structure, and should provide local planning authorities with ample and tangible proof of the possibility of applying the general principles of the Plan to particular local circumstances and problems.

Merits of the Plan

The chief merits of the Plan are perhaps to be found in the general boldness of the approach, in the fact that the problem of the Region as a whole is always kept in mind, that decisions are at this stage made only in respect of matters which must be dealt with by a central authority, that machinery is proposed to create such central authority as a permanent institution, and that plenty of scope and encouragement is given to Local Authorities for preparing the many detail plans still required.

It is in the field of initial research into London's occupational structure, and the exigencies of its political and physical geography, that the Plan may be found controversial or deficient, and all depends on these foundations being rendered completely unassailable. With such a unique opportunity before us it would be disastrous if a serious misjudgment of any basic assumption were discovered when it is too late.



West Ham : study of two neighbourhoods each of 8,000 population, in the inner urban ring. 75 per cent. of the people in two-storey houses, 25 per cent. in two-storey flats.



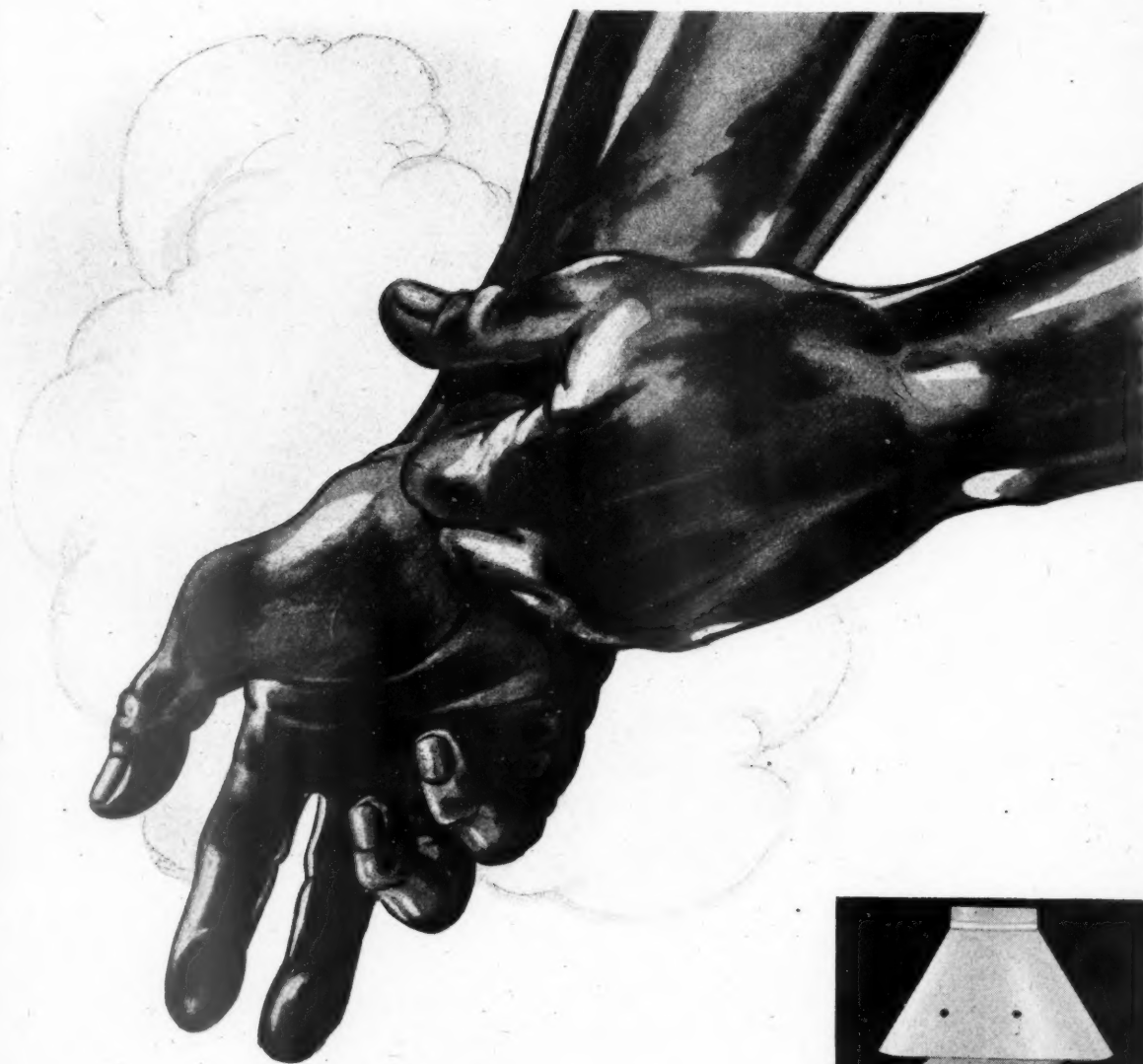
West Ham : a design by Peter Shephard, a member of the group under Sir Patrick Abercrombie, for terrace houses and blocks of flats near West Ham Park.



Above: a view of the proposed new satellite town of Ongar. Right foreground is Greensted Park with the Community Centre and Avenue leading to the village. Right: the recreational centre at Broxbourne on a flat site in London's Green Belt, with main road and rail access designed as a public park with lakes formed in reclaimed gravel pits and extensive tree planting.



A view of the Lea Valley Green Wedge looking south towards London, with the Broxbourne Park in the foreground, and the Green Wedge narrowing towards the Thames-side Industrial area in the background.



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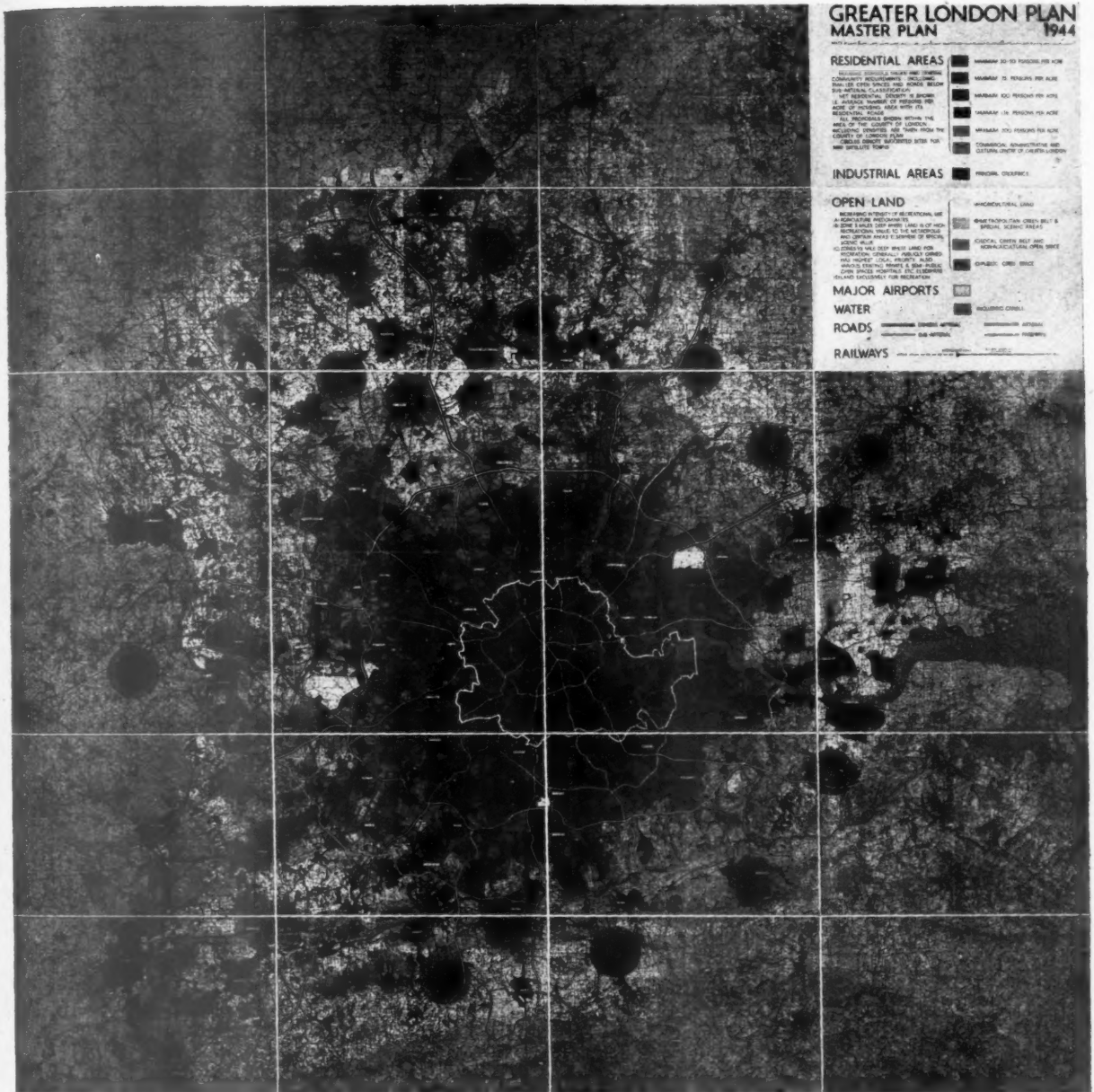
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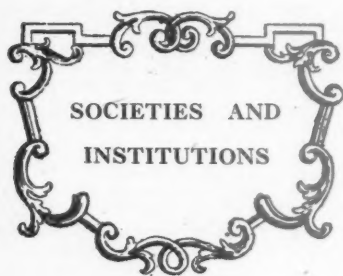


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F A R N H A M R O A D S L O U G H B U C K S



In the Exhibition at the Institution of Civil Engineers this Master Plan covered the whole of one wall of the room. It was well coloured and was displayed in such a way that every detail was visible. It gave an excellent idea of how the various components of the plan—decentralization, arrangement of green spaces, road system, etc.—could be combined into a whole. It was felt incumbent to reproduce this plan as an illustration to the analysis, but the restriction of size and the lack of colour have greatly reduced its effect. Because of its vast size the original map had to be made in sections and the lines where these sections were joined together were then used as a scale. Even on this reproduction the relationship between the express road system, satellite towns and green spaces, can be seen.



Speeches and lectures delivered before societies, as well as reports of their activities, are dealt with under this title, which includes trade associations, Government departments, Parliament and professional societies. To economize space the bodies concerned are represented by their initials, but a glossary of abbreviations will be found on the front cover. Except where inverted commas are used, the reports are summaries, and not verbatim.

TPI

A. V. Williams

At the Town and Country Planning School, Bristol, sponsored by the Town Planning Institute. Talk on PUBLIC EDUCATION IN PLANNING, by A. V. Williams, B.A. (OXON.), Town Clerk and Solicitor of Bilston.

A. V. Williams: It is generally accepted that only a relatively small minority in the country are politically conscious; people are usually more concerned with what they regard as their own affairs than with matters of public concern. The years of war, in identifying personal fortunes with state policy, have not modified the essential truth of the general lack of interest in social and political affairs but have merely served to emphasise the fact that the public mind can be adapted to events of disturbing excitement. It may well be, unless great efforts are made now to continue the identification of social aim with individual well-being, that the public will relapse into a routine of habit and thought which dissociates itself from social and political participation. That is the political climate to which planning aim must adjust itself. And planning has come to mean in the public mind town and country planning. According to a most illuminating trilogy of articles recently published in *The Times*, "Town and Country Planning has become a greatly enlarged conception; indeed it has assimilated some part of the large notion of planning and made it its own. . . ." "The old notion of such planning as the control of development in the interests of health and amenity has given place to the idea of controlling the use of land so as to harmonise all the main interests that are dependent on its use—the health and well being of cities, agricultural use and industrial development and national amenities. . . ."

In effect, *The Times* has summarised for its public the aims and hopes of those who have followed in the footsteps of Patrick Geddes whose beliefs now inform, in so many instances, the plans for the development and reconstruction of our cities and towns. To suggest, however, that the public understands and believes in the need to trace the organic pattern in the bricks and mortar of existing town decay in order to rebuild the new communities which are the answer to the evils of concentration, or believes in the necessity of producing a proper balance in the allocation of land for homes, open space and industry, is to suggest an idea which the facts will not support. At the present time, the relationship of this planning to houses does not concern the common man. There is no question of priorities in this field; he wants a house and in his need he is little concerned with the culture of cities, although he vaguely realises that good housing and good planning are not disconnected. And yet the Geddesian conception of planning together with the premise of the Marshallian economics that land is a "factor of production" has taken hold and, in some cases, is now being translated into action.

The aim of the planning agencies, it must be presumed, is not merely to reconstruct our towns and cities on the community principle as an end in itself but, essentially, so that in the new environment the individual may be able to reach out to a fuller and more useful life and play a greater part in civic affairs. Thus, Planning is Politics, and in this context its aim is towards a new culture.

The new positive conception of planning is already discernible in the legislation of the war years, and the Ministry of Town and Country Planning has tried to bring home to local authorities the new policy. In the instance of planning, at least, it is not public opinion which has informed legislation but rather the enthusiasm and perseverance of a school of thought. It would be hazardous to suggest that the representatives of the public serving on local government authorities throughout the country and officials too, are fully appreciative of the significance of the new conception of planning. Presumably the setting up by the Ministry of Regional Officers, and the meetings of planning associations, are intended to supply information to those ultimately concerned with the practical realisation of planning theories. Therefore when the problem of planning and public education is raised, the fear immediately arises whether the local authorities, who are to carry out plans of redevelopment, are all informed of the scope of planning so often defined by those, who have given a lifetime to its study. The need therefore for persisting in the publicising of planning aims is a compelling necessity. The rebuilding of our towns is about to begin in accordance with plans, evolved during the war years and, unfortunately in too many cases, with the idea that wherever there is a piece of available land there shall the houses go.

PUBLIC EDUCATION AND THE PLANNER

It has taken over thirty years to achieve the acceptance, in town planning practice and legislation of the thought which Patrick Geddes evolved: education is a continuous process and does not produce quick results. There is a danger that a wrong emphasis may be placed upon the nature and efficacy of education in relation to planning in so far as the planners may seek in the failure of public response to planning practice an alibi for the social failure of their own architecture and their own layouts. The only effective education for the public in planning is through the actual processes and products of planning. The lack of interest in civic design and planning in the past and incidentally the lack of interest in civic affairs and the

politics of everyday life, has surely arisen through the poverty of educational material. So much of our planning and architecture in the past, and not least in the inter-war years, has been concerned with the production of the stereotypes of dead culture. Past planning and architecture has not been concerned with structures which serve a high human standard or individual opportunity. Even the least imaginative finds little difficulty in discovering through the town environment, the lack of cultural aim in Industrial Britain—it is a negation of human dignity and is the expression of artificial aims in which humanity has not been the end but the means. Nor can one persuade the public that a plan is good or make them politically conscious through the media of film, radio and press. These merely serve to confirm the impression of personal experience. The public will make a contribution to planning and planning will become a part of public opinion, only when the idea of community building is put into operation and the planners, through structural form, have shown that they have really understood the theories which they have talked about. If they can translate their belief and aim—the subordination of all form to human use and need—into structural terms, they will soon reap their reward in public response.

To-day the lack of interest in local affairs is due to the concentration of the town organization. Interest and control fall into the hands of sections. That democracy upon which so much piety is expended, appears in the public mind as the periodic recourse to the polling booth. For the common man, the opportunities for social participation are lacking because the forms of government and the access to its activity are remote. The planners must therefore understand that if they are seeking to establish a new culture and a new interest in civic life through its architectural form, it will be essential to break up the present urban concentrations and develop the new communities in terms of decentralized units. Decentralisation is the key to public participation; not merely physical decentralization but also the social and political decentralization that must accompany it. The tendency in local government circles to seek the abolition of the small local government units and to replace them with administrative units which are larger in area, in no way conflicts with the policy of decentralization in planning practice. In terms of local government, the large unit can achieve the decentralization at which the planners aim, provided the principle of community building is accepted.

It is useless to expect people to be interested in civics unless, quite apart from the possibility of being a representative on the local Council, they are given something to do. In some circles it is considered that there is a tendency on the part of the present day planners to devise their community centres in terms that are too grandiose; in a manner, so to speak, reminiscent of the monument.

There are objections that in some of the plans now projected, not enough small community buildings are to be provided, or too much insistence is being placed on the grouping of certain sections of the community together, thus emphasising their peculiarity rather than their social usefulness—as, for instance, the conventional grouping of old persons cottages on the new estates.

In some cases, it is felt that there should be small one room libraries set up on the new estates which could be managed voluntarily by members of the community. The one fine clinic, one fine community centre, one fine library, etc., may not be the answer; perhaps a number of small buildings for each class of activity should be provided. All the community buildings need not be regarded as essentially suitable for the grand civic opening complete with mayor and corporation.

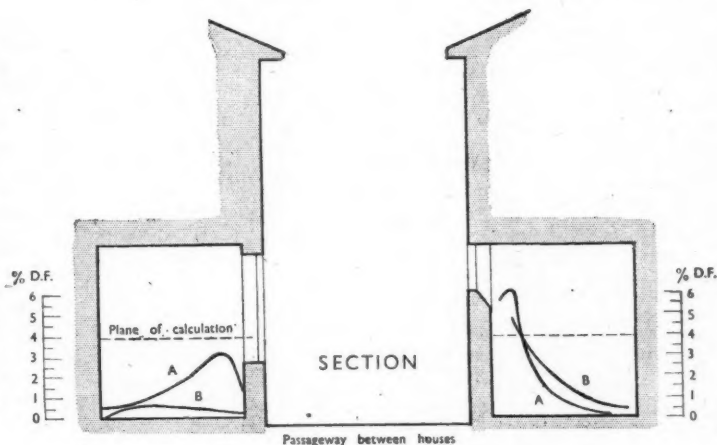
BUILDING FOR DAYLIGHT

No. 14 FACTS FOR ARCHITECTURAL STUDENTS

DAYLIGHTING IN HOUSES:

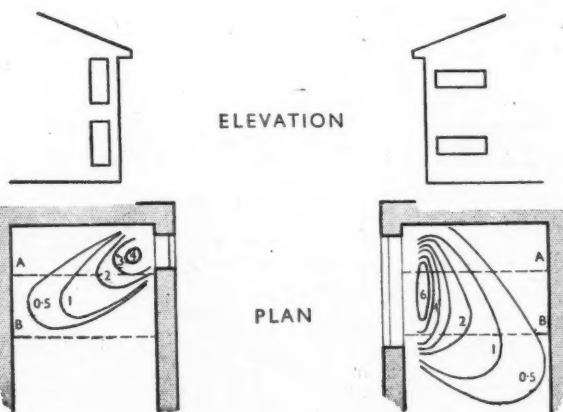
The position and size of windows in rooms, as well as the transmission factors of the window glass, determine the quantity and quality of daylight in interiors.

The daylight factor at a point indoors is the ratio, expressed as a percentage of the daylight received at that point, compared with that obtained from an unobstructed sky. In these examples, the method used for calculating daylight factors takes no account of any reflected light, therefore, in each instance, the actual quantity of daylight would be higher than that indicated.



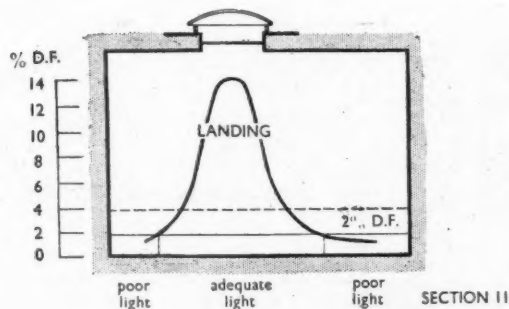
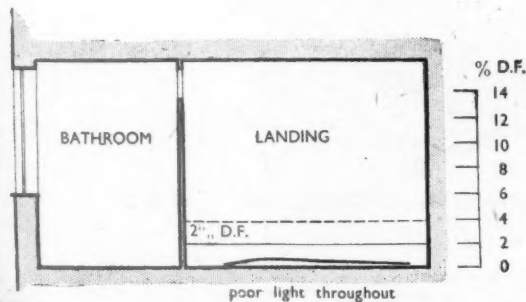
(1) Lighting the hall of a semi-detached house.

A long shallow window, set high up in the wall, gives greater quantity and better penetration than a high narrow window. The effect is increased by splaying the cill, and a splay on the side reveal of the vertical window would considerably improve daylight penetration to the back of the hall.



(2) Lighting an internal first floor landing.

This is commonly lit by a fanlight in the back wall of the bathroom. Even if this fanlight is extended to the full width of the bathroom wall, as shown in Section I below, the borrowed light thus obtained is inadequate. Where possible, a roof light is the better alternative; high intensity of daylight occurs immediately below it, and though this decreases rapidly from the centre, there is still adequate lighting over the whole of the landing, as shown in Section II.



SECTION I

SECTION II

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These are a few indications of the kind of problem with which the planner is faced in his approach to decentralization. The response in active public participation will be the measure of his failure or success to deal with it imaginatively.

THE POLITICAL BASIS AND INFORMATION MEDIA

It would be wrong to assume that pending the realization of existing plans there is no need for the planners to concern themselves with educating opinion. The popularity of such publications as the Forshaw-Abercrombie plan indicates the deep interest aroused in a considerable section of the public. But the question arises as to whether there is sufficient weight and influence already existing to speed up planning legislation to the point where it can be said honestly to have dealt with the problems of land ownership and control, and industrial location. The solution of these problems is basic to the new planning and consequently the need for creating an effective legislative reaction is paramount. The solution may be supplied by widening the range and insistence of public demand through information supplied by the planning agencies.

The enthusiasm resulting from the cessation of hostilities, whilst it serves to mitigate, does not eradicate the friction in the machinery of planning caused by fears that we cannot afford to plan on the scale now contemplated, or that planning is a restriction of individual freedom. Such inadequacy of legislation and such fears and doubt may hinder the realisation of plans now prepared. An intensive publicity campaign, to break down the fallacies, carried out objectively through the normal publicity media of press, film and radio, is urgently needed since time itself and space are now foreshortened.

A national emergency which would impart essential information on planning matters so that the way could be cleared for the realization of plans is at present lacking, but the work carried out in the war years by many private organizations and public planning societies has been useful, although lacking in central co-ordination.

The speed up and improvement of local plans could be greatly facilitated through the formation of Public Relations Committees working through a Public Relations Officer.

But the function of Information Agencies for planning purposes, whether at the national or the local level, should not be concerned with the advocacy of any policy. Their function should be restricted to the elucidation of planning activity and should in no way dispense with the free access of the press to the persons responsible for the execution of the policy. The hand-out of standardized news is a failing which seems naturally to attend the operation of official publicity. It is above all necessary for the press to be allowed to interpret policy.

The education of the public on these lines and by the same agencies through the media of film and radio must undoubtedly assist a greater and a wider understanding of planning, but they are merely means to an end. But this machinery acting through the conventional media is more useful in assisting the creation of law-making opinion than in providing the education for a new society, and it is not through those means alone, detached from the environment that planning can create, that planning becomes public opinion. If criticism of present day publicity methods may be offered it would be that there is a tendency on the part of planners to believe that presentation in explanatory or argument form through the film, press and radio is the beginning and

end of public education in planning.

The appropriate legislative background to the planning aim is presumably responding to ideas persistently expounded through group discussion and the conventional publicity media. What must always be taken into account is that often neither argument nor reason but rather the circumstances in which men are placed will create public opinion.

SURVEY AS EDUCATION

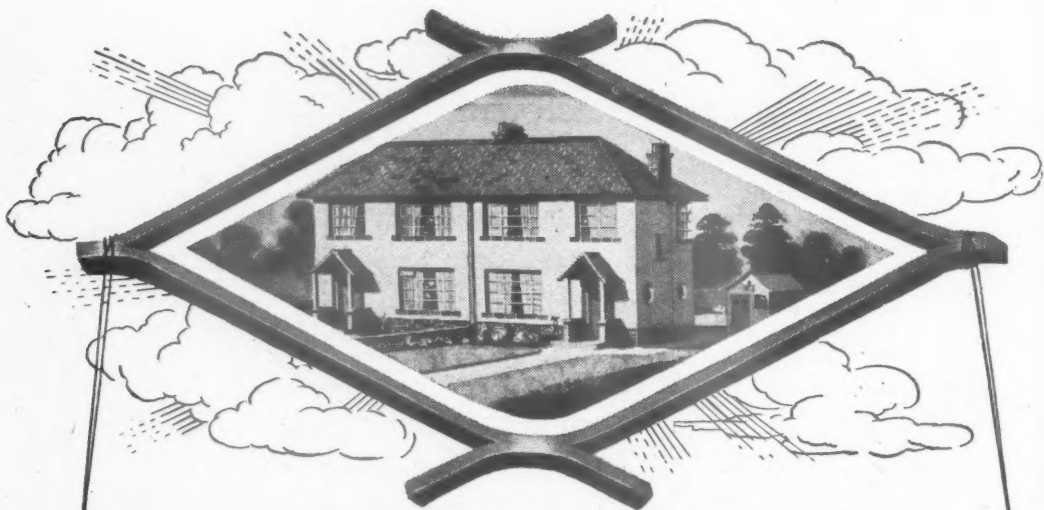
The stages of planning fall naturally into four clear divisions: (1) The Survey; (2) The evaluation or analysis of the survey data; (3) The interpretation of the data into structural form—which is the plan proper, and (4) The absorption of the plan into the life of the community. At each stage the public can play its part and at each stage not only the public but the members of local authorities, can be educated.

The teaching of the methods of social survey is one which the Ministry of Education might do well to examine with the Ministry of Town and Country Planning with a view to introducing it into school curriculum.

The relationship between the school and the planning idea embraces in their intellectual affinity the fact that the planners regard the school as the community nucleus; it is no longer a mere afterthought.

CONCLUSION

The confusion that appears in the educating of the public arises perhaps through a failure to differentiate between the aims of planning (upon which all are agreed) and the means of their achievement. There is a failure too in the refusal to recognise the distinction between educating the public in order to produce law-making opinion, which in the circumstances is urgent, and the wider education which involves a new attitude of society.



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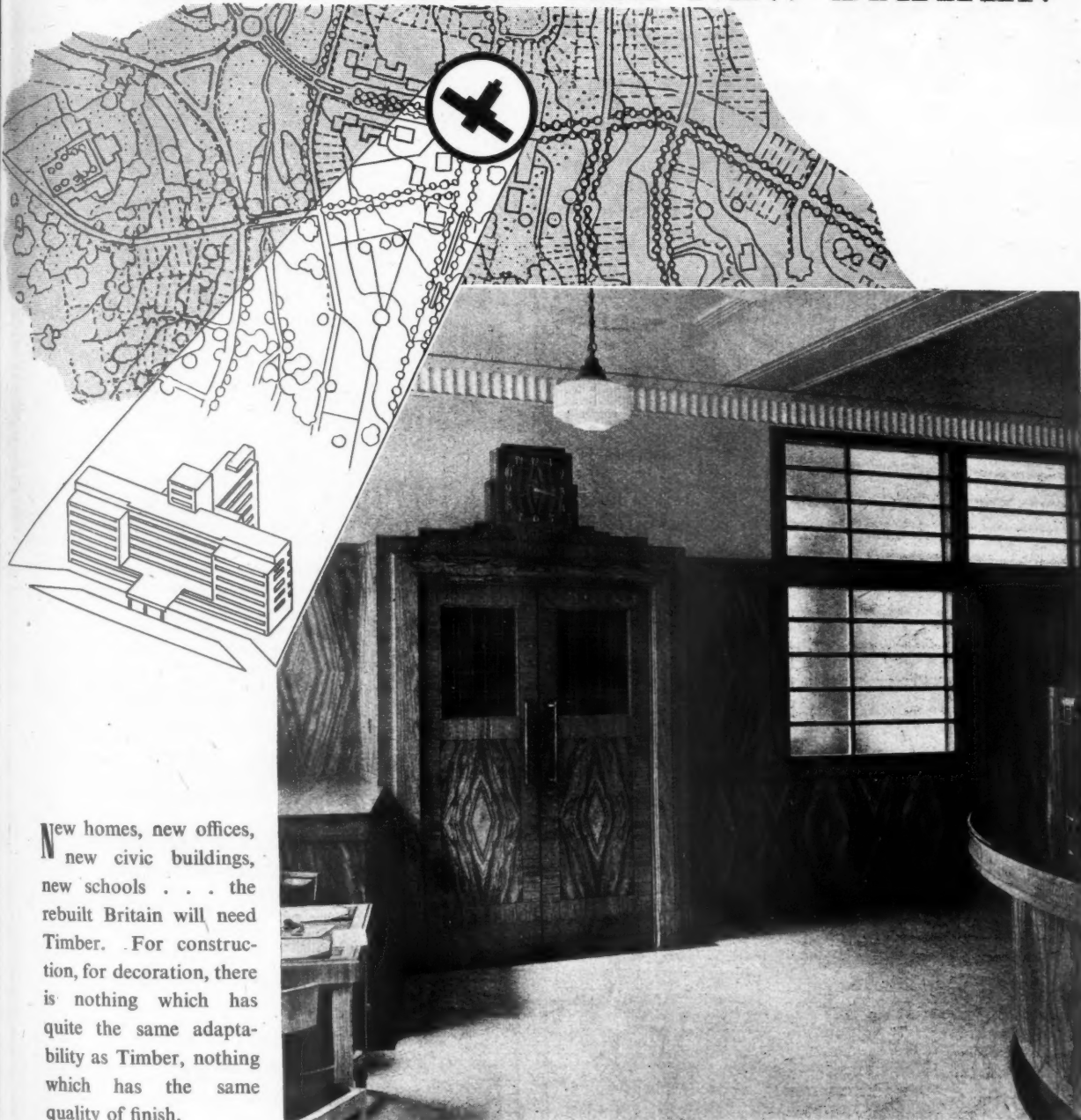
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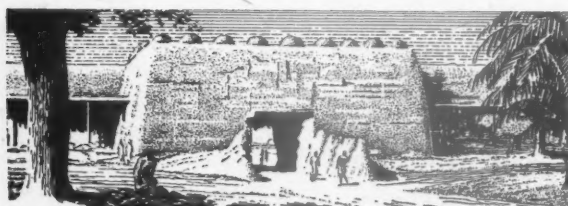


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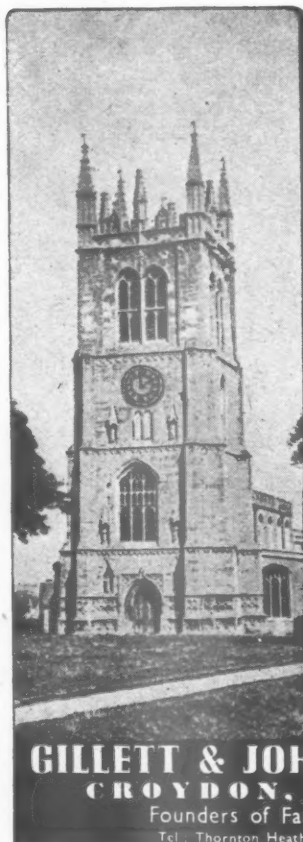
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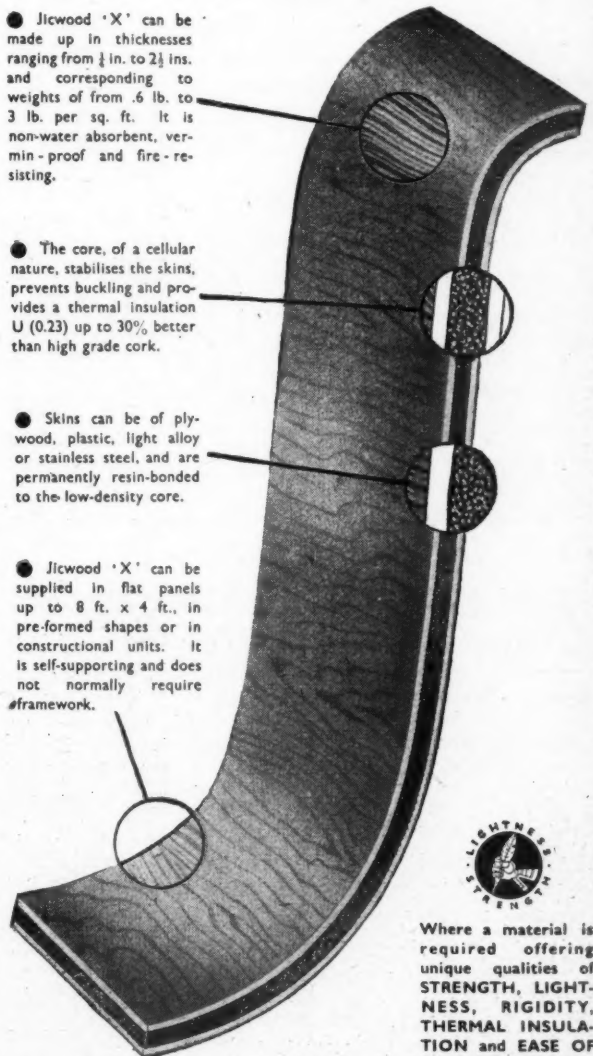
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Applicants should be A.R.I.B.A.'s, and have had considerable experience in one of the above subjects. The persons appointed under (a), (b) and (c) will have control of the respective sections, and must co-operate in the preparation of the Town Plan. Experience in town planning will be an advantage.

The appointments are whole time, terminable by one month's notice in writing on either side, and subject to the Local Government Superannuation Acts, 1937/39. Successful candidates will be required to pass a medical examination.

Application forms can be obtained from Thomas E. North, F.R.I.B.A., Borough Architect and Planning Officer, 100, West Ham Lane, E.15, and applicants must state clearly for which post they are applying. Forms to be returned to above not later than 7th November, 1945.

Canvassing members of the Council is prohibited, and will disqualify applicant.

CHARLES E. CRANFIELD,

Town Clerk. 785

PRESTON REGION JOINT TOWN PLANNING COMMITTEE.

APPOINTMENT OF TOWN PLANNING AND SURVEYING ASSISTANT.

Applications are invited for the appointment of a Town Planning and Surveying Assistant, at the salary of £300 per annum, rising by annual amounts of £25 to £350 per annum (plus war bonus).

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and will be terminable by one month's notice on either side.

Experience in general surveying work for a town planning office, with good experience in revision of ordnance sheets and preparation of basic surveys, essential. Preference will be given to Associate Members (by examination) of the Town Planning Institution and/or the Institute of Municipal and County Engineers and to ex-Service men who have had experience on the class of work mentioned above.

Applications, giving full personal details, present position, and outline of experience, together with copies of three testimonials and two additional references, to be received by me not later than Saturday, 17th November, 1945.

HERBERT E. NUTTER,

Clerk to the Committee.

Municipal Building, Preston, Lancashire. 791

CORNWALL COUNTY COUNCIL.

Applications are invited for the post of ASSISTANT in the Architectural Department, at an annual salary from £300 to £360, according to qualifications and experience.

Forms of application may be obtained from the County Architect, County Hall, Truro, to whom applications must be sent not later than Monday, the 12th November, 1945, accompanied by copies of three recent testimonials.

L. P. NEW,

Clerk of the County Council.

County Hall, Truro. 19th October, 1945. 811

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Applicants should have had extensive experience in County Planning, and should have passed the final examination of the Town Planning Joint Examination Board, and, in addition, they should have obtained a B.Sc.(Eng.) degree or have passed the final examination of either:—

(1) Institution of Civil Engineers.

(2) Institution of Municipal and County Engineers.

(3) The Royal Institute of British Architects.

(4) The Chartered Surveyors' Institution.

Applicants must not be over 45 years of age on the 1st day of December, 1945, unless they have exceptional qualifications, and are already in the permanent employment of a Local Authority. Both appointments are subject to the Local Government Superannuation Act, and the successful candidate will have to pass a medical examination. The appointments will be subject to the County Council's general conditions of service, and will be determinable by one month's notice on either side.

Applications, accompanied by three recent testimonials, in a sealed envelope endorsed "County Planning Appointments," should be delivered to the County Planning Officer, Glamorgan County Hall, Cardiff, not later than 12th November, 1945.

Canvassing, either directly or indirectly, will be a disqualification.

Applicants who are members of H.M. Forces and serving abroad are requested to cable the date of the despatch of their application. Telegraphic address: "Morgannwg, Cardiff."

D. J. PARRY,

Clerk of the County Council. 794

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Applications, stating age, qualifications and experience, and giving the name and addresses of three persons to whom reference can be made, and endorsed "Technical Assistant," should be sent to the Surveyor and Water Engineer, Town Hall, Skipton, not later than first post on Monday, the 12th November, 1945.

The Ministry of Labour and National Service have given permission under the Control of Engagement Order, 1945, for the advertisement of this vacancy (E.2073X).

K. B. ROBINSON, B.Sc.(Eng.).

A.M.Inst.C.E.,

Acting-Clerk of the Council, Surveyor

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Town Hall, Skipton, Yorks (W.R.). 822

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M. HARVEY,

Clerk of the Council.

Council Offices, 29, West

Borough, Wimborne, Dorset. 816

LONDON COUNTY COUNCIL.

Required in the Senior and Secondary technical departments of the Brixton School of Building, Ferndale Road, S.W.4, a full-time TEACHER OF DESIGN. Candidates should possess the A.R.C.A. or similar qualification, and be capable of training students for the Ministry of Education examinations for the National Diplomas of Design in Painting and Decorating and Interior Decoration. A knowledge of modelling and design for plasterers would be a recommendation. The successful candidate will be required to take up his duties on 1st January, 1946. Appointment will be temporary, and subject to Burnham Scale, together with London allowance and additions for qualifications as applicable. Application form T.1/40, County Hall, S.E.1 (stamped addressed envelope necessary), returnable by 14th November, 1945. 794

URBAN DISTRICT COUNCIL OF FELTHAM

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of Architectural Assistant in the Engineer and Surveyor's Department, at a salary of £500-£550 per annum, plus cost-of-living bonus (at present £59 19s. per annum). Applicants should be qualified architects, and have had experience in the preparation of plans, specifications, and quantities for public and domestic buildings, and preference will be given to persons with experience in the preparation of housing schemes. The appointment will be subject to one month's notice on either side.

Forms of application may be obtained from the undersigned, and should be returned, accompanied by copies of not more than three testimonials, not later than 5th November, 1945.

Canvassing is prohibited, and applicants must disclose in writing whether to their knowledge they are related to any member of or the holder of any senior office under the Council.

J. S. SYRETT,

Clerk of the Council.

Council Offices, Feltham, Middlesex. 790

NORTHAMPTONSHIRE COUNTY COUNCIL.

PLANNING ASSISTANTS.

Applications are invited from members of H.M. Forces and others for the following Technical Appointments on the permanent staff of the County Planning Department:—

(a) TECHNICAL ASSISTANT. At a salary of £350-£412 10s.-£400 per annum, plus war bonus, as authorised by the Council from time to time.

(b) TWO JUNIOR ASSISTANTS. At a salary of £200-£210-£250 per annum, plus war bonus, as authorised by the Council from time to time.

Applicants for (a) should have had experience in the preparation of planning schemes, and preference will be given to those candidates who possess qualifications of the Town Planning Institute.

Applicants for (b) should have had experience in the preparation of planning schemes, and be neat and expeditious draughtsmen.

The successful candidates will be required to provide and maintain a motor car for use in connection with their duties, for which an allowance will be paid, in accordance with the Council's scale.

The appointments will be subject to the provisions of the Local Government Superannuation Acts, and the candidates selected will be required to pass a medical examination.

Applications, endorsed (a) "Technical Assistant" and (b) "Junior Assistants," stating age, qualifications and experience, past and present appointments, accompanied by a copy of one recent testimonial, and the names of two persons to whom reference may be made, must be submitted to the Acting County Planning Officer at the address below, not later than the 10th November, 1945.

J. ALAN TURNER,

Clerk of the County Council.

County Hall, Northampton. 805

COUNTY BOROUGH OF BARNSELY.

APPOINTMENT OF ASSISTANT ARCHITECT.

Applications are invited for the appointment of an Assistant Architect on the Borough Engineer and Surveyor's staff.

The salary will be £360 per annum, plus war bonus, rising subject to satisfactory service by increments of £10 to £400 per annum, in accordance with the Corporation's grading scheme.

The applicant will be subject to the Local Government Superannuation Act, and the successful applicant will be required to pass a medical examination.

Applications, stating age, qualifications, and experience, together with copies of two testimonials, should reach the Borough Engineer and Surveyor, Town Hall, Barnsley, on or before 6th November, 1945.

A. B. GILFILLAN,

Town Clerk. 814

CITY OF LEEDS.

CITY ENGINEER'S DEPARTMENT.

Applications are invited for the appointment of a **PLANNING ASSISTANT**, at a commencing salary of £400 per annum, plus cost-of-living bonus (at present £59 16s. per annum). The maximum salary for the post is £450 per annum, and the first increment of £25 will have effect on the 1st April following the completion of twelve months' satisfactory service.

Applicants should be Corporate Members of the Town Planning Institute, and have had considerable experience in the preparation and administration of Planning Schemes.

Preference will be given to candidates who also possess an engineering, architectural and/or surveying qualification.

The post is subject to the provisions of the Local Government Officers' Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

Applications on the forms provided, which are obtainable from the undersigned, to be delivered not later than 20th November, 1945, accompanied by copies of not more than three testimonials.

Canvassing in any form, either directly or indirectly, will be a disqualification.

W. S. CAMERON, M.Inst.C.E.,
City Engineer.

Civil Hall, Leeds.

CITY OF BIRMINGHAM EDUCATION COMMITTEE.

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DEPARTMENT OF BUILDING AND STRUCTURAL ENGINEERING.

Applications invited for the following posts. Salary in accordance with New Burnham Technical Scale.

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(2) **LECTURER IN BUILDING SCIENCE** to teach this subject in Building and Civil Engineering Courses. Applicants should have a degree in Science, preferably General Science or Physics.

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P. D. INNES, Chief Education Officer.

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PERMANENT HOUSING.

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Plans, specifications, etc., may be obtained from the Council's Architect, Mr. R. Arthur Jones, "Bwthyn-Hedd," Llanfyllin, Mont., upon payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide tender and the return of all plans and documents.

No contract will be entered into until the sanction of the Welsh Board of Health has been received.

Sealed tenders, endorsed "Housing Tender," should reach the undersigned not later than Monday, 12th November, 1945.

GLYN JONES,

Clerk to the Council.

Rural District Council Offices, Llanfyllin.

17th October, 1945.

819

Architectural Appointments Vacant
Four lines or under, 4s.; each additional line, 1s.

Wherever possible prospective employers are urged to give in their advertisement full information about the duty and responsibilities involved, the location of the office, and the salary offered. The inclusion of the Advertiser's name in lieu of a box number is welcomed.

SENIOR ARCHITECTURAL and Surveying Assistant required by London Property Company; good general London experience essential; prospects of permanency; commencing salary about £450 per annum. Full particulars of experience, age, etc., to Box 787.

ARCHITECTURAL ASSISTANT required, aged about 25, capable of preparing working drawings, etc., under supervision for high priority housing. State experience, salary required, and position regarding National Service, to D. C. Denton-Smith, L.R.I.B.A., 40, Regent Street, Cambridge.

JUNIOR ARCHITECTURAL ASSISTANT, over 20, required for Birmingham's Architect's office; state experience and salary required. Apply telephone, Birmingham Central 3628, or write Box 788.

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REGISTERED ARCHITECT, Dipl. Arch., aged 23, requires responsible position; in London or North-West England; salary required, £500. Box 169.

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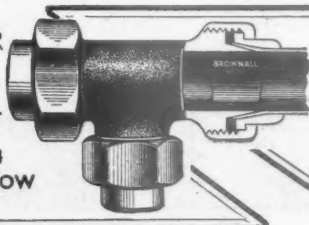
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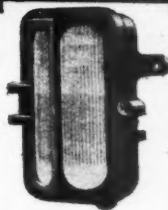
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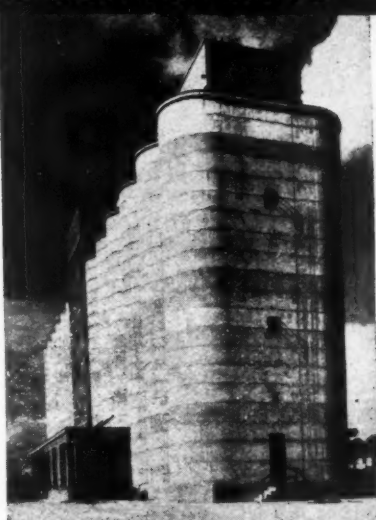
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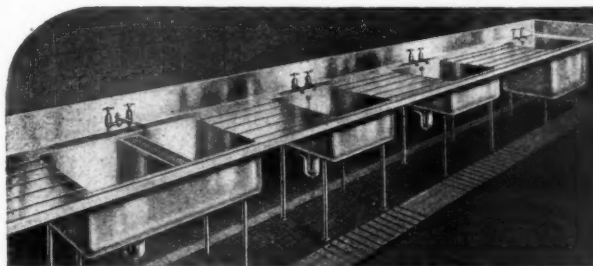


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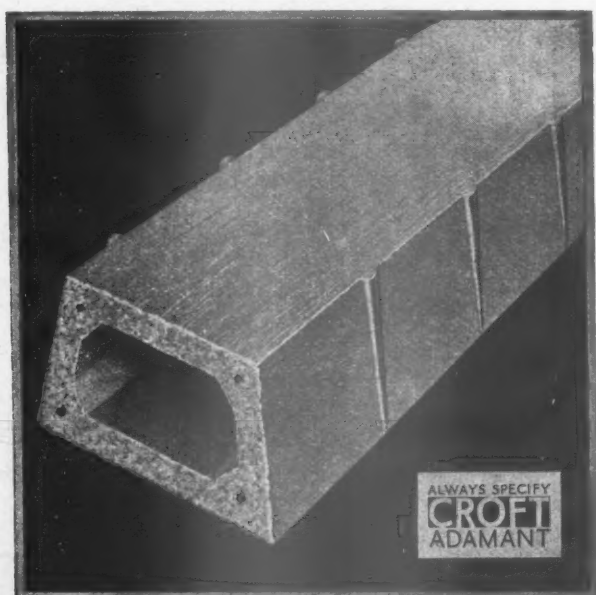
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