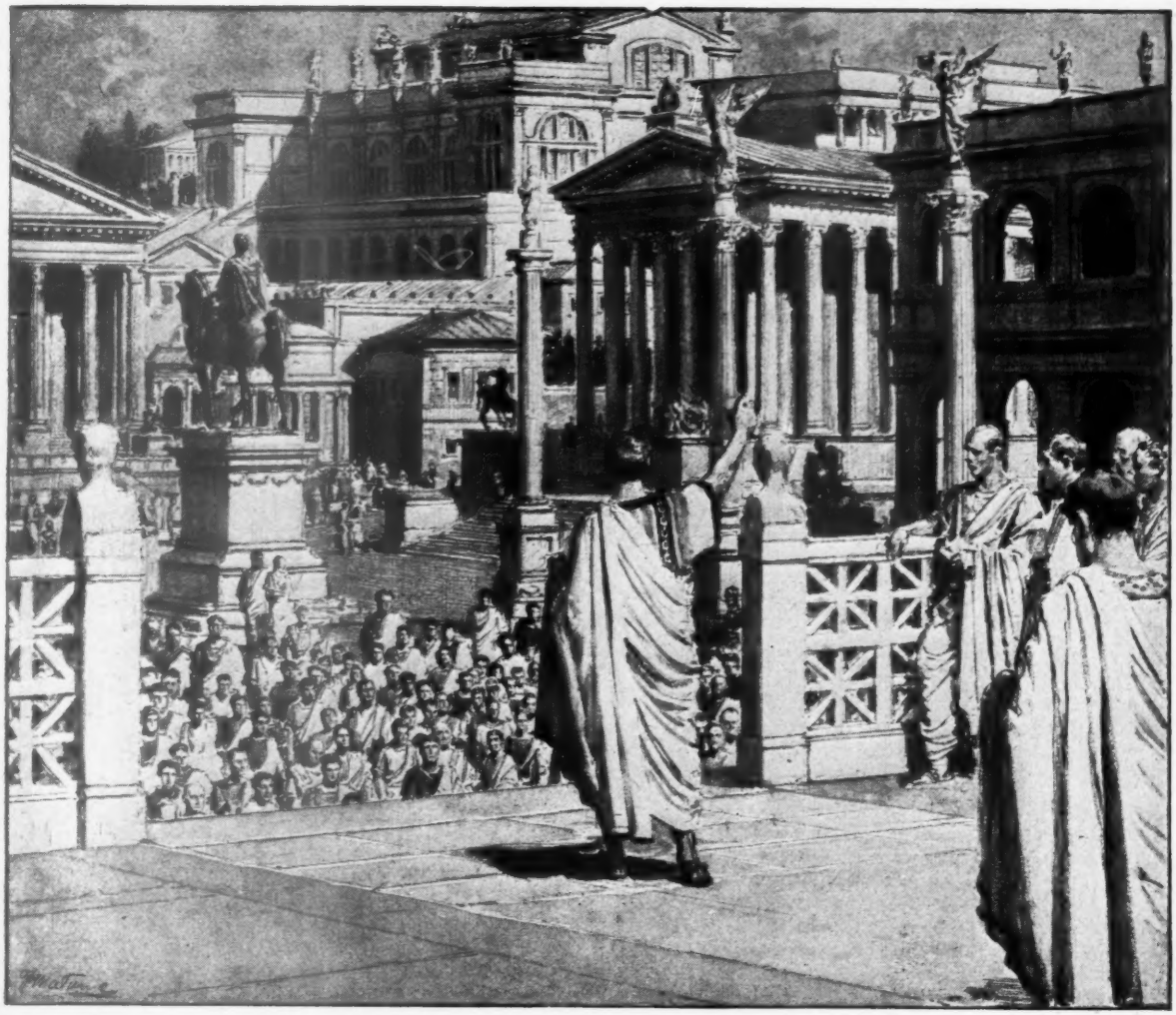

THE ROMAN FORUM, AS SEEN FROM AN ORATOR'S ROSTRUM

The Romans inherited by conquest the collected wisdom and craftsmanship of many centuries' search and discovery. For, as power shifted from race to race the culture of each was woven in the life pattern of its successor.

The Roman wove the strongest threads of his heritage into a design which is still traced in the plan of modern life.

But those who, centuries before, first spun threads of knowledge from the flax of discovery, are the men to whom posterity owes so much. They were astronomers from Carthage — goldsmiths from Memphis — architects and chemists from Babylon and Persepolis — philosophers and scientists from Athens. They, in their turn, were debtors — owing their energy to weather that was always kind.*

They lived in a climatic belt where areas of moderate humidity coincided with a yearly average temperature of 70° F. For 4000 years no nation outside this belt contributed to civilisation's progress. Then the Romans developed the hypocaust. This primitive central heating is recognisable as a rudimentary function of Air Conditioning and its use in the "unfriendly" climates became a vehicle for the extension of Roman civilisation.

The modern analogy is supplied by the Carrier installation, producing in any enclosed space, in any climate, an atmosphere in which we may live and work with maximum comfort and efficiency.

** Since that time it is significant that deterioration in climate has been followed by deterioration in national prosperity and world influence.*

CARRIER ENGINEERING COMPANY LIMITED

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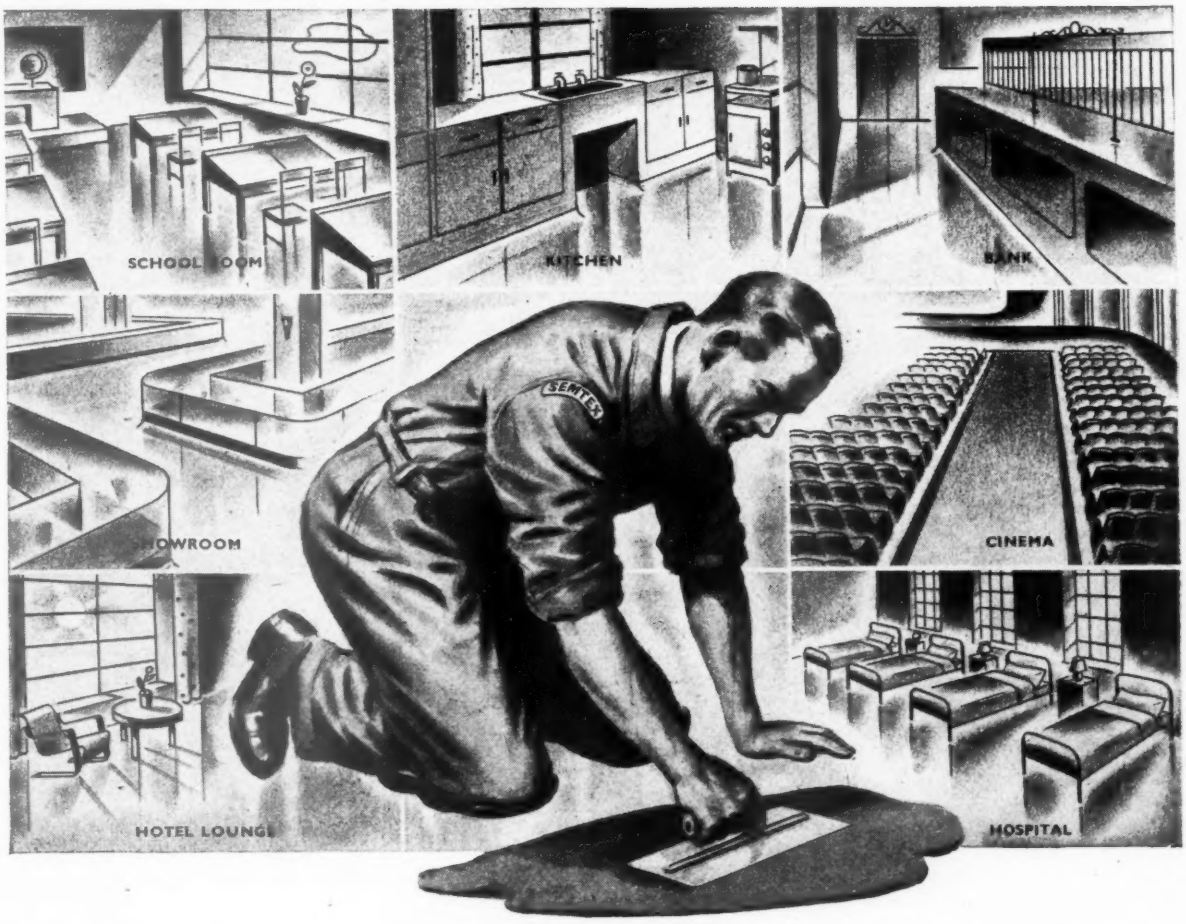
The Flooring of the Future



New floor covering compounds of a revolutionary character, that are applied cold on the spot, have been evolved by SEMTEX Technologists. Destined to play a vital part in the building programmes of the future, these fleximers contain no rubber, yet possess important additional characteristics. Fleximers by SEMTEX bond positively to steel, concrete or other rigid material. They provide a smooth, jointless, flexible, non-slip, damp-proof, hygienic and heat-resisting floor covering of great durability.

★ **Only work of first degree priority is at present undertaken, but arrangements are in hand for fleximer materials to become generally available for the building programmes of the future.**

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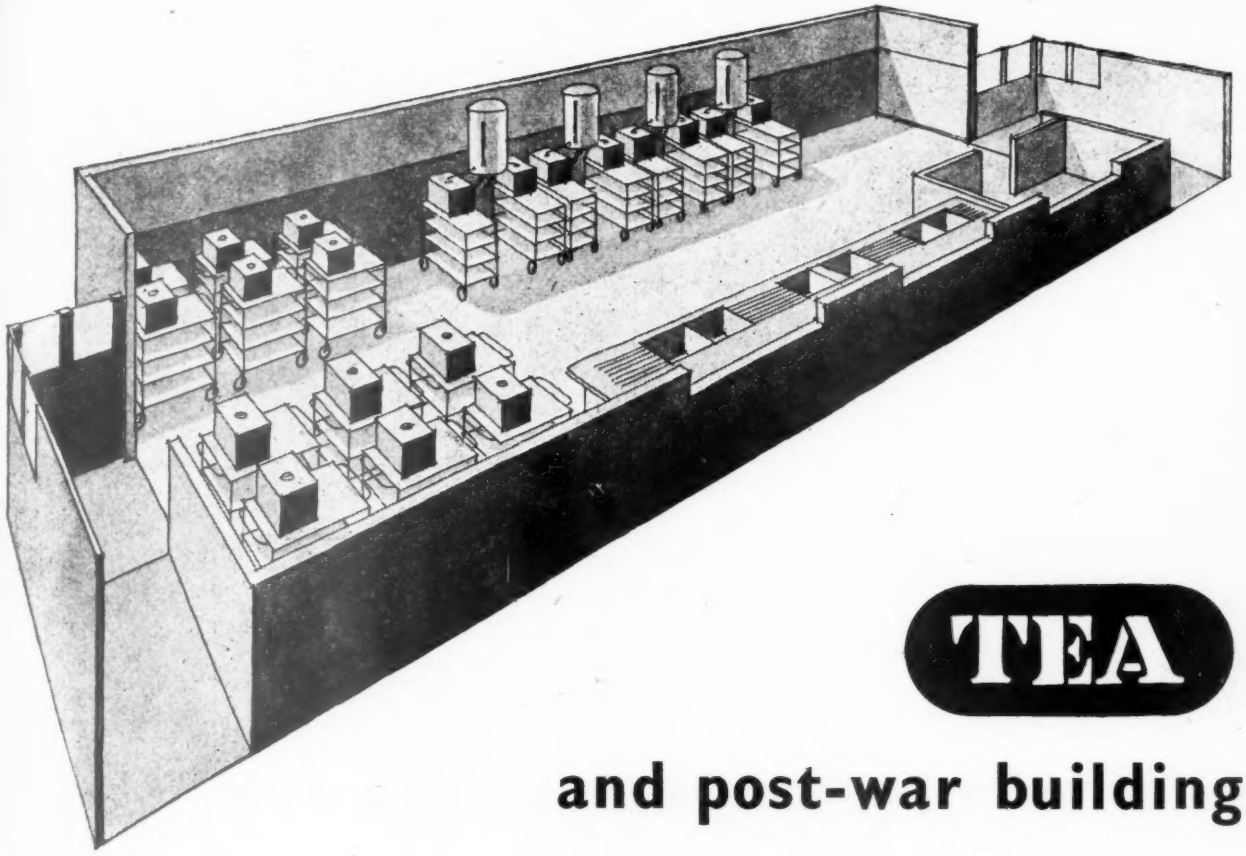


TEA

and post-war building

DURING the war, over 3,000 industrial firms have approached the Empire Tea Bureau about their tea catering services.

Many of them asked advice on the re-organizing of tea-stations, or the planning of entirely new tea-service departments.

Many structural changes had to be made in industrial buildings because no adequate provision for the national beverage had been made in the original plans. Tea in factory and office has come to stay, and to provide tea for 1,000 workers in ten minutes needs planned economy in time and space.

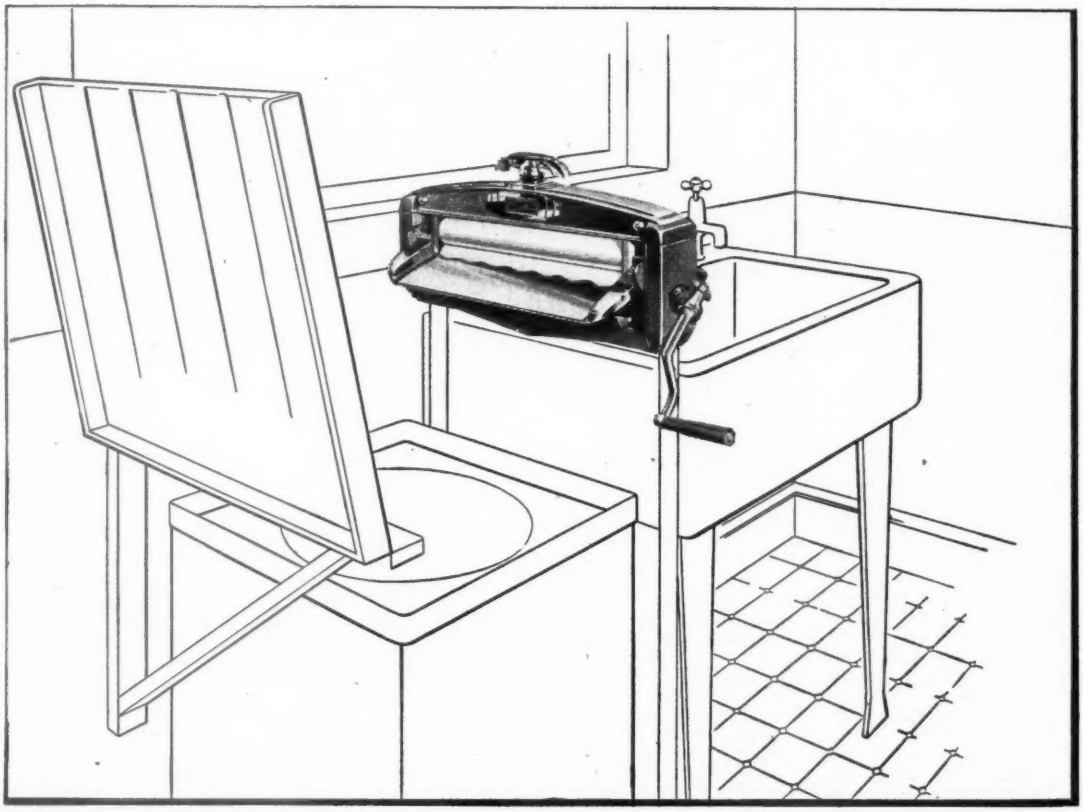
In post-war planning everything can be built right the first time, and we shall be happy to put our wide experience before any architect, builder or caterer who would like to ring us up or write to us.

The Empire Tea Bureau represents all the Tea Producers of the British Empire. Its main function is to act as a clearing house for ideas and advice freely available to anyone with any catering problem involving tea.

THE EMPIRE TEA BUREAU
REGENT HOUSE
89 KINGSWAY WC2
CHANCERY 6601 (7 LINES)

★

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

ACME WRINGERS LTD · DAVID STREET · GLASGOW · S·E

English Electric

DOMESTIC · APPLIANCE · DEPARTMENT

MESSAGE FOR FEBRUARY

IN post-war housing schemes, Electricity will be much more extensively used for cooking, hot-water systems, clothes washing and other purposes.

Through our earlier experience, greatly amplified by the production of heavy duty equipment for Works Canteens and British Restaurants, we shall be able to offer a range of domestic appliances of very advanced design.

Before reaching any decisions, therefore, it will be in your interests to discuss your requirements with one of our Development Engineers. Please address your enquiries to Domestic Appliance Dept., Queen's House, Kingsway, W.C.2.

The ENGLISH ELECTRIC COMPANY LIMITED

ENLIST THE EXPERIENCE OF ENGLISH ELECTRIC

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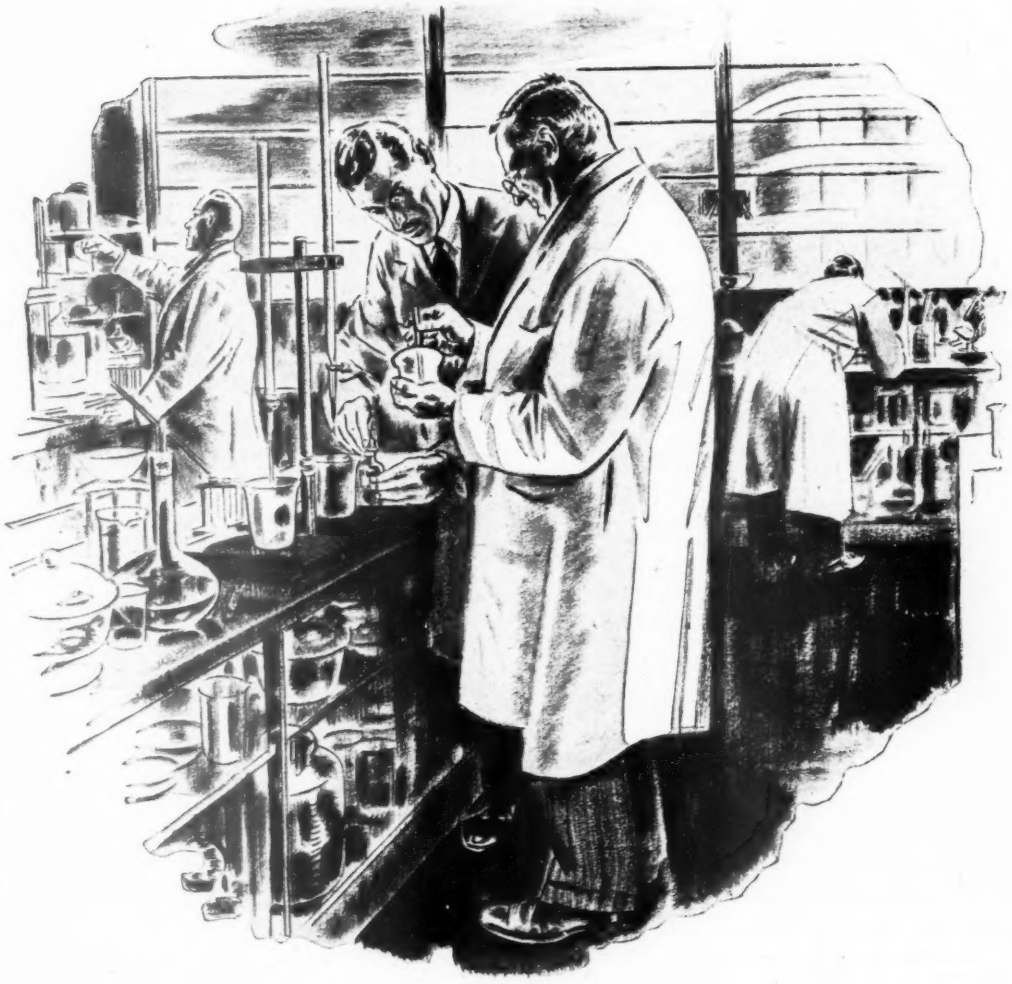
B

WIMPEYS AT WORK

Scientific methods in Building construction



THE LABORATORY IS THE STARTING POINT

The primary function of Wimpeys' laboratory staff is to exercise rigid technical control over the materials used for each contract. Frequent tests, continued throughout the job, ensure that the predetermined standard is fully maintained. Specific problems (concerning soil mechanics, for instance) are also submitted to the laboratory by the men on the site.

Architects have long been familiar with Wimpeys' reputation for sound and speedy construction. It is not so well known, however, that the smooth progress and high quality of every Wimpey job are largely due to the work of analytical chemists, research engineers and other technicians at headquarters. From start to finish of a Wimpey contract, the quality of the building materials is under constant control by the laboratory staff. Tests are continually being made on concrete cubes, on cements, ballasts, sands and gravels, on soils and asphalts. These tests and others, all conducted in close collaboration with the men on the site, ensure that the materials used in every Wimpey building are right for the job.

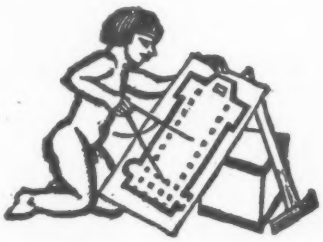
The work of the laboratory is only one aspect of Wimpeys' scientific approach to the problems of building construction. For over sixty years, Wimpeys have taken a leading part in developing methods by which efficient, economical construction can be predetermined. It is these methods which enable the firm to offer an exceptional service as building contractors.

The post-war years will find Wimpeys well equipped for every branch of modern building — from hotels and cinemas to civic centres and labour-saving houses for the people.

WIMPEY

GEORGE WIMPEY AND COMPANY LIMITED
TILEHOUSE LANE, DENHAM, MIDDLESEX

In common with every other periodical this JOURNAL *is rationed to a small part of its peacetime needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the* JOURNAL. *Newsagents now cannot supply the* JOURNAL *except to a "firm order." Subscription rates: by post in the U.K. or abroad, £1 15s. 0d. per annum. Single copies, 9d.; post free, 11d. Special numbers are included in subscription; single copies, 1s. 6d.; post free, 1s. 9d. Back numbers more than 12 months old (when available), double price. Volumes can be bound complete with index, in cloth cases, for 15s. each; carriage 1s. extra. Goods advertised in the* JOURNAL *and made of raw materials now in short supply, are not necessarily available for export.*



DIARY FOR FEBRUARY MARCH AND APRIL

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. *Experimental Houses.* Visit of the Association of Building Technicians, Birmingham Branch, to the Birmingham Experimental Houses. February 3, at 3 p.m. Particulars from Hon. Sec. F. W. Gregory, c/o Clifford Tee & Gale, 39, Bennetts Hill, Birmingham, 3. FEB. 3

CHESHUNT. *When We Build Again.* Exhibition. (Sponsor, TCPA). FEB. 28-MAR. 10

HASLINGDEN. *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). Town and Country Planning Association Conference, Mar. 24. Speakers, R. L. Reiss and W. Dobson Chapman, Vice-President TCPA. MAR. 22-APR. 7

LICHFIELD. *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). The Town and Country Planning Association is holding a Conference on the last day of the Exhibition. Speaker, F. J. Osborn. FEB. 12-17

LONDON. Percy Smith, Master of the Faculty of Royal Designers for Industry. *Beauty in Sign Painting and Civic Lettering.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 1.45 p.m. FEB. 7

Town Planning Survey Maps from about Twenty English Towns and Counties. Exhibition arranged for official delegations arriving from France and Belgium. At the RIBA, 66, Portland Place, W.1. FEB. 5-10.

H. S. Goodhart-Rendel. *The Work of the late Sir Edwin Lutyens.* At 66, Portland Place, W.1. (Sponsor, RIBA.) 5.30 p.m. FEB. 13

Wing-Commander T. R. Cave-Browne-Cave. *Camouflage for the Concealment of Civil Factories.* (Francis Cobb Lecture). At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 5.30 p.m. FEB. 14

Sir Kenneth Clark. *Architecture in 15th Century Italian Paintings.* At the Courtauld Institute of Art, 20, Portman Square, W.1. 1.15 p.m. FEB. 15

F. N. Sparkes and A. F. Smith. *The Concrete Road; a Review of Present-day Knowledge and Practice.* At the Institution of Civil Engineers, Great George Street, Westminster, S.W.1. (Sponsor, Institution of Civil Engineers). 5.30 p.m. FEB. 27

Federation of Master Builders. *Luncheon Meeting preceding Fourth Annual General Meeting.* At the Connaught Rooms, Great Queen Street, W.C.2. Guest of honour, Sir Malcolm Trustram Eve, K.C. 1.15 p.m. FEB. 27

Professor E. P. Stebbing. *Erosion and Water Supplies.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 1.45 p.m. FEB. 28

F. Longstreth Thompson. *An Outline Plan for a Region.* At Caxton Hall, Caxton Street, S.W.1. (Sponsor, TPI). 6 p.m. MAR. 1

National Housing and Town Planning Conference. At the Central Hall, Westminster, London, S.W.1. The Conference will consider some of the more important problems confronting local authorities in post-war reconstruction in England and Wales, and will be similar in character to the conference held in Westminster in October, 1943. Ladies are specially invited. The Minister of Health (Mr. H. U. Willink) will address the Conference on March 2, and it is hoped that the Minister of Town and Country Planning (Mr. W. S. Morrison) will find it possible to address the conference on March 1. Following is the preliminary programme:—March 1: Chairman, Alderman P. J. M. Turner, J.P. (Sheffield), Chairman of the National Housing and Town Planning Council. General Subject: *Planning for Post-War Reconstruction.* March 2: Chairman, M. Lindsay Taylor, Town Clerk of Southall, Middlesex, and Vice-Chairman of the National Housing and Town Planning Council. General Subject: *Housing the Nation.* MAR. 1-2

Lord Westwood. *Industrial Relations.* (Amulree Memorial Lecture). At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 1.45 p.m. MAR. 14

MALVERN. *When We Build Again.* Exhibition and Film. (Sponsor, TCPA, in collaboration with Messrs. Cadbury Bros.). *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). Town and Country Planning Association Conference, Mar. 17. MAR. 10-19

MIRFIELD, YORKS. *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). FEB. 25-MAR. 9

STOCKTON. *When We Build Again.* Exhibition. At the Gas Showrooms, Stockton. (Sponsor, TCPA). FEB. 1-14

NEWS

THURSDAY, FEBRUARY 1, 1945
No. 2610 VOL. 101

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.*

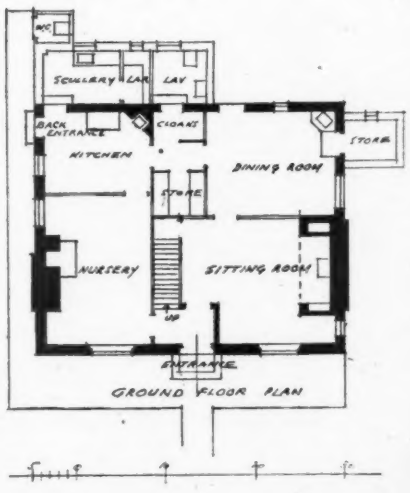
★ *means spare a second for this, it will probably be worth it.*

★★ *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.

Aberdeen Chamber of Commerce is to ask for the support of the Scottish Council on Industry in its bid to get the Government to FINANCE A ROAD THROUGH GLENFESHIE to link Deeside with Speyside.

It is obvious, as many of our readers have pointed out, that the wrong plan was published on page 73 of our last issue. Here is the correct one.



From AN ARCHITECT'S *Commonplace Book*

PLANNING WITHOUT TEARS. [*From* TVA : Democracy on the March, *by David E. Lilienthal, Chairman of the Tennessee Valley Authority* (*Penguin Books*).] The TVA could not close the gates of the dam, pay off the land-owners and townspeople, and call it a day. That would not do, because the resources of the region—human energies included—were to be seen as a whole, and the development of a river was only a single part of the total job of regional building. And so, when a dam on the TVA system is still under construction and long before the waters have risen the TVA sees to it that trained men and women of the vicinage are on their way into the countryside. They examine farms that may be for sale, so that families moved from the reservoir may have disinterested and expert advice, if they ask for it, on values and locations. The expert counsel of technicians and neighbour farmers is available to those who must move ; that change provides a chance for the farmer to improve his agricultural practices. Thousands of families have obtained such guidance on a great variety of matters ; simple architectural plans for a new house or the remodelling of an old one on the new location, or for the building of a poultry shed ; information about the electric co-operative line near by, or about a Farm Improvement Association.

With the liberation of Paris and the re-opening of the postal service with London came GREETINGS FROM THE FRENCH BUILDERS.

The greetings came in a letter to the President of the National Federation of Building Trades Employers from Monsieur L. Lassalle, President of the French National Federation. M. Lassalle attended the International Congress of Building and Public Works which was held in London in 1930, and will be remembered by many British builders. M. Lassalle's letter is as follows: Dear Mr. President, We are glad that the restoration of postal communication allows us to send you fraternal greetings from the French Federation of Building and Public Works. Even in the darkest hours of the war our feelings towards the British Empire have remained the same as in the days of the Entente Cordiale and of the common victory of 1918. We desire most strongly to re-establish and strengthen still more our relations and our feeling of friendship with your great Federation. Meanwhile when your members come to Paris, will you please tell them that they will have the warmest welcome at our office, No. 9, Avenue Victoria, and we shall be pleased to give them all the information and assistance which they may need. Please accept, dear Mr. President, our good wishes and our warmest sympathy, L. Lassalle, President. Mr. Gray has sent a cordial letter to the President of the French Federation in reply to his very welcome message.

★

Pontypool Urban District Council has been informed by the Minister of Town and Country Planning that in the interests of efficient planning the Council SHOULD BE MEMBERS OF THE WEST MONMOUTHSHIRE JOINT PLANNING COMMITTEE.

The Minister has accordingly issued an Order (West Monmouthshire Joint Planning Order, 1944), to that effect under Section 5 (1) of the Town and Country Planning Act, 1932. The Order says: The Council shall be a constituent member of the Joint Committee, and shall appoint three representatives thereon, but the proceedings shall not be invalidated by any delay or failure on the part of the Council to appoint a representative. The Order transfers to the Joint Committee the whole of the powers and duties of the Council in relation to the preparation of a Planning Scheme for the Urban District of Pontypool except the power to borrow money or levy a rate.

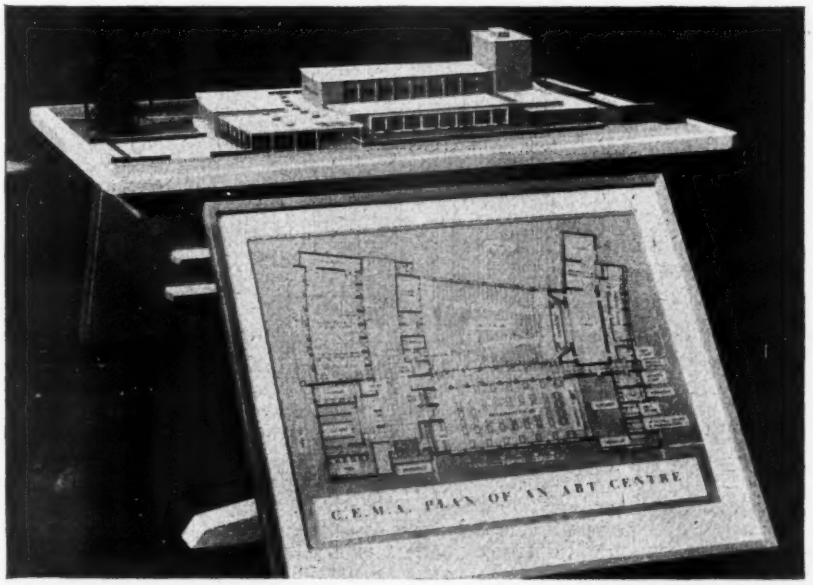
Mr. A. E. Sylvester has been elected Chairman of the NEW GOVERNING BODY FOR THE GAS INDUSTRY.

A step in the reorganization of the gas industry is the governing body which has been set up by the merging of the Central Executive Board of the National Gas Council and the Executive Committee of the British Commercial Gas Association. Mr. A. E. Sylvester, managing director of the Gas Light & Coke Company, has been elected chairman, and thus becomes leader of the industry. This is the initial stage in the reorganization of the national bodies of the gas industry, and by it a single spokesman for the industry is now available in all matters of national interest, policy, and commercial development. An organizing committee has been appointed to deal with two aspects to achieve unity within the industry. One is the selection and appointment of a director at Gas Industry House, the second to create greater unity by the merging and augmenting of the staffs of the two associations. In order that the governing body shall have the complete strength of the industry behind it, the district committees of the National Gas Council and the British Commercial Gas Association are considering the setting up of joint committees on the same basis.

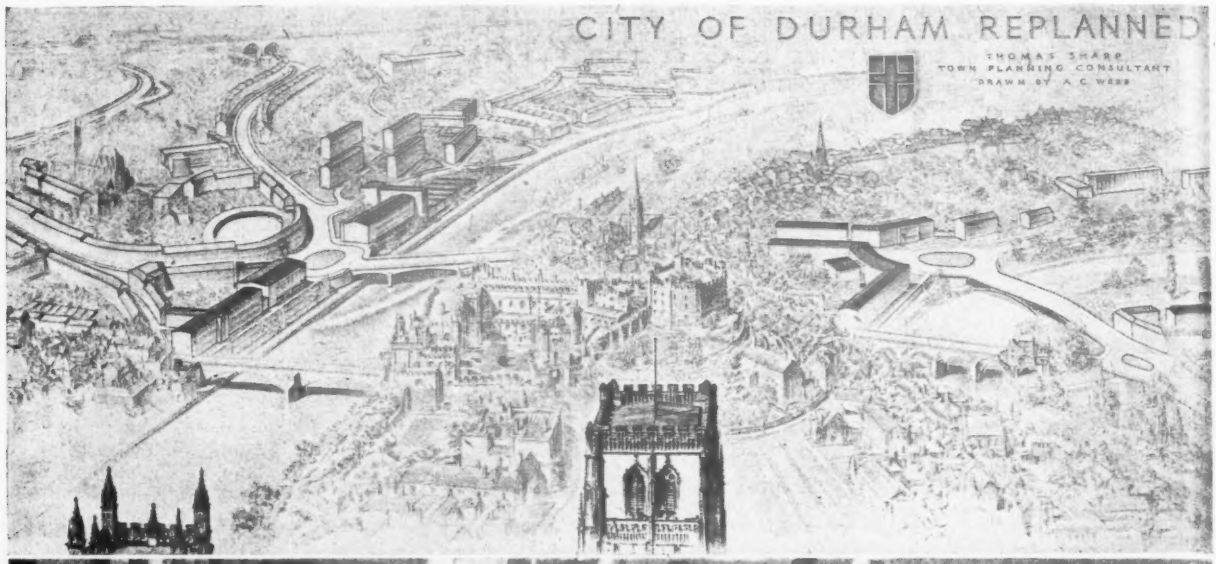
★

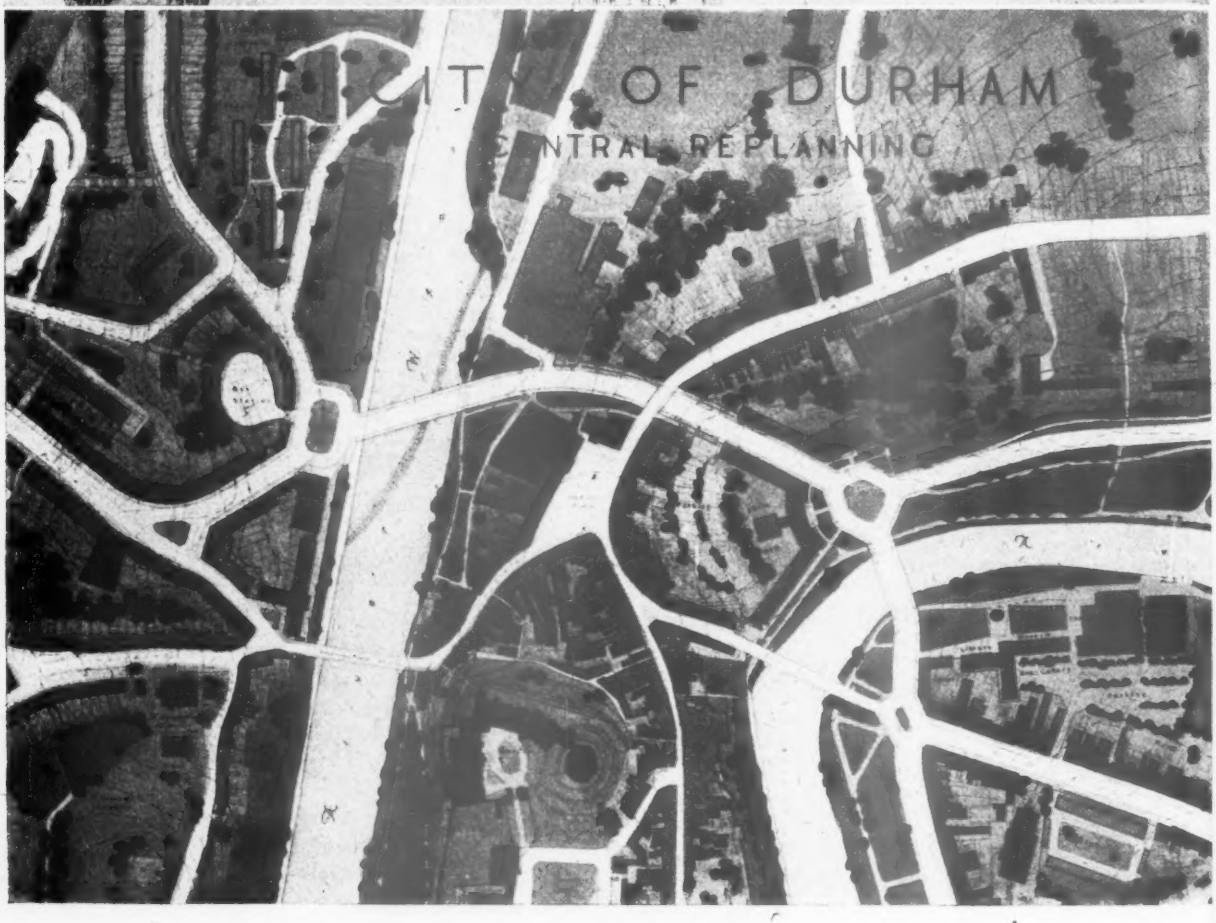
The RIBA has instituted the RIBA DISTINCTION IN TOWN PLANNING, which is obtainable by Fellows, Associates and Licentiates who are not less than 26 years of age.

The test by means of which this distinction is awarded will be conducted by a special Board of Examiners appointed by the Council of the RIBA. This new award does not take the place of the RIBA Diploma in Town Planning, which is obtainable by Fellows, Associates and Licentiates of the



Model of an Art Centre made for CEMA by the Modelling Unit of MOTCP and exhibited at the British Drama League's exhibition at the RA. The building is intended for all forms of communal entertainment in a small town where individual buildings for the arts are not practicable. The exhibition closes on Saturday, but may go on tour later.





Saving Durham

Durham has figured prominently in the news recently owing to the proposal to erect a £3,500,000 electricity generating station within three-quarters of a mile of the city. While a decision on the matter by the Ministry of Town and Country Planning is awaited, it is perhaps as well to study another proposal which, if carried out, would also endanger the city. It is the County Council's through road scheme. In his report on the plan, reviewed by Mr. Alfred C. Bossom, M.P., on page 97, Mr. Thomas Sharp gives his opinion that the carrying through of this scheme "would be a major disaster to the City." The plan and perspective above, showing Mr. Sharp's proposals for the central area of the city, include his alternative through road which he maintains follows "the one proper and natural line for a genuine and valuable city improvement."

RIBA without any minimum age limit. The primary purpose of the new award is to satisfy a demand from senior architects to take a qualifying test in town planning suited to their age and existing attainments. The examiners will meet three times a year—in February, May and October. Applications should be submitted to the Acting Secretary of the RIBA by January 1, April 1 and September 1 annually. Copies of the form of application containing the procedure, regulations, general scope of study and bibliography may be obtained, free, on application to the Acting Secretary, RIBA.

The National Smoke Abatement Society has sent to municipal authorities a memorandum setting out the importance attached by the Government in the new Housing Manual to the REDUCTION OF SMOKE.

The manual expresses the hope that the fullest advantage will be taken of the many advances in domestic heating and approved appliances that will be available. It points out that the matter is of urgency even in areas at present relatively free from the effects of air pollution, for, unless the necessary steps are taken, extensive new housing developments will create their own palls of smoke to the detriment of these new districts and neighbouring property or agricultural land. The memorandum describes certain technical developments in heating appliances and offers to assist housing authorities by obtaining information from manufacturers or trade associations.

★

The Government has decided to carry out a MILLION POUND·S TRADING ESTATE scheme for Hartlepool.

It has been officially announced at Hartlepool, says *The Times*, that intimation has been received from Mr. Sadler Forster, Regional Controller of the Board of Trade, that it has been decided to develop a trading estate, covering 60 acres, for the benefit of Hartlepool and West Hartlepool. It is hoped that details will be settled early this year. The Mayor of Hartlepool (Councillor T. H. Pailor) said the scheme is one which will give heart and encouragement to the people of the two towns, mentioning that in 1934-35 there were 10,000 unemployed in the two boroughs. The Government, he said, has agreed to a scheme costing £1,000,000, and it is estimated that the whole trading estate, when completed, will provide work for an estimated total of 7,000 men and women.

Negotiations are taking place for the transfer of ELTHAM PALACE, Eltham, Kent, to the Government to be preserved for the nation.

In 1933 Mr. Stephen Courtauld was granted a 99 years' lease of the palace on the recommendation of the Crown Lands Advisory Committee. One condition was that the public must be admitted on certain days to the great banqueting hall of Edward IV. According to a historian of the Order of the Garter, that Order was instituted by Edward III at a tournament at Eltham in 1347.

MEDIÆVAL CITY

MR. THOMAS SHARP'S plan for the City of Durham is important not only because of the literary qualities of his report,* or because of its outspokenness, although both are exceptional, but because Durham provides a new and important test case for planners. London has proved to be a testing ground for almost every aspect of planning, particularly the administrative problems which are likely to beset reconstruction. Plymouth has provided a test of the problems of a medium-size, heavily-blitzed city. Now comes Durham, with a test which is almost a test of the planner. For it is a test of his understanding of a place as a scene and a symbol.

In both these aspects Durham is unique. As a scene, it is perhaps unrivalled in Western Europe. The cathedral and castle stand high on a solid piece of sandstone, isolated by a hairpin bend of the River Wear; the houses which rise from the thick belt of trees lining the river crowd round them; it is the quintessence of the mediæval landscape. But more than this it is a symbol of the drama of mediaeval life, towards which the buildings, the landscape and the topography are but contributions. It is because of its particular emphasis on these qualities that Durham provides the test for which planners have been waiting.

The solution of a town's functional problems is the precondition of its health. This aspect of planning has received a full measure of study recently and it is right that it should continue to receive it. However, it is but one part of the planner's job; another, which has received less study, is the appreciation of what may be termed the *personality of the place*. This attribute, in common with the personality of individual human beings, is made up of many factors, definable and indefinable (among which, of course, are functional, as well as visual and symbolic, factors); and it is the job of the planner, so to understand its character that his proposals shall prove to be true to that personality. In the case of Durham, the importance of this is multiplied by the fact that its personality reached maturity in another age, and that, by many accidents of fate, it has kept its personality, not unchanged, for this is never possible (the attempt to do it is the preservationists' noose) but developing slowly as a natural part of the ecology of the region.

Within the terms of his reference, Mr. Sharp has clearly dealt with the functional problems of Durham extremely successfully. But how do his proposals affect the particular problem of Durham's personality, and are these proposals an answer to similar problems in other places? In Chapter 9, on Architecture and Landscape, he suggests the methods which should be adopted in order to maintain existing good buildings, to remove or improve bad buildings, to see that new buildings are of a proper standard of design, and to

* *Cathedral City: A Plan for Durham* by Thomas Sharp. Published for the Durham City Council by the Architectural Press, London, 5s. Reviewed by Alfred C. Bossom, M.P., page 97.

secure the quality of landscape design in and around the city. It is not possible to describe here the methods proposed, but it is clear that they have been given unusually careful consideration, particularly with regard to the ownership of land in the district, local government and the realization of the plan. Through them Durham can continue to serve as a Cathedral City, a University City, an Assize City, and a County Town, but, in addition, it can assimilate a certain proportion of new industry and by remaining true to its mediæval character (the conclusive argument against a power station, however beautiful), it can attract the thriving tourist trade it has always deserved. The planner's job has, therefore, been well done, but it is also clear that if these methods are to work at all, they depend on the enthusiasm of the local inhabitants, especially those in responsible positions.

What, then is Durham's lesson for planners? It is that, in those places which possess æsthetic and symbolic value, whether for the whole nation or only for the immediate inhabitants, they should assess the significance of these qualities truly, in relation to all other factors; that the machinery they devise for safeguarding and improving should be designed not to a stereotyped pattern, but with the particular conditions and resources of each place in mind, and that by their own understanding and enthusiasm, they should heighten people's awareness of their surroundings and consequently their sense of responsibility towards them. That is the lesson of Durham. The test is still to come.

The Architects' Journal
War Address: 45, The Avenue, Cheam, Surrey
Telephone: Vigilant 0087-9

NOTES & TOPICS

ON THE GRID

You will probably have read with great interest the accounts of the system of petrol supply pipes that have been constructed so widely over the country. It is possible, so it seems, to pour petrol into a pipe at some western or northern port and to have it spurted forth somewhere on the East Coast, in the vicinity of an airfield. It seems a very sensible and satisfactory arrangement.

*

How quickly and satisfactorily these things are arranged when the demand is an operational one, when the Ministry requiring the work to be done is the Air Ministry and not something rather dim and pre-war, like the Ministry of Health, when the liquid to be transported is 100-octane petrol and not something dull and spiritless, like drinking water.

*

For some time now various people have been urging that, as part of our planning for agriculture, we should improve the methods of water supply in rural districts. Various people have said all this, but neither the Ministry of Health, nor the Ministry of Agriculture, for that matter, are Service Ministries. It took some three years and a labour force of under 1,000 to put down a 100-octane petrol grid for Britain. A water grid for Britain has been talked about for generations, and there were times when to take away a labour force of some 1,000 would have been a public benefit. But nothing whatsoever has been done, nor are there any indications that anything will be done.

*

Gas, too, needs a grid in that, when it is produced to sell in London at eightpence a therm, it can be taken out to the country and sold, say, at tenpence a therm instead of one and sixpence. We might even use some of the petrol pipeline, before it is torn up and scrapped in a frenzy of post-war economy, for I should think that a pipe that will convey a volatile fluid like petrol could probably cope with gas.

CEAPE

As the cover of the A.J. reminds us every week, this is an age of initials. The CEAPE, which has just issued its annual report, almost heads the list for clumsiness, but don't be discouraged by that. The Council for Education in Appreciation of Physical Environment carries a fine crew of experts—from Patrick Abercrombie to Henry Morris, from Kenneth Clark to Paul Rotha, from Herbert Read to F. J. Osborn—and it is doing a very useful job.

*

Educationists are generally agreed that every opportunity should be given to children to be trained in the appreciation of their environment—not as just another "subject" (and certainly not as an "extra"), but as a background to, and link between, other subjects, such as art, history and geography. This can only be achieved by the training of special teachers, which is the ultimate aim of the Council.

*

But such training obviously takes time, and the Council is therefore wisely pursuing a short-term policy as well, under which short training courses are given to those who are interested, and advice and information are circulated throughout the country to local authorities. Film and book lists have been prepared, and particulars of suitable travelling exhibitions are made available, together with syllabuses for lectures.

*

The Council has received, and deserved, wide interest during its first year of work, and it asks for support and suggestions during 1945. Its address is 28, King Street, W.C.2.

THE BUILDING CENTRE

The Building Centre, after a number of war-time vicissitudes, has acquired No. 9, Conduit Street. It is appropriate that the Centre should have taken the old home of the RIBA, for the first meeting of manufacturers when the Building Centre was formed was held there.

*

The building is now being gradually laid out, and some time this year the new premises should be in working order. The Centre, which will obviously be of very great value in the post-war years, will, I understand, be more unified and condensed than formerly and there will be more co-operation between exhibitors.

UNIQUE THEATRE OF 1788

In the January issue of the *Architectural Review* Mr. Richard Southern describes one of the few surviving Georgian theatres in this country, that at Richmond, Yorkshire, of which he is now making a thorough survey. To those who read the article the exhibition on *The British Playhouse from Fit-up to National Theatre*, which closes this week at the Royal Academy, will have been all the more interesting in that there is shown a model and various illustrations of this little playhouse.

*

Surprisingly little interest seems to have been taken in this country in the development of the architecture of the theatre and its influence on drama, and Mr. Southern's enthusiasm for his subject is therefore the more to be welcomed. (He has been responsible for the organization of the exhibition at the RA, which celebrates the twenty-fifth anniversary of the British Drama League.) As he points out in his article in the *Review*, a good deal is known about the Elizabethan playhouse and about the Victorian theatre, but the nature of the Restoration and Georgian playhouses in between is comparatively obscure.

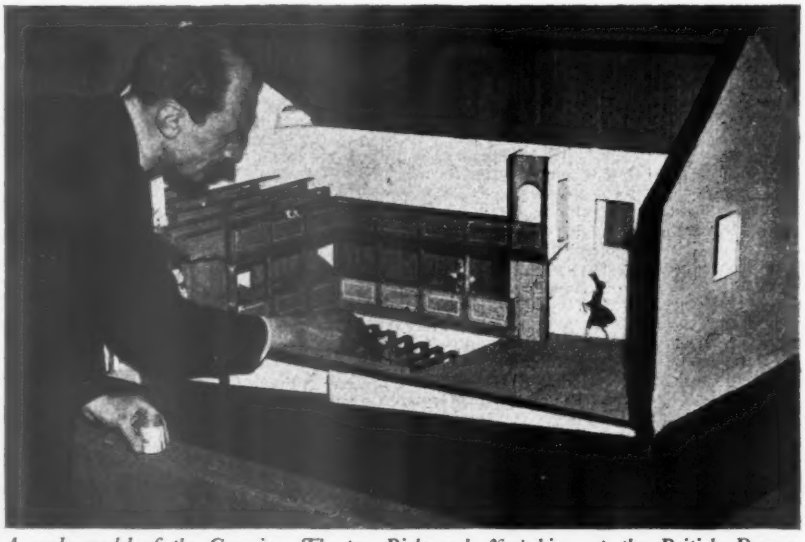
*

The Theatre Royal, Bristol, provided the first example of an actual historic Georgian theatre, and now the discovery of that at Richmond, twenty years its junior, gives us, in many ways, an even better insight into the eighteenth century playhouse. It has, unlike that at Bristol, remained relatively unchanged since it was built, apart from the ravages of decay and neglect, and it retains its original form and atmosphere, notably in its proscenium.

*

As Mr. Southern writes: "Here is a theatre building of the true English tradition, a monument of first—indeed of unique—importance. It is without a doubt, as far as present knowledge goes, the nearest approximation to an unspoilt Georgian theatre in Great Britain . . . the most perfect known Georgian little theatre in existence." Let us hope that it will now be treated with some respect, and not used in future as it has been during the war—as a depot for salvage.

ASTRAGAL



A scale model of the Georgian Theatre, Richmond, Yorkshire, at the British Drama League's exhibition at the Royal Academy. See Astragal's note.

LETTERS

Roy A. Lewis

Anonymous

Another Candidate

E. Kent, F.R.I.B.A.

D. M. Goodacre
(*National Secretary, Architectural Students' Association*)

E. R. Riley
(*John Laing and Son*)

W. W. Scott-Moncrieff, M.C., F.R.I.B.A.

R. Blyth Winter, L.R.I.B.A.

R. S. Offord, B.Sc.(Lond.), A.M.Inst.C.E.
(*Borough Surveyor and Water Engineer, Andover.*)

RIBA National Plan

SIR,—The new RIBA national plan offers a hope of intelligent planning in post-war England. But just what do they mean by national? If it is an English plan, as appears to be the case, it should be called so: but in that case why continue the roads as a sort of after-thought into Wales, treating her as an appendage tacked on to England?

I do not know how the Welsh members of RIBA were occupying themselves while their English colleagues were engaged in such good work; but I presume that they had opportunity to consult the report of the Welsh Advisory Committee on Reconstruction, and therefore have some idea of the type of development needed. They should also be aware of the nation-wide demand for a Secretary of State (which should give Wales the same immunity from English planning as Scotland now enjoys), a demand expressed unanimously by Welsh members of Parliament and by local authorities, and which means nothing less than the planning of Wales as a unit. They should realize that we do not favour the idea of setting our country aside as a natural paradise for English holiday-makers, while we ourselves emigrate along the convenient new roads to find work across the border.

All industries, including the tourist in-

dustry, need in Wales the same thought and planning as in England. It is not unreasonable to suggest that we should be able to travel from Cardiff to Caernarvon—or from any one town to another—without a lengthy detour through England. We have been appealing for years for the North-South road: for better railways: for the intelligent development of highways old and new which will enable us to spread our industry and develop our resources.

It would be a big step in the right direction if the RIBA would erase its wanderings to the west of Offa's dyke, and hand over the clean sheet to some competent body in touch with Welsh public opinion, and with those committees at present considering post-war reconstruction in Wales.

Cardiff ROY A. LEWIS

The TPI Examination

SIR,—I studied hard for over 18 months (including a precious "stay at home" holiday week) before the examination, and despite the impossible conditions under which the examination was held, I came away feeling confident of the result. After a four months wait I also received the bald statement that I was unsuccessful. I wrote asking if I had been relegated in any subjects, or if I was required to take the whole examination again, including the "set piece," to which I received the reply that I was required to take the whole examination, and that no further information could be given.

I have sat for several professional examinations in the past, but never under such arbitrary conditions.

I agree with your correspondent that the whole conduct of the examination calls for a statement by the Board, particularly on the followings points:—

(*a*) Why could not the examination have been arranged to have been held in one or more convenient centres in the provinces?

(*b*) Why could not the candidates have been given the option of sitting in Scotland?

(*c*) Would it not have been only reasonable to have allowed extra time for interruptions during the examination?

(*d*) Why were candidates required to pass in all subjects, including the "set piece," at one sitting—as appears to be the case?

(*e*) Valuable time was wasted on the field day at Wimbledon in having to bring the ordnance sheet up to date. Why could not "War Emergency Editions" have been issued to the candidates?

ANONYMOUS

SIR,—The conditions under which the last TPI Examination was held have been described most admirably by Astragal, and further comment in regard to this is unnecessary.

The methods employed during and after the examination, however, call for immediate revision by the respective bodies constituting the Joint Examination Board.

The length of time taken to notify candidates of the results is excessive, and no information regarding these results can be obtained by candidates applying by letter, but I was informed by a candidate sitting the Examination for the second time that a personal visit to the Institute had proved more fruitful, and in his case he had been informed of the subjects in which he had failed to satisfy the examiners. Why the distinction?

With regard to the oral, Candidate's description is most apt, and is entirely borne out by my own experience.

I was asked by one examiner if I had read a particular book of which he was the author, and when, after ascertaining the examiner's name, I replied in the negative, I was advised by him to obtain a copy and read it, although it bore no relation to the subject in which I was being examined.

Another examiner enquired if I wanted to ask him any questions about the particular paper in which I was supposed to be being examined.

In two other subjects I was not questioned at all, for the simple reason that no examiners were present for these subjects.

After my experience I also deem it advisable to remain anonymous for the same reason as Candidate.

ANOTHER CANDIDATE

London Housing Needs

SIR,—The demographic method of ascertaining housing needs so violently attacked by Mr. Osborn has in fact very little to do with the old controversy of houses against flats. It is simply a way, and I think the only reliable way, of assessing the numbers, sizes and composition of households, including the potential ones which in times of housing shortage cannot come into existence.

Dr. Block is right in pointing to the fact that all housing estimates in the past have fallen disastrously short of the real demand, for lack of a scientific method to ascertain the needs. Without reliable estimates of the real demand (when it becomes fully effective) planning is an impossibility. House-to-house inquiries as conducted by the TCPA may be useful in confirming that people want what they are used to and are suspicious of what they do not know, but they will not be of great help in formulating good housing programmes. For these we need Census returns adapted to the requirements of the planner and in addition properly conducted social surveys in all areas to be re-developed, so that particular local conditions are brought to light and may be duly considered.

There is no easy short-cut to obtain equally reliable results.

Welwyn Garden City E. KENT

Empire Builders

SIR,—Why, in your leading article on Empire Builders, do you ask, "So where are we?" when you have already implied the answer in your final paragraph?

In the first place it is obvious that the question is not one of æsthetics, but of sociology. What is the sociological significance of these massive pomposities? They may "make people love their native country"; on the other hand I doubt it. But that is not the point.

"The vaulted halls of the Roman Baths" were more than symbols of the Roman decadence; they played an integral part in that decadence. In producing a temporary mood of wellbeing, they reduced the realization of defects in the contemporary culture to a minimum; instead of giving his mind to the rectification of the prevalent abuses, the Roman would retire to the Bath and dissolve his dissatisfaction in sensuous complacency—*panem et circenses*. So it is in the present day; monumental civic buildings and banks, sleek luxurious cinemas—these are the *circenses* of the modern world.

No matter what arguments, economic, political or æsthetic you produce in support of these edifices it is blatantly obvious that any Government that spends millions of pounds in building pomposities whilst the workers who make it all possible are housed in hencoops, that Government has a perverted sense of values.

Sir Herbert Baker's book does not belong to the Brave New World our soldiers hope they are fighting for—put it away until the next period of decadence.

Nottingham D. M. GOODACRE

War Savings

SIR,—The slogan, "We must keep on Saving," has been taken to heart by the employees of John Laing & Son, Ltd., and they have just had the satisfaction of passing another milestone along the National Savings Road. They have now passed the figure of £300,000, which has been the result of steady, persevering savings week by week on contracts scattered throughout the country. The readers of your Journal know full well the difficulties of running a National Savings Campaign on these isolated sites where men are only employed for a few months at a time, and in some cases only a few weeks. Another of the especial difficulties of the industry is the variation in earnings at different seasons owing to shorter days and inclement weather, and we feel that the workmen are to be congratulated on what they have achieved.

London E. R. RILEY

The New Humanism

SIR,—Just exactly what is meant by the word Humanism I do not know. To me it means nothing, but as a now almost ancient upholder of the hand, in the hand *v.* machine controversy, allow me just to say this:

Works of art are works having a spiritual quality. It is the hand of man in direct contact with materials which imparts this quality. Interpose self-propelled machinery between the hand and the material and the spiritual quality is no longer in the thing which is made. When the painter takes to using a mechanical spray instead of his brush, his picture, even though Rembrandt himself used the machine tool, will have no spiritual quality. This, I am convinced, is a first principle and applies to whatever is made, be it a picture, a piece of woodwork, or a tin-can.

Machinery gives us a slick perfection which is without spirit. This is what people seem to want at the present time. It is what the majority of architects hope in. A vain hope indeed. They will doubtless get what they want, but they will loose the spiritual quality which they have not sought.

The hand is and was blessed, but if you believe not that the machine is cursed—"circumspice!"

Diss, Norfolk W. W. SCOTT-MONCRIEFF

MOW Standard Factory

SIR,—I am at a loss to understand Mr. A. O. Jones's opening remark in his letter concerning lattice-girder clear span roofs, since, far from discouraging their use, I had already mentioned the conditions under which such construction was justifiable. My whole point was that the MOW Standard Factory did not fulfil these conditions, and was, therefore, an unjustifiable extravagance.

If Mr. Jones can design 100 ft. clear spans using only 5.3 tons of steel per 1,000 ft. super of floor space, which in effect he says is possible, I should be very interested to have his address. If he is correct, then the MOW factory is an even greater extravagance than I had supposed, since my estimate of 7.5 tons per 1,000 ft. super, or a total of 375 tons per factory, is more likely to approximate to the weights employed in practice. Perhaps the designer of the steelwork in question will oblige by supplying the actual figures.

Chingford R. BLYTH WINTER

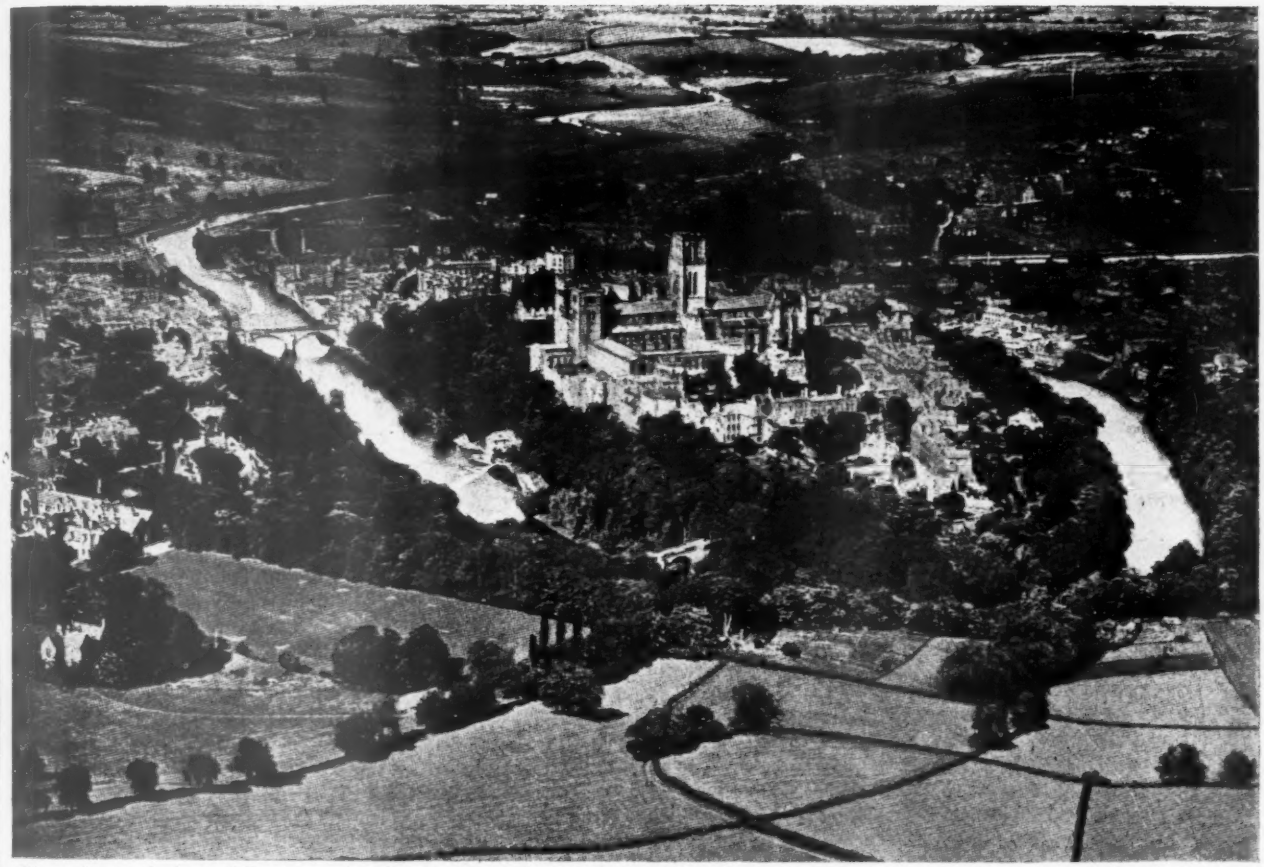
Straw-Sewage Sludge

SIR,—Your correspondent, Information Centre, Questions and Answers, No. 1761—Sewage, may be interested to learn that a process for composting liquid sludge and straw has been in operation at my Council's Sewage Disposal Works for some eighteen months.

I do not see why this process could not be applied to a village sewage disposal scheme, and I believe one farmer in the vicinity is carrying out a similar process with material from a cesspool serving his house and farm buildings.

Andover R. S. OFFORD

PHYSICAL PLANNING SUPPLEMENT



Above is an airview of Durham showing the Cathedral with the Castle beyond, towering above the ravine of the river whose great loop makes a peninsula of the old town. The light patch of ground in the bend of the river, immediately above the Cathedral tower, is the site of the proposed Power Station.

DURHAM replanned

Thomas Sharp's plan for Durham described by

ALFRED C. BOSSOM, M.P.

Though England is becoming replete with Post-War and Town Planning Reports, the latest, *Cathedral City, A Plan for Durham,* by Thomas Sharp,* is not only welcome but, indeed, stimulating. Obviously prepared by a knowledgeable and sympathetic technician, it is a tender story written with meticulous care after examination of one of the Empire's architectural heirlooms. With frankness, the report gives both the possibilities and limitations that Durham possesses. It is not a mealy-mouthed, non-committal recitation so frequently encountered, which attempts to satisfy everyone, but a positive and challenging document.

It is clear that in making this survey, the author went into the many phases in detail, and whether his findings may be popular or unpopular, he states them with a clarity that is arresting. He does not deal with town planning as though its purpose is to provide beautiful vistas and nice open spaces, but he discusses living conditions, the happiness and prosperity of the population equally with the importance of the City to all its admirers who he rightly feels have a collateral interest in its future.

The Report presents a considered review of existing conditions, examines the need for planning with reference to the limits of growth and change, and at the same time does a little desirable dreaming. Existing communications are thoroughly investigated; equally, public and quasi-public buildings are examined; housing occupies much of Mr. Sharp's attention, as well as the service buildings and open spaces. Architecture and landscape as existing—so important in a City of the quality of Durham—are recorded, and after this he presents his proposals and weighs the likelihood of their realization. It is a scholar's report.

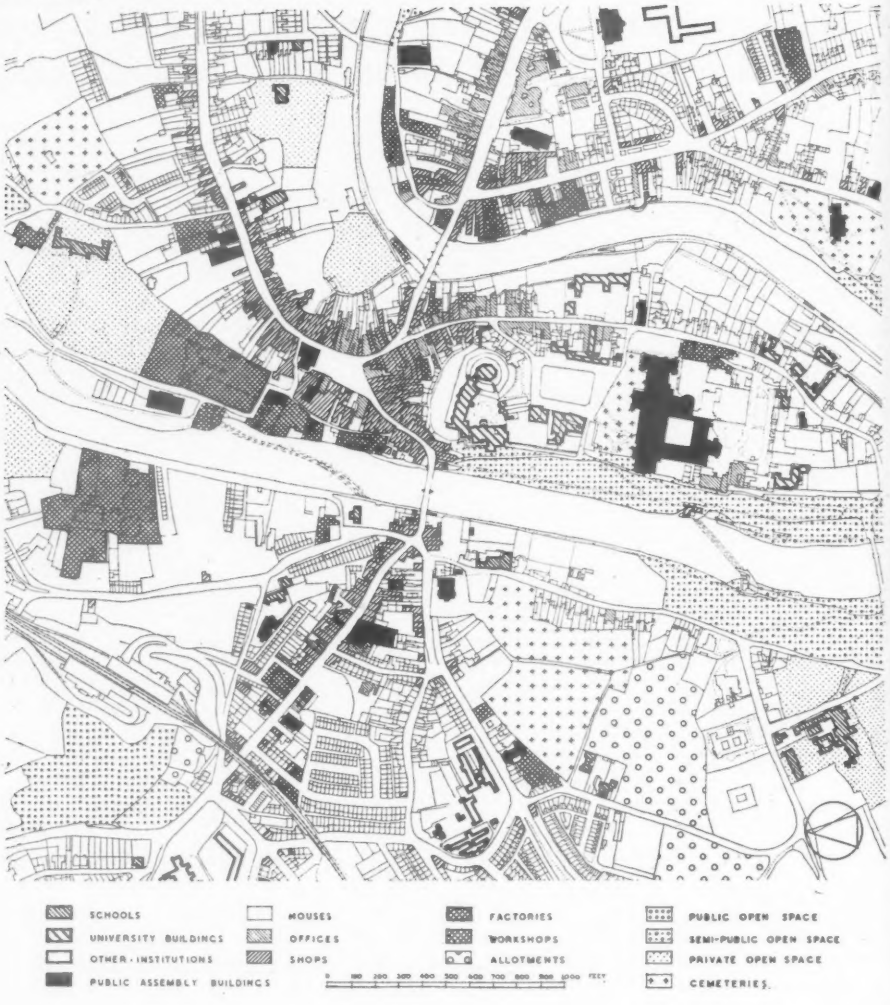
A series of delightful old engravings from all angles illustrate the document, and these are balanced with photographs of the town and its environments to-day. Explanatory maps and understandable diagrams elucidate any uncertainties as to the author's intention, and whether one agrees with his conclusions or not, it would be churlish not to give full credit to Mr. Sharp for the fine way he has accepted his responsibility and endeavoured so to present the considerations that influenced him in making his recommendations, as to make them crystal clear to the most amateur reader.

The historical and architectural quality of Durham is given particular consideration. This is fortunately possible, as it

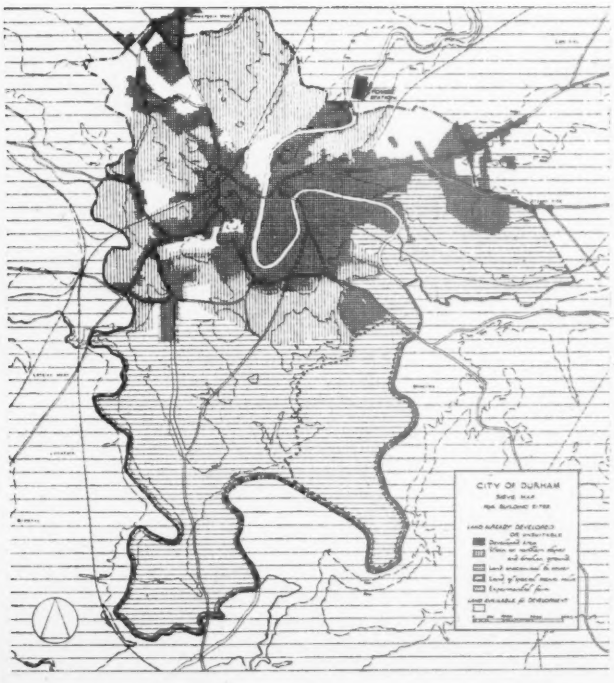
* Published for the Durham City Council by the Architectural Press, 5s.

SURVEY

Right is a map showing existing land use in the central area of Durham. The City is in no sense an industrial centre. It is an administrative centre, a shopping centre, an educational and cultural centre, a tourist centre, and a residential centre for people who work in adjacent areas. It functions in these various ways with varying degrees of success, and even of near-failure. But Mr. Sharp stresses that the sensible basis of any plan for Durham is that it should in the future continue to be the same kind of city as it has been in the past. Below is a sieve map showing the land available for development in the district, when all factors have been taken into account.



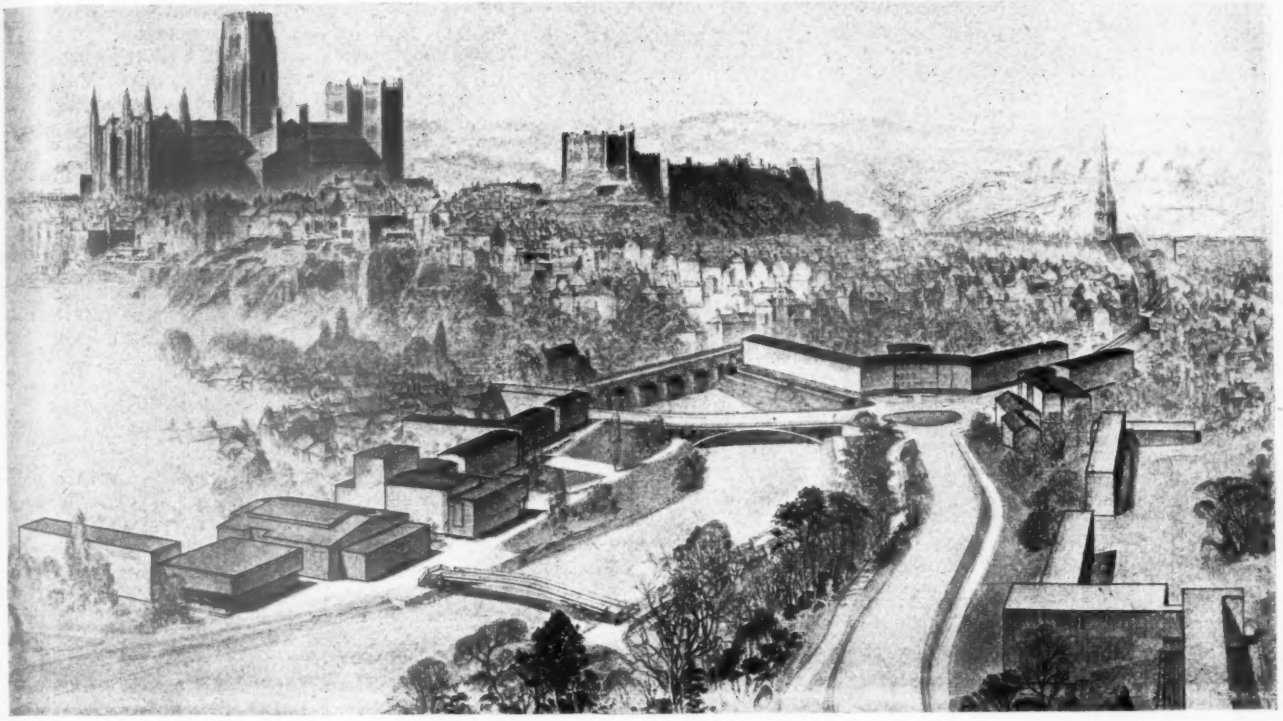
ANALYSIS



has escaped any war damage. Its life through a thousand years has passed quietly; the industrial revolution hurdled it without leaving much imprint. Although in the centre of a coal-mining area, there is not a single pithead within sight from the hills of the inner city. However, it has its quota of squalid 19th century housing; its river, the Wear, is filthy, and the air of grimness and neglect is obvious in many parts. But, until the middle years of the 1930's, it did not suffer much of the architectural or artistic torment that was inflicted on so many places of a similar size. Then regrettable things began to happen. The unseemliness of chain-store façades began to blazon themselves along the City's principal streets and, on the South, the green countryside which for centuries had swept right up to the foot of the Cathedral, was unprofitably exchanged for increased site values.

Now, other disturbing prospects are in the hatching, the most outstanding being the proposed new £3,500,000 North-Eastern Electricity Supply Company's Power Station on the riverside at Kepier, ¾-mile from the City centre. This plant would be bigger than the Cathedral itself. Its proposed chimneys, which soar 350 ft., would tower over 100 ft. higher from mother earth than the Cathedral's great central tower, which is only 218 ft. high, and over the beautiful panorama of the City which Ruskin described as "one of the seven wonders of the world." From almost any vantage point, the eye could not help being drawn to the two chimneys and the massive cooling towers (250 ft. high).

The Report analyses this industrial project from several angles, and does not attempt to ignore the benefits that might accrue, as well as the disadvantages that it brings in its wake.



PROPOSALS

Above is a perspective by Mr. A. C. Webb showing the proposed central improvements looking West. Among Mr. Sharp's proposals for the future of Durham are: an industrial estate of light and medium-heavy industries; a system of external by-pass roads; a new through-road, one end of which is shown in the perspective above; various new public buildings; the replacement, within the next decade or so, of most of the housing in the older parts of the city; a green wedge between the old and new city; a new shopping centre, and local neighbourhood shopping centres; an hotel quarter; a new natural park and more playing fields; the preservation of old buildings of special architectural value or interest and of the existing character of the landscaping; and the control of the design of all new buildings in the city.

Many contend Durham Cathedral is the noblest single edifice in the Kingdom, which, when aided by its dramatic setting, forms, with the Castle, one of the structural epics in the architectural history of the western world. Should the setting of this group be mutilated by bad or ill-considered developments, much of the beauty will be irretrievably lost and our national heritage will correspondingly suffer.

Durham is also a cultural and educational centre; after Oxford and Cambridge, its University is the oldest in the country. It has five Colleges with their associated buildings, three Teachers' Training Colleges; about three miles outside is the great Roman Catholic College of Ushaw, and the Houghall Agricultural College. Durham School, one of the oldest public schools in the country, was founded in 1414. This means there are ten Colleges and a Public School in this one small City which has a population of only 18,500, and there are important possibilities of considerable extensions to its educational facilities—it is obviously a natural cultural centre.

Situated within reasonable access of the Great North Road, the City is 230 miles from London and 100 miles from Edinburgh, and with the main North/South railway passing through it, it could be made an important tourist centre which, with the national widening interest in travel and cultural knowledge, could be a source of considerable income. Fortunately, its physical and historical attractiveness has not so far been seriously impaired by commercial development, but if indiscriminate industries are introduced, the City's drawing power for sightseers undoubtedly will be reduced. Industry is essential, but beauty equally so, and it is impossible casually to try to combine these without definite risk.

There is strong feeling in the County regarding the projected Power Station, for there is pride in the County Town, as instanced when a miner wrote to the *Northern Echo* on the 17th July, 1944, saying: "To build this power plant with its . . . steam and grit will not only take something irreplaceable from Durham, but from the hearts of the Durham miners. Durham is the miner's haven of peace, his Mecca. To turn it into the likeness of one of the dirty mining villages in which he lives would be just another blow to the miner."

Against this attitude, it is quite likely there will, after the war, be a certain amount of unemployment in the local mining industry; estimates which have been made show this may rise to 20 per cent. unless certain new industries are introduced, and many remember only too painfully similar problems after the last war. But, the great power plant, if erected, will only give employment to about 300, and these mostly technical workers. It will not add much employment to the locality, and as the electricity generated will be sold to the Grid, it will not of itself even attract industries that specially thrive on cheap power. The present population of 18,500 may possibly increase to 23,000 or even 25,000, but that is the maximum that can at all reasonably be anticipated, even though Durham is the centre of an area containing some 2,000,000 people.

Much of the existing housing is unsatisfactory, and the choice of sites for new housing will need very careful study, owing to the irregular topography of the City's environment.

Mr. Sharp's terms of reference did not require him to make suggestions as to suitable future factory sites, but the Report shows that certain light industries appropriately situated would present the opportunity of further kinds of local em-

ployment, and the suggestion is made that these should be adjacent to the districts where many of the city workers are now living.

Mr. Sharp concludes the Report by indicating that, in his judgment, the City's future is best to be served by extending and improving itself as a market centre, a cultural and tourist centre, and by providing for a limited amount of industry. He feels, and most would agree, that it is essential to preserve the best of the old buildings and secure good design in the new; not by calling for duplicates or copies of those existing, but by requiring them to be good neighbours. He knows that some will contend his recommendations are over-ambitious, but they would not come into being right away. There will no doubt be a new Town Hall and Shire Hall, more University Buildings, a Youth Centre, Library and Museums, in the course of reasonable time; also developments of administrative, shopping, educational and residential centres. Existing amenities must be preserved and new ones sponsored, and an industrial estate for light and medium industries will form part of the set-up. Southward extension should be restricted, and any developments needed should be towards Gilesgate Moor-Belmont, Framwellgate Moor and Sniperley. By-pass roads should be developed, but he is unalterably opposed to the County Council's proposed new "through road" in the centre of the City, and he advocates an alternative with an appropriate system of Car Parks.

The height and roof design, the material, character, use and siting of any future building, must be judged in relation to the Cathedral, and a Design Panel should be appointed to assist in this. The Report recommends that the southern slope of Claypath ought to be developed for a range of University and College buildings. Parts of this ridge should be left open as a green wedge between the old City and the new.

Mr. Sharp also mentions that the number of shops in the central area should be reduced, and that the North Road should be entirely re-built to become the principal street; also, that local shopping areas should be projected on the outskirts of the town. With faith in the City as a tourist centre, he advocates an hotel quarter, and to add to the attractiveness he proposes that the sewage disposal works be removed at least a mile downstream and the gasworks also be taken out of the City. As to the Power Station, he contends that in no circumstances should that be permitted.

A Public Trust should be formed and made responsible for the preservation of some of the age-mellowed and character-bearing buildings in Silver Street and Saddler Street, in Old Elvet and South Street. The Trust should also undertake new planting, which is so often overlooked, and the management of landscaped areas should be entrusted to it.

River pathways should be provided and the condition of the river improved. Last, but by no means least, all advertising of a public nature should be controlled.

After carefully studying this review of the potentialities of one of our historic Cathedral Cities, one is brought face to face with the fact that if our town planning laws mean anything; if all the writings and talking of recent years are to bear fruit, here is a test case, for it will demonstrate whether a City like Durham can be protected against vandalism and at the same time can be a prosperous place to live in whilst maintaining its character.

How often are speedy profits seized upon and permanent benefits ignored. Mr. Sharp in *Cathedral City* has not shirked this issue. His Report condemns, but it also constructs, and is a sound basis for much pondering. The maintenance of the fine character of this unobtrusive but cherished national heirloom, an element that has caused our country to be respected as a land of domestic beauty and charm is placed in fitting perspective, and all lovers of England will watch with keenest attention the results of this admirable Report upon the actions of the powers to be.

PLANNER'S SCRAPBOOK

BEACHCOMBER'S PLAN NEWS

Dear Sir,

I have followed the controversy about Durham Cathedral and the new power station. Would it not be perhaps possible to preserve the amenities by adding chimneys and cooling towers to the Cathedral itself, so as to bring it into harmony with the power station? After all, the twentieth century cannot wait, and whatever lags behind must be brought up to date. We are not living in the Middle Ages.

Yrs truly,
Ernest McMilkman.

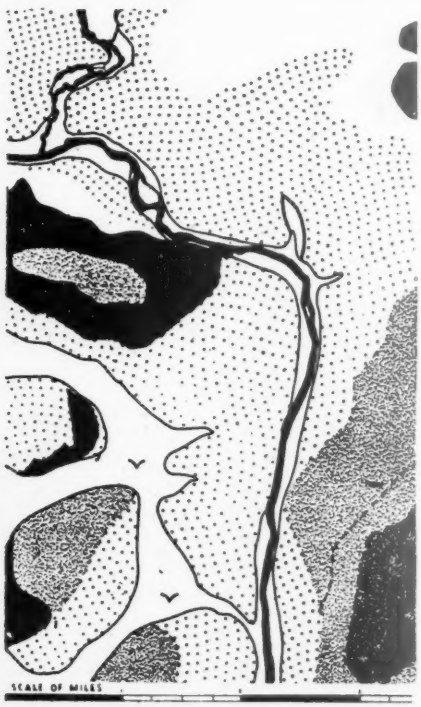
(*From the "Daily Express."*)

PLANNER'S QUIZ

2. On the left is part of a map from a guide to a rapid method of District Survey. All the information shown can be deduced from published sources, but these sources will not be given until the next Quiz, when the key to the symbols used on the map will also be given.

There are, therefore, two questions ; what do the symbols denote in the map on the left? and from what published sources was the information taken?

Answer in the next Planner's Scrapbook.



THE ANSWER TO THE LAST PROBLEM

1. The symbols in this RELIEF map are shown below. The published sources from which the information was taken are as follows : CONTOURS : Ordnance Survey One Inch to One Mile Fifth Edition Maps. ADDITIONAL SPOT HEIGHTS: Ordnance Survey Six Inches to One Mile Maps.

1 SLOPE STEEPER THAN 1 IN 7 — SLOPE STEEPER THAN 1 IN 20 BUT LESS THAN 1 IN 7 — LAND UNDER 200 FT. — LAND BETWEEN 200 AND 400 FT. — LAND BETWEEN 400 AND 600 FT.

PRICES

NINETEENTH WARTIME LIST

Rates of Wages have not risen since November 1, 1944, and are now as follows :—

LONDON DISTRICT	*Craftsmen.*	*Labourers.*
Within 12 miles radius	2s. 2½d.	1s. 8¾d.
From 12-15 „ „	2s. 2d.	1s. 8½d.

GRADE CLASSIFICATIONS

	A	A¹	A²	A³	B	B¹	B²	B³	C
Craftsmen..	2s. 1d.	2s. 0½d.	2s. 0d.	1s. 11½d.	1s. 11d.	1s. 10½d.	1s. 10d.	1s. 9½d.	1s. 9d.
Labourers..	1s. 7¾d.	1s. 7¼d.	1s. 7d.	1s. 6½d.	1s. 6¼d.	1s. 5¾d.	1s. 5½d.	1s. 5d.	1s. 4¾d.

F.S.I., F.I.Arb.

CURRENT MARKET PRICES OF MATERIALS

BY DAVIS, BELFIELD AND EVEREST,

Chartered Quantity Surveyors.

Prices vary according to quality and the quantity ordered.

Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit for the General Contractor.

CONCRETOR

Cements

† All delivered in paper bags (20 to the ton) free.
* Paper bags charged at 7/– extra per ton; jute sacks charged at 35/6 per ton and credited on return at 1/6 each, when received in good condition within two weeks.

	6 Tons and over	In 80-ton freights F.A.S. Safe Wharf In River Thames, London Area.
*Portland	per ton 51/–	48/6
*"417" Ultra rapid hardening	per ton 71/–	—
*Rapid hardening ..	per ton 57/–	54/6
*Water repellent ..	per ton 81/–	—
Atlas White (1 barrel 376 lb.)		per barrel — 6 ton upwards
*Colorcrete rapid hardening, buff and red	per ton	91/–
*Colorcrete rapid hardening khaki ..	per ton	91/–
†Colorcrete rapid hardening dark ..	per ton	—
†Colorcrete non-rapid hardening ..	per ton from	175/– to 399/–
†Snowcrete	per ton	225/–
	1–9 cwts.	10–19 cwts. 1 ton and upwards
*Ciment Fondu, delivered Central London area	per cwt. 15/3	14/9 per ton 254/–

Aggregate and Sands (Full Loads)

2″ Unscreened ballast	per yard cube 12/–
¾″(Down) Washed, crushed and graded shingle	per yard cube 12/9
¾″ (Down) Ditto	per yard cube 13/9
2″ Broken brick	per yard cube 14/6
¾″ Ditto	per yard cube 16/–
Washed pan breeze	per yard cube 9/6
Coke breeze 1″ to dust	per yard cube —
1/16″ Sharp washed sand	per yard cube 14/6
White Silver Sand for white cement (one ton lots)	per yard 40/–

(For Sands for Bricklaying and Plastering *see* respective trades)

Pavings

Brick hardcore	per yard cube 7/6
Concrete ditto	per yard cube —
Clean furnace clinker and boiler ashes.. ..	per yard cube 4/–
Coarse gravel for paths	per yard cube —
Fine ditto	per yard cube —
Clean granite chippings	per ton 39/2

CONCRETOR—(*continued*)

Pavings—continued

Red quarry tiles, 6″ × 6″ × 7/8″	per yard super 8/1
Ditto 6″ × 6″ × 5/8″	per yard super 6/9
Buff ditto 6″ × 6″ × 7/8″	per yard super 8/10
Ditto 6″ × 6″ × 5/8″	per yard super 7/5
Hard red paving bricks, 2″	per 1,000 237/9
Ditto 1½″	per 1,000 215/9

Reinforcement

Home trade maximum basis price for mild steel rods, ⅝″ diameter and upwards, ex mills delivered to station or siding	per ton £16 19 6
Extras for :—	
Under ⅝″ to 7/16″ diameter	per ton 10/–
Ditto 7/16″ and over ¼″ diameter	per ton 15/–
⅜″ and over 11/32″ diameter	per ton 20/–
11/32″ and over 5/16″ diameter	per ton 25/–
5/16″ and over 9/32″ diameter	per ton 30/–
9/32″ and over ¼″	per ton 35/–
¼″ diameter	per ton 40/–
Under ¼″ to 3/16″	per ton 60/–
Lengths over 40 ft. to 45 ft.	per ton 10/–
„ „ 45 ft. to 50 ft.	per ton 15/–
„ „ 50 ft. (as 50 ft. plus per ft.) ..	per ton 1/6

Sundries

Retarding liquid, in 5-gallon drums (for exposing aggregate) per gallon 21/–	}	Ex Warehouse, Southwark Bridge. Drums chargeable and credited, if returned.
Ditto (for obtaining a bond) per gallon 13/1½	}	

BRICKLAYER

Common Bricks

†Rough stocks	per 1,000 —
†Third stocks	per 1,000 —
†Mild stocks	per 1,000 —
Sand limes	per 1,000 —
‡Phorpres pressed Flettons	per 1,000 62/3
‡Phorpres keyed Flettons	per 1,000 64/3
Blue Staffordshire wirecuts	per 1,000 295/9
†Lingfield engineering wirecuts (ex works)	per 1,000 98/–
Firebricks, best Stourbridge 2½″	per 1,000 425/–
Firebricks, best Stourbridge 3″..	per 1,000 542/6

Facing and Engineering Bricks

Sand Limes, No. 1	per 1,000 —
Sand Limes, No. 2	per 1,000 —
‡Phorpres rustic Flettons	per 1,000 82/3

‡ At King's Cross (Maiden Lane) Stn. For delivery in W.C. district add 10/– per 1,000.

BRICKLAYER—(*continued*)

Facing and Engineering Bricks—continued.

Midhurst Whites	per 1,000	—
†Hard stocks, firsts	per 1,000	—
†Hard stocks, seconds	per 1,000	—
Sand-faced, hand-made reds	per 1,000 from	195/6
Sand-faced, machine-made reds	per 1,000 from	—
Red rubbers (9¾-in.)	per 1,000	—
Uxbridge Flints (white)	per 1,000 from	86/–
Uxbridge Flints (creams, light greys, etc.) per 1,000	from	113/–
†Dunbriks (concrete), greys or Commons	per 1,000	67/–
†Dunbriks (concrete), various colours	per 1,000	—
†Southwater engineering No. 1 (first quality red pressed)	per 1,000	148/–
†Southwater engineering No. 2 (second quality red pressed)	per 1,000	128/–
Blue pressed	per 1,000	323/3

† Price ex works, delivery extra.

Limes and Sand

		1-ton lots	6-ton lots
Lime, greystone	per ton	61/–	—
Lime, chalk	per ton	61/–	—
Lime, blue Lias (including paper bags	per ton	—	—
Lime, hydrated (including paper bags)	per ton	70/6	—
Washed pit sand	per yard cube		13/6

(For cements, *see* "Concretor.")

Hire of jute sacks charged at 1/6 and credited at 1/6. If left charged at 1/9.

Sundries

Wall ties, self coloured	per cwt.	—
Wall ties, galvanized	per cwt.	—
D.P.C. slates, size 18″ × 9″	per 100	48/6
D.P.C. slates, size 14″ × 9″	per 100	41/6
D.P.C. slates, size 14″ × 4½″	per 100	11/6
‡Ledkore D.P.C. Grade A	per foot super	8½d.
‡Ledkore D.P.C. Grade B	per foot super	10½d.
‡Ledkore D.P.C. Grade C	per foot super	1/–

‡ Trade discount 5 per cent. and cash discount 5 per cent. Prices include delivery on minimum of £5 orders.

Airbricks:	9″ × 3″	9″ × 6″	9″ × 9″	12″ × 9″	14″ × 9″
Red and buff terra cotta (each)	1/–	2/1	4/7	—	12/7
Black cast iron, School	9″×3″	9″×6″	9″×9″	12″×6″	12″×9″
Board pattern airbricks per doz.	—	—	—	—	—
Galvanized ditto per doz.	—	—	—	—	—
Black hit and miss cast iron ventilators per doz.	—	—	—	—	—
Galvanized ditto per doz.	—	—	—	—	—

	1′ 0″	1′ 6″	2′ 0″	2′ 6″	3′ 6″	5′ 0″
Buff terra cotta chimney pots (each)	3/8	4/4	6/4	8/4	19/–	32/5

Fireclay ..per ton 71/–

Wall reinforcement supplied in standard rolls containing 25 yards lin.

*2″ wide black japanned	per roll	2/5
*2″ wide galvanized	per roll	—
*2½″ wide black japanned	per roll	3/–
*2½″ wide galvanized	per roll	—

Greater widths pro rata 2½″ price carriage paid on orders of £5. Discounts for quantities.

Partitions, etc.

		2″	2½″	3″	4″
Clinker	per yard super	2/10	3/3	3/9	4/9
Pumice	per yard super	5/–	6/–	—	—
Hollow Block	per yard super	2/10	3/1	3/8	4/2
Plaster	per yard super	5/2	5/10	7/1	8/4
†1″ Wood-wool Slabs	per yard super from				4/2 to 4/10
†2″ Wood-wool Slabs	per yard super from				6/7 to 7/6½
†3″ Wood-wool Slabs	per yard super from				8/6 to 9/8½

† Prices according to quantity ordered. 2½% Cash Discount.

Gas Flue Blocks

		Single Flues.	Double Flues
Straight blocks	each	1/4	2/5
Backing block	per set of 3	3/3	5/8
Cover blocks	each	1/8	3/6
Raking blocks 45°	each	3/2	4/11
Raking blocks 60°	each	2/2	3/5
Offset blocks	each	3/10	5/4
Closer blocks	each	1/4	2/5
Closer flashing blocks	each	1/1	1/10
Straight flashing blocks	each	1/1	1/10
Terminal and cap	per set	7/3	12/3
Middle terminal and cap	per set	6/9	11/6
End terminal and cap	per set	7/–	12/–
Corbel block	each	5/4	10/9
Gathering block	each	—	3/7

DRAINLAYER

Agricultural Pipes

		2″	3″	4″	6″
Pipes in 12″ lengths	per 1,000	77/6	110/–	147/6	285/–

(Delivered in full loads Central London Area.)

Salt Glazed Stoneware Pipes and Fittings

		4″	6″	9″
Pipe (2′ lengths)	each	1/8	2/6	4/6
Bends, ordinary	each	2/6	3/9	6/9
Single Junction, 2′ long	each	3/4	5/–	9/–
Yard Gulley, without grating	each	6/3	6/10½	11/3
Ordinary round or square Grating, painted	each	–/7½	1/3	2/6
Ordinary round or square Grating, galvanized	each	1/0½	2/1	4/4½
Extra for Inlets, horizontal	each	1/6	1/6	1/6
Extra for Inlets, vertical	each	2/3	2/3	2/3
Intercepting Trap with Stanford Stopper	each	17/6	22/6	37/6
Grease and mud interceptor with bucket for removing silt and grease for 6″, 9″ and 12″ drains, with iron grating, painted	each			20/–
Ditto, with iron grating galvanized	each			21/10½

The above prices to be varied by the following percentages for the different qualities given. All subject to 2½ per cent. cash discount.

	British Standard	British Standard Tested
Orders for 2 tons and over	Plus 15%	Plus 40%
Orders under 2 tons, 100 pieces upwards	Plus 32½%	Plus 57½%
Orders under 2 tons, less than 100 pieces	Plus 42½%	Plus 67½%

	Best	Seconds
Orders for 2 tons and over	Plus 7½%	Subject to 15% off the price of best quality for all sizes.
Orders under 2 tons, 100 pieces upwards	Plus 25%	
Orders under 2 tons, less than 100 pieces	Plus 35%	

Cast Iron Drain Pipes and Fittings

Socket and Spigot Pipes:—

Weight (per 9 ft.)	Size	9 fts.	6 fts.	4 fts. each	3 fts. each
1 . 1 . 8	4″ per yard	8/3	9/3	14/9	11/2
1 . 1 . 20	4″ per yard	8/7	9/6	15/1	11/6
2 . 0 . 6	6″ per yard	12/9	15/2	24/5	19/6
4 . 0 . 2	9″ per yard	23/1	30/3	52/6	40/–
		2 fts.	18 ins.	12 ins.	9 ins.
1 . 1 . 8	4″ each	9/3	7/10	7/3	6/6
1 . 1 . 20	4″ each	9/5	—	—	—
2 . 0 . 6	6″ each	14/8	—	—	—
4 . 0 . 2	9″ each	—	—	—	—

Tonnage Allowances:—
Orders up to 2 tons nett.
Orders 2 to 4 tons less 2½%.
Orders 4 tons or over less 5%.

		4″	6″	9″
Bends	each	8/2½	17/1	52/9
Single junctions	each	14/6	30/–	91/3
Intercepting traps	each	39/7	66/–	162/3
Gulleys ordinary trapped	each	19/2	—	—
Extra for inlet 4″	each	5/3	—	—
Grease Gulley trap	each	152/6	—	—
H.M.O.W. large socket gulley trap with 9″ gulley top and heavy grating and one back inlet	each	33/3	61/8	—

Channels in Brown Glazed Ware

		4″	6″	9″
Half round straight channels 24″ long	each	1/3	1/10½	3 4½
Half round straight channels 30″ long	each	—	—	4 2¾
Ditto, short lengths	each	1/3	1/10½	—
Half round ordinary channel bends	each	1/10½	2/9½	5/0½
Ditto, short	each	1/10½	2/9½	—
Ditto, long	each	3/9	5/7½	10/1½
Three-quarter round branch bends	each	5/–	7/6	—
		6″×4″	9″×6″	
Half round taper channels 24″ long	each	3/9	6/9	
Half round taper channel bends	each	4/8½	8/5½	

The above prices are subject to the same discounts as those given for "Best" quality salt glazed stoneware pipes.

Manhole Covers, etc.

		Black	Galvanized
‡24″ × 18″ single seal for foot traffic. (Weight 0.0.3 in lots of 24)	each	19/3	30/–
‡24″ × 18″ single seal for light car traffic. (Weight 2 cwts. in lots of 24)	each	49/7	88/2
‡24″ × 18″ Wood Block pattern. For road traffic. (Weight 3 cwts.)	each	Coated	79/3

DRAINLAYER—(*continued*)

Manhole Covers, etc.—(continued)

		Fine Cast	Galv.
‡Cast iron steps, 13½″ long, 6″ wide, 9″ in wall, approximate weight 5½ lb. each	per dozen	17/4	28/11
‡Galvanized fresh air inlets with cast brass fronts (L.C.C. pattern)	each	7/7	31/–

‡ These prices are subject to 7½% advance.

MASON

Yorkstone

Building quality Robin Hood and Woodkirk Blue Stone.

Blocks scrappled, random sizes	per foot cube	6/3½
Add for blocks to dimension sizes ..	per foot cube	8½d. (each dimension)
Templates with sawn beds, edges rough (up to 4 ft. super and not over 2′ 6″ long)	per foot cube	7/–
Templates with sawn beds, sawn one edge,	per foot cube	8/4½
Templates with sawn beds, sawn two edges,	per foot cube	9/9½
Prices f.o.r. Yorkshire, railway rate to London Station per ton. (Minimum 4-ton loads.)		29/1

Artificial Stone

6″ × 3″ Copings and sills..	per foot run	2/1
6″ × 6″ Copings and sills..	per foot run	3/2
9″ × 3″ Copings and sills..	per foot run	2/6
9″ × 6″ Copings and sills..	per foot run	4/6
12″ × 3″ Copings and sills..	per foot run	3/3
12″ × 6″ Copings and sills..	per foot run	5/2
Cornices according to detail, per foot cube (from)		9/3

SLATER, TILER AND ROOFER

Best Bangor Slates

	£ s. d.
24″ × 12″ .. .. per 1,000 actual	—
20″ × 10″ .. .. per 1,000 actual	—

Prices include for delivery to site in lots of 1,000 and upwards.

Tiles

	£ s. d.
Hand-made sandfaced 10½″ × 6½″ red roofing tiles per 1,000	—
Machine-made sandfaced 10½″ × 6½″ red roofing tiles per 1,000	—
Berkshire rustic pantiles .. .. .. per 1,000	—

Asbestos-cement

6″ corrugated sheets, grey	per yard super	3/5
Standard 3″ corrugated sheets, grey ..	per yard super	3/1½

Slates (*Manufacture temporarily suspended*) :—

* 15¾″ × 7¾″ grey	per 1,000	£7 6 0
* 15¾″ × 15¾″ diagonal, grey ..	per 1,000	£14 12 0
* 15¾″ × 15¾″ diagonal, russet or brindled	per 1,000	£23 12 6

Pantiles (*Manufacture temporarily suspended*).

* Large russet brown	per 1,000	—

* Prices are for minimum two-ton loads, and are subject to 5% trade discount.

WALLBOARDS, Etc.

½″ Insulating board..	per yard super	2/4⅞
½″ Building board	per yard super	2/0½
⅛″ Standard hard board	per foot super	-/4⅝
5/32″ Do.	per foot super	-/5⅜
⅛″ Tempered hard board	per foot super	-/5 15/16

Laminated Wallboard

3/16″ Thickness (standard) :		
1 bundle up to 2,500 sq. ft.	per foot super	-/2¼
2,500 sq. ft. to 5,000 sq. ft.	per foot super	-/2⅛
5,000 sq. ft. and over	per foot super	-/2

Asbestos-cement and Asbestos Products

†5/32″ Semi-compressed flat building sheets, grey	per yard super	1/6½
†5/16″ Ditto	per yard super	1/7
†¼″ Ditto	per yard super	2/3¼

†Prices are for orders of two tons and over and are subject to 5% trade discount.

¼″ Asbestos wallboard (in sheets 8′ 0″ × 4′ 0″),	per foot super	-/5
5/32″ Ditto	per foot super	-/4
*3/16″ Asbestos wood (in sheets 8′ 0″ × 4′ 0″)	per yard super	2/6¼

* Prices are for orders of 2 tons and over.

The following asbestos prices are for minimum 1-ton lots and are subject to 10 per cent. trade discount :—

Asbestos-cement stipple glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″) ..	per yard super	8/8
Marble glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″) (*Manufacture temporarily suspended*)	per yard super	8/8

WALLBOARDS, Etc.—(*continued*)

Asbestos-Cement and Asbestos Products—(continued)

		25–75 yards	150–300 yards	Over 600 yards
½″ Asbestos Insulating Board	per foot super	—		
¾″ Fireproof plaster board	per yard super	2/7	2/3	1/11
¼″ Ditto	per yard super	2/5	2/1	1/9
Joint tape ..	per 100 yard roll	—	—	7/6
Joint filler	per lb.	—	—	-/4

Sundries

Slaters or sarking felt..	per yard run	-/9
Roofing felt (1-ply bitumen)	per yard sup.	1/–
Bituminous hair felt	per roll	58/–

All rolls 25 yards long by 32″ wide.

Building paper, 50″ wide (B.I. 20)	per yard run	1/1
,, (K. 40)	per yard run	-/5½

" Cabots " Quilts :—(Ex Works) Twenty roll lots delivered carr. free

Double ply .. per roll	—	per half roll —

All rolls 28 yards long by 36″ wide. Special terms for quantities.

Cut steel clasp nails	1″ per cwt.	39/3
,, ,, floor brads	2″ ,,	31/3
Bright oval wire nails..	1″ ,,	43/4
Galvanized wire staples with slice cut points	1″ × 12 gauge per cwt.	52/–
Scotch glue	per cwt.	—

STEEL AND IRONWORKER

Steelwork

	£ s. d.
Basis price for rolled steel joists sections 5″ × 3″ to 16″ × 6″, in 10 ft. to 50 ft. lengths	ex mills per ton 15 10 6

PLASTERER

Plaster and Cement

		1-ton loads
Sirapite (coarse)	per ton	91/6
,, (fine)	per ton	99/6
Victorite No. 1 (White) ..	per ton	136/–
,, No. 2 (Buff) ..	per ton	119/6
Thistle (browning)	per ton	91/6
Thistle (haired)	per ton	—
Pink plaster	per ton	91/6
White plaster	per ton	94/6
Keene's pink	per ton	138/–
Gypstone	per ton	70/6 } ex Works, Kent
Glastone	per ton	73/– } ex Works, Kent
Paristone (haired)	per ton	70/6 } ex Works, Kent

Cullamix (Tyrolean Finish) 1 ton lots and upwards per ton from 149/– to 182/6

Sundries

Sharp washed sand			per yard cube	14/6
Cow hair			per cwt	.70/–
Goat's hair			per cwt.	100/–
Expanded metal lathing, 9′ 0″ × 2′ 0″ ⅜″ mesh × 26 gauge			per sheet	2/9
Wire Slate nails (galvanized) 1¼″ × 15 gauge			per cwt.	62/5
,, ,, ,, (bright wire) ,, ,,			per cwt.	—
	25–150 yards	150–300 yards	Over 600 yards	
⅜″ Plaster board (plaster base) per yard super	2/2	1/10	1/8	
1¼″ Galvanized nails .. per cwt.	58/3			
Scrim cloth in 100-yard rolls per roll	3/10			

Wall Tiles

The following prices are subject to 75 per cent. addition :

Commercial quality.		
Ivory, white, etc., glazed 6″ × 6″ × ⅜″ ..	per yard super	10/1
Angle beads (1½″ wide)	per yard run	1/2¾
,, ,, (1″ ,,)	per yard run	–/10
Rounded edge tiles	per yard run	2/6½
Coloured enamelled bright glazed, 6″ × 6″ × ⅜″	per yard super	14/3
Angle beads (1½″ wide)	per yard run	1/4½
,, ,, (1″ ,,)	per yard run	–/11½
Rounded edge tiles	per yard run	2/7
Eggshell gloss enamelled, 6″ × 6″ × ⅜″ ..	per yard super	15/–
Angle beads (1½″ wide)	per yard run	1/7½
,, ,, (1″ ,,)	per yard run	1/0¾
Rounded edge tiles	per yard run	2/8½
Special rates for quantities		

PLUMBER

Lead

3½ lb. and upwards milled sheet lead in quantities of 5 cwts. and upwards	per cwt.	40/–
Add if cut to sizes	per cwt.	3/–
Lead ternary alloy, No. 2 quality extra over sheet lead	per cwt.	14/–
Allowance for old lead delivered to merchant	per cwt.	18/–

Cast Iron Goods

Percentage Adjustment on List No. 3100 A.B. 1/2/40

Rainwater Goods (painted or unpainted)	*Plus* 25%
Soil goods (coated or uncoated)	*Plus* 25%

Mild Steel Rainwater Goods

The following prices are subject to 2½ per cent. trade discount and 40 per cent. advance.

24 gauge rainwater slip jointed pipes.		2″	2½″	3	3½″	4″
Galvanized round pipes with ears	per 6′ 0″	2/7½	3/1½	3/9	4/3	4/9
Painted round pipes with ears	per 6′ 0″	2/4½	2/9	3/1½	3/7½	4/–
Painted or galvanized short lengths with ears, extra	each	–/6	–/6	–/6	–/6	–/6

18 Gauge gutters.		3″	3½″	4″	4½″	5″	6″
Galvanized half round gutters	per 6′ 0″	2/–	2/3	2/4½	2/9	3/–	3/7½
Painted half round gutters	per 6′ 0″	1/6	1/9	2/–	2/3	2/6	3/–
Painted or galvanized short lengths extra	each	–/3	–/3	–/3	–/3	–/3	–/3

Asbestos-Cement Rainwater Goods

The following prices are subject to 12½ per cent. trade discount. Orders over £30 are subject to 17½ per cent. trade discount.

Rainwater Pipes.

Prices are for 6′ 0″ lengths, 10′ 0″ lengths available in 2½″, 3″, 3½″ and 4″ diameters. 4′ 0″ charged as 1½ yards. From 4′ 0″ to 6′ 0″ charged as 2 yards. Over 6′ 0″ charged as 10′ 0″.

Round pipes

2″	per yard run 2/3½
2½″	per yard run 2/6½
3″	per yard run 3/1
3½″	per yard run 3/7½
4″	per yard run 4/2½
4½″	per yard run 6/–½
5″	per yard run 7/1½
6″	per yard run 8/10½

Gutters.

Short lengths of gutter up to 2′ 0″ charged as 1 yard; from 2′ 0″ to 4′ 0″ as 1½ yards, and over 4′ 0″ as 2 yards.

Half round gutters	3″	4″	4½″	5″	6″	8″
per yard run	1/7½	1/11¼	2/–½	2/4½	3/3¾	4/1
Ogee gutters per yard run	—	2/4½	2/6¾	3/1	3/9	4/10½

INTERNAL PLUMBER

Lead pipe in coils, 5 cwts. and upwards	per cwt.	40/3
Lead soil pipe	per cwt.	44/3
Add if ribbon marked	per cwt.	–/6
Lead ternary alloy, No. 2 quality extra over lead pipe	per cwt.	14/–
Plumber's solder	per cwt.	155/–
Tinman's solder	per cwt.	210/–

Drawn lead traps with brass screw eye, 6 lb.

		1″	1¼″	1½″	2″
S. trap	each	2/9	3/2	3/11	5/8
P. trap	each	2/5	2/7	3/3	4/7
Extra for 3″ deep seal	each	–/8	–/8	–/8	–/8

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.

Tubes.		¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″
Tubes 2 ft. long and over	per ft.	–/5½	–/6¾	–/9½	1/1	1/4½	1/10		
Pieces 12″ to 23½″ long	each	1/1	1/5	1/11	2/8	3/4	4/9		
Bends	each	–/11	1/2	1/7½	2/7½	3/2	5/2		
Fittings.									
Elbows, square	each	1/1	1/3	1/6	2/2	2/7	4/3		
Elbows, round	each	1/2	1/5	1/8	2/4	2/10	4/8		
Tees	each	1/3	1/7	1/10	2/6	3/1	5/1		
Crosses	each	2/9	3/3	4/1	5/6	6/7	10/6		
Sockets, plain	each	–/4	–/5	–/6	–/8	–/10½	1/3		
Sockets, diminished	each	–/6	–/7	–/9	1/–	1/4	2/–		

INTERNAL PLUMBER—(*continued*)

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.—(continued)

		¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″
Flanges	each	1/–	1/2	1/4	1/9	2/–	2/9		
Caps	each	–/5	–/6	–/8	1/–	1/3	2/–		
Plugs	each	–/4	–/5	–/6	–/8	–/10	1/3		

Fittings and flanges and tubes ordered in long random lengths are subject to the following trade discounts :—

	Tubes	Fittings	Flanges
"Light Weight"	51½%	47½%	28%
"Heavy Weight"	44%	39¼%	15½%

COPPERSMITH AND ZINC WORKER

Copper

Hot rolled copper sheeting in 1 cwt. lots, all gauges to 24 wire gauge	per lb.	1/1½
Light gauge copper tube, solid drawn	per lb.	1/3½
Copper tube, solid drawn screwing sizes	per lb.	1/2½
Copper wire, 10 and 12 gauge	per lb.	1/2
Copper nails, 1″ and up	per lb.	—

GLAZIER

Sheet Glass cut to size (ordinary glazing quality)

18 oz. clear sheet	per foot super	3½d.
24 oz. ditto or "R" quality	„ „ „	5d.
26 oz. ditto	„ „ „	6½d.
32 oz. ditto	„ „ „	8½d.
¼″ figured rolled and cathedral glass (white)	„ „ „	6½d.
⅛″ ditto, approved tints	„ „ „	9½d.

British Polished Plate Glass cut to size

Ordinary ¼″ Substance		Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
In Plates not exceeding				
2 ft. super	per foot super	2/2	2/4	2/10
3 „	per foot super	2/9	3/–	3/9
5 „	per foot super	3/–	3/6	4/3
*45 „	per foot super	3/6	4/–	5/5
*100 „	per foot super	4/6	5/7	7/2

*Plates exceeding 100 ft. super or 160 in. long or 100 in. wide at higher prices.

Special quotations should be obtained for other qualities and thicker substances.

Wired Glass Cut to Sizes

¼″ Wired cast	per ft. super 9½d.
‡¼″ Georgian wired cast	per ft. super 10d.
‡¼″ Polished Georgian wired glass	per ft. super 3/2

‡ For cutting to allow for wires in adjacent pieces to be "lined up," add 4d. per foot super.

Supplied in sizes up to 110 in. long and up to 36 in. wide.

PAINTER

Snowcem paint	per cwt. 56/–
White ceiling distemper	per cwt. 22/–
Washable distemper	per cwt. from 44/– to 66/–
Ready mixed white lead paint (best), 5 cwt. lots, 14 lb. tins	per cwt. 91/4
Aluminium paint	per gallon —
White enamel	per gallon —
White enamel paint	per gallon 27/–
Stiff white lead (genuine English stack process, 1 ton lots, 1 cwt. kegs)	per cwt. 70/9
Liquid driers	per gallon 23/–
Linseed oil raw (5-gallon drums)	per gallon 6/11
„ „ boiled (5-gallon drums)	per gallon 7/2
French polish	per gallon 15/6
Knotting	per gallon 24/–
Oil stain (scumble)	per lb. 3/–
„ „ red oxide	per cwt. 72/–
„ „ middle Brunswick green	per cwt. 95/–
„ „ dark umber	per cwt. 105/–
„ „ golden ochre	per cwt. 82/–
Varnish (outside quality) oak	per gallon 22/–
„ „ copal	per gallon 24/–
„ „ flatting	per gallon 26/–
Turpentine, genuine American 5-gallon lots	per gallon —
„ substitute	per gallon 4/–
Creosote, 1-gallon lots	per gallon 1/9
Putty	per cwt. 26/9
Utility Glazing Putty	per cwt. 21/3
Size	Per ½ cwt. 30/–
Best quality English gold leaf, 23 carat	per book 3/6
Extra thick, ditto	per book 4/2

INFORMATION CENTRE

The function of this feature is to supply an index and a digest of all current developments in planning and building technique throughout the world as recorded in technical publications, and statements of every kind whether official, private or commercial. Items are written by specialists of the highest authority who are not on the permanent staff of the Journal and views expressed are disinterested and objective. The Editors welcome information on all developments from any source, including manufacturers and contractors.

STRUCTURE

1776 — ***Loading***

BRITISH STANDARD CODE OF PRACTICE, CP 4:1944. CODE OF FUNCTIONAL REQUIREMENTS OF BUILDINGS (CLASSIFICATION CODE), CHAPTER V, LOADING. *The Codes of Practice Committee of the Ministry of Works.* (*British Standards Institution*, 2*s*.) Superimposed floor loads. Reductions of total superimposed loads on columns. Superimposed roof loads. Wind pressure on buildings.

This Code differs from previous Codes in an important respect. Codes in the past have dealt mainly with a limited field of structural requirements, whereas this present scheme is comprehensive in character and applies to the whole of the building and its components.

The results of research on wind pressure on buildings, carried out at the National Physical Laboratory, indicated that assumptions in the past led to error not only in the magnitude, but also in the direction of wind pressure. Although further research on this subject is required, the suggestions in this Chapter are a reasonable combination of the results of research and practical experience so far available.

A warning is given that deflections must be watched, for they become increasingly important as loading is reduced and working stresses are raised. A further warning draws attention to the possibility of later changes in occupancy involving loading heavier than was originally contemplated.

According to the definition of dead loads, "the dead load in a building comprises the actual weight of all walls, partitions, floors and roofs, and includes all other permanent construction in the building." It does not seem to be consistent to consider non-load-bearing partitions, which may be removed or rearranged in modern buildings, as "permanent construction." A different treatment is specified for partitions shown on the plans and for partitions not shown on the plans. It would be simpler if a uniformly distributed load could be substituted for non-load bearing partitions in both cases, not only in the second case, as suggested in the Code. It would be more logical if this allowance were to be added to the superimposed load and not to the dead load. This would be in line with the provision that the weight of the partition may be neglected if its influence on the floor is less than one-fifth of the superimposed load.

It should be added that the distinction between dead load and superimposed load is of no importance in the case of simply supported beams, but it has to be taken into account in the design of continuous structures.

The reduction of floor loads to 30 lb./sq. ft. in private dwellings, 40 lb./sq. ft. in dwellings of more than two storeys, 50 lb./sq. ft. in rooms used as offices, 60 lb./sq. ft. in classrooms in schools and light workshops, 70 lb./sq. ft. in offices, 80 lb./sq. ft. in restaurants, churches, etc., as against 50, 80 and 100 lb./sq. ft. respectively in previous Codes, is very reasonable. Many housing authorities still specify 50 lb./sq. ft. for floors (excluding allowance for partitions), and 40 or even 50 lb./sq. ft. for flat roofs, are still common practice, although such loads no not occur in this type of building. The specification of excessive loads in dwelling houses increases their cost without increasing their value. The new Code specifies 30 lb./sq. ft. and allows a reduction to 20 lb./sq. ft. for a light roof, where designs and location render it in no circumstances likely to be made accessible to persons other than for maintenance purposes.

Another improvement on previous Codes is the reduction of the superimposed load on beams or girders supporting not less than 500 sq. ft. The reduction, amounting to 5 per cent. for each 500 sq. ft. supported, with a limit of 25 per cent., is simple, yet a formula similar to that of the American Standards Association (see Inf. Centre No. 1075 in ARCHITECTS' JOURNAL of February 25, 1943, p. 148) might have been preferable.

The specification of horizontal loads for parapets and balustrades is also a welcome novelty.

The most important feature of the Code is the method of dealing with wind pressure. The requirements of previous Codes were rough rules of thumb with very little relation to actual conditions. Now, the location, position, height and shape of the building are taken into consideration and several combinations of internal and external wind pressures investigated. The variations of the wind pressure on different parts of a building are well illustrated for a few typical cases.

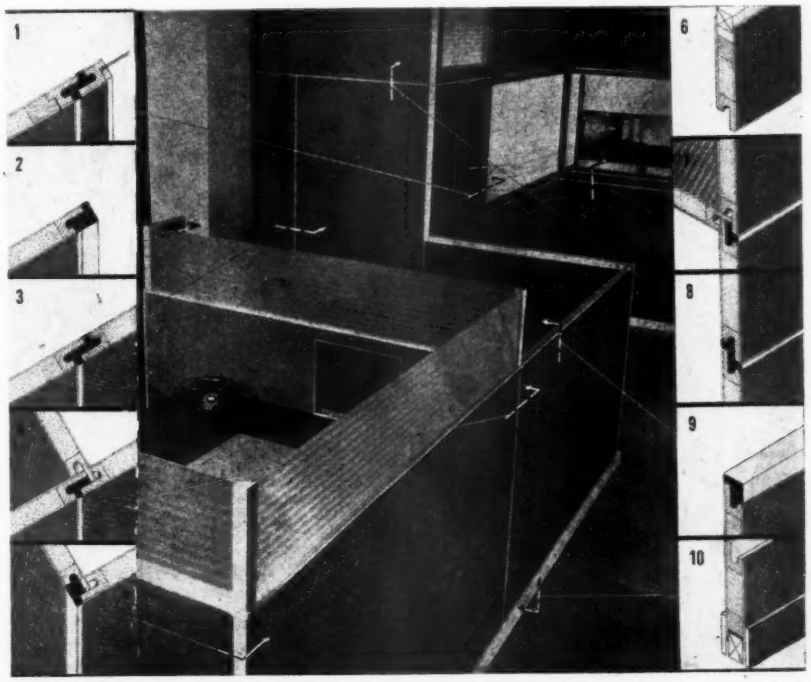
On the whole, the new Code is a progressive, up-to-date document. It forms a suitable basis for more economic and more scientific design than was permissible in the past.

1777 — ***Partitions***

A NEW SYSTEM OF OFFICE PARTITIONS. *Produced by the General Panel Corp.; developed by Konrad Wachsmann.* (*Architectural Forum. September*, 1944, *pp.* 97-100.) Connecting device allowing for two, three and four-way panel intersections without projecting posts or elaborate connectors.

The main characteristic of the system is an irregularly grooved edge on all four sides of the panels shaped in such a way that four panels can be fitted tightly together with edges interlocked. Butt joints between panels are filled with simple wood splines. The system produces a completely flush wall and the narrow splines and varying panel sizes create an interesting pattern. The panels can be used in either horizontal or vertical position, and even laid flat to produce shelves and closet ceilings. Doors and glazed sections are incorporated in the units.

A wide variety of surface materials can be used. The most economical is a pressed-wood fibreboard. Glued under pressure to both sides of a light wood frame, it pro-



A new American system of demountable office partitioning with ingenious connector which eliminates projecting posts. Illustration shows ten conditions for panel connections; left, vertical joints; . right, horizontal joints. See No. 1777.

duces a stressed-skin panel only 1¾ in. thick. An optional stuffing of mineral wool produces sound and thermal insulation.

The standard panel size is 3 ft. 4 in. by 6 ft. 8 in., augmented by horizontal and vertical half and quarter sizes. In addition, narrow end strips are available for use as baseboards, to fill space between partition and ceiling, or for slight longitudinal extension. The system was designed for office and factory interiors, but its great flexibility, high degree of standardization and agreeable appearance make it suitable for use in housing of all types. Assembly, disassembly and rearrangement are very simple and involve no waste.

1778 ***Book on Construction***

BUILDING CONSTRUCTION (*Volumes II and III*). *W. B. McKay.* (*Longmans, Green and Co., London,* 1944, 9*s.* 0*d.* each.) Cover parts of Building Construction which are regarded as suitable for second-year course of students of architecture, but also useful to practising architects. Brickwork, drainage, masonry and mild steel roof trusses dealt with in Vol. II; carpentry, joinery and roof coverings in Vol. III.

The author has adopted a wide syllabus and has treated the subject sufficiently comprehensively to meet a variety of needs of both students and lecturers. Much of the description in smaller type is intended for more advanced students and for reference.

Materials, like brick, lime, cement, are not only described from the point of view of their application, but their manufacture and the methods of testing them are also explained and illustrated. In the chapter on masonry a list of British quarries of granites, sandstones, limestones, with the main characteristics of their products, is included and the typical structures of various building stones are shown in diagrams dawn to the same scale, considerably magnified. The chapter on carpentry contains the description of the structure, conversion, seasoning, preservation, defects, characteristics, uses, preparation and sources of timber. The manufacture, characteristics and uses of plywood are dealt with in detail.

The size of the drawings has made it possible to include many details of construction which are particularly useful (*e.g.*, working details of typical steel roof trusses up to 40-ft. span, timber trusses, various types of roof coverings, etc.).

The two volumes are eminently suitable not only for students, but also for use in the drawing offices of architects.

HEATING and Ventilation

1779 ***Heating Problems***

NATIONAL HEATING PROBLEMS AND DISTRICT HEATING. *O. Faber* (*Journal of the Institution of Heating and Ventilating Engineers, March/April,* 1944, *p.* 12.) Presidential address to the Institution. Need to conserve coal. Efficiency of open coal fire. Recent development of domestic closed stove. District heating methods and economy.

Dr. Faber begins by pointing out that in Germany the heat value of the fuel consumed for domestic purposes is only about two-thirds of that consumed per person in Great Britain, in spite of the colder weather and warmer houses. British coal deposits are not inexhaustible, and in fact the output of some coalfields has dropped considerably since 1913. In future coal will be of poorer quality, and will be more expensive to mine. The problem is to supply the domestic heating services to about 10 million homes with the least consumption of coal. Each method of heating must be considered from the aspects of cost and of coal economy.

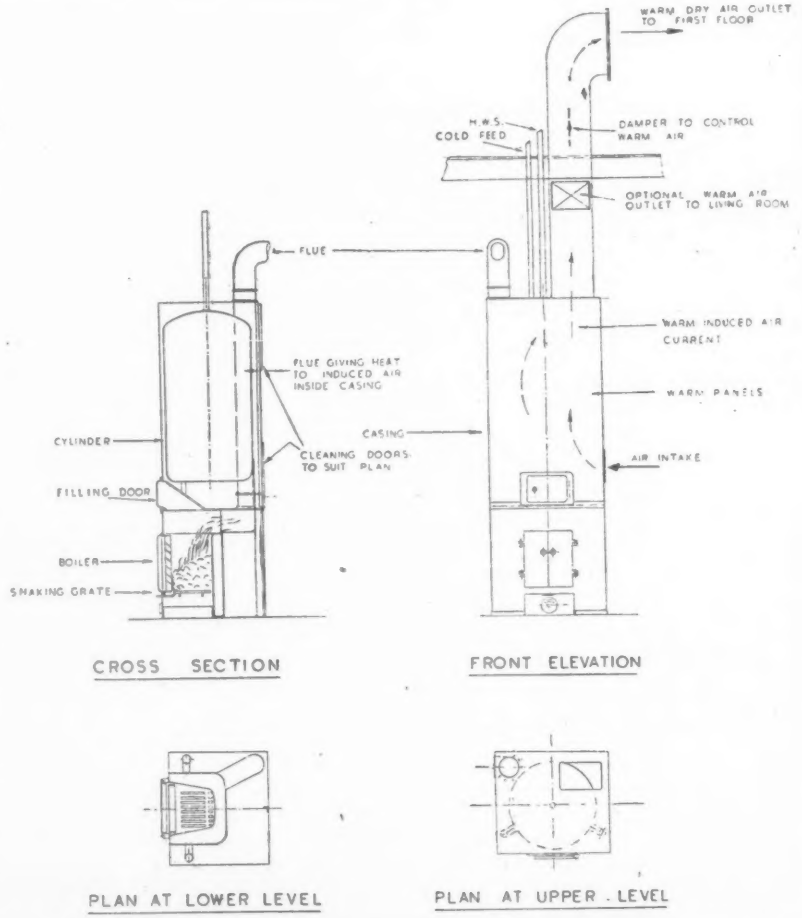
The author considers in some detail the efficiency of the open coal fire, and concludes that heating by this method costs 10.28d. per useful therm (*i.e.*, heat actually used in warming a room); and that to produce 1 therm requires the consumption of 32 lb. of coal. Similar calculations are made for other methods of heating, and the Table above is abstracted from the fuller tables in the paper.

	Cost of fuel	Efficiency of use	Cost per useful therm	Lb. of coal for 1 useful therm
Room-heaters		Per cent.		
Open coal fire	60/- per ton	25	10.28d.	32
Anthracite stove	80/- per ton	70	4.35d.	10
Gas fire	8d. per therm	50	16.0d.	21
Electric fire	½d. per unit	100	14.6d.	43*
District heating (thermo-electric)	5d. per therm	100	5d.	8
Coke boiler and radiators..	60/- per ton	50	5.14d.	21
Water-heaters :				
Coke boiler	60/- per ton	50	5.14d.	21
Instantaneous gas heater..	8d. per therm	60	13.3d.	18
Electric heater	½d. per unit.	100	14.6d.	43*
District heating	5d. per therm	100	5d.	8
Combined boiler and stove	60/- per ton	70	3.7d.	11

* Low-grade coal.

The author points out that the actual figures are open to argument, but small variation will not affect the broad conclusions.

A recent development of the closed stove is described (see diagram below). The fire-pot of the stove can be opened to give radiant heat, but it is normally closed, and the fire is continuous burning. A boiler at the back provides the hot-water supply, the storage tank being directly over the

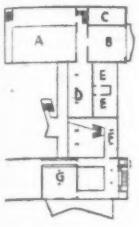


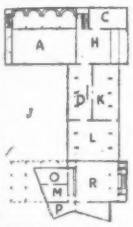
A combination boiler unit with closed stove for continuous burning. Storage tank is directly over the appliance. See No. 1779.

FACTS ABOUT GLASS FOR ARCHITECTURAL STUDENTS

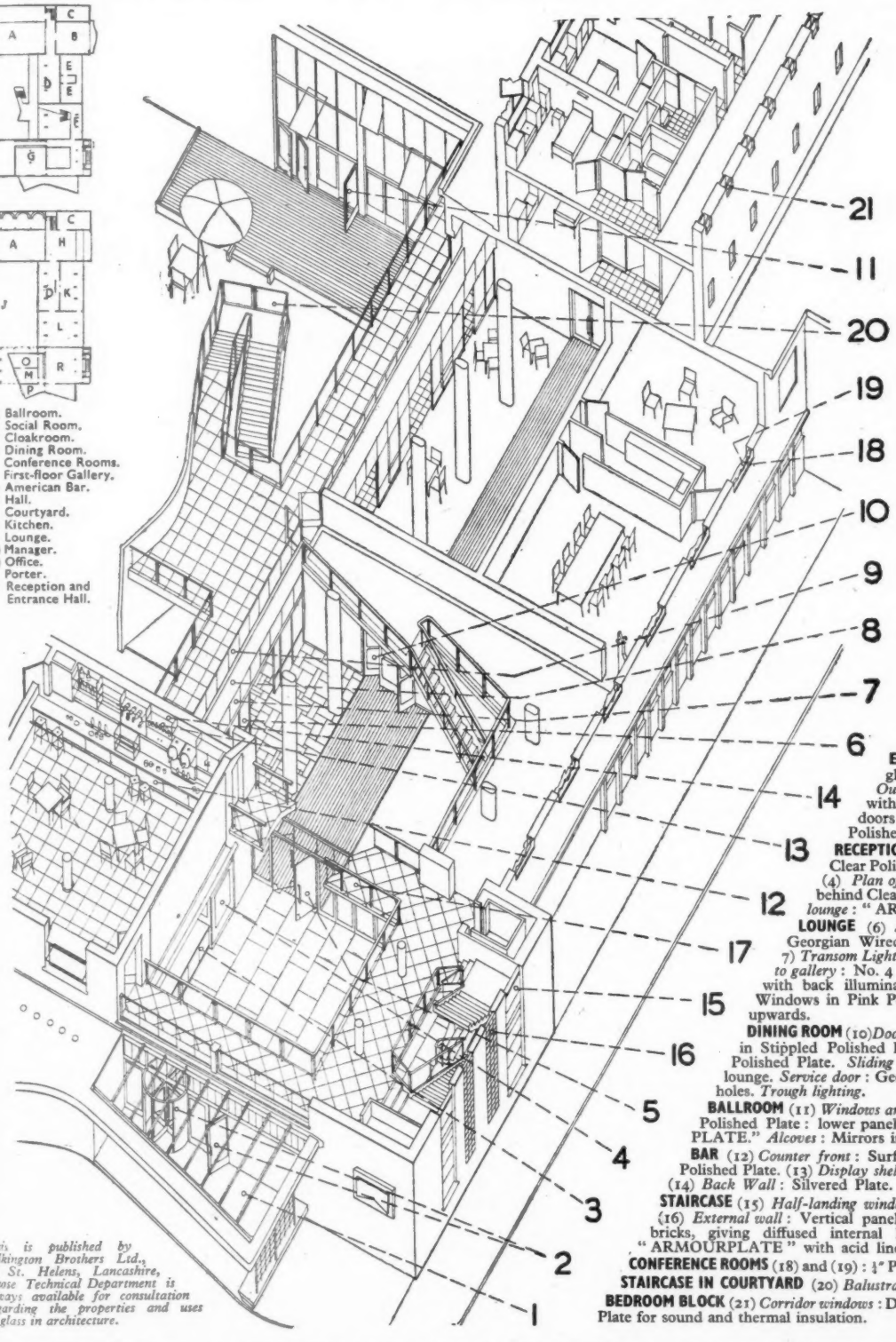
SPECIFICATION FOR GLASS IN A PROVINCIAL HOTEL

(The numbers in brackets correspond to the key numbers in the drawing.)





(A) Ballroom.
(B) Social Room.
(C) Cloakroom.
(D) Dining Room.
(E) Conference Rooms.
(F) First-floor Gallery.
(G) American Bar.
(H) Hall.
(I) Courtyard.
(K) Kitchen.
(L) Lounge.
(M) Manager.
(O) Office.
(P) Porter.
(R) Reception and Entrance Hall.



ENTRANCE (1) *Canopy*: Patent glazing in Wired Glass. (2) *Outer doors*: Revolving, glazed with Clear Polished Plate. Side doors glazed with Georgian Polished Wired.

RECEPTION OFFICE (3) *Counter front*: Clear Polished Plate over woven fabric. (4) *Plan of hotel*: Architect's drawing behind Clear Polished Plate. (5) *Doors to lounge*: "ARMOURPLATE" frameless.

LOUNGE (6) *Sliding doors to courtyard*: Georgian Wired and Clear Polished Plate. 7) *Transom Light*: Prismatic Glass. (8) *Fascia to gallery*: No. 4 Fluted Rolled, sand-blasted, with back illumination. (9) *1st-floor gallery*: Windows in Pink Polished Plate, from sill level upwards.

DINING ROOM (10) *Doors from lounge*: Lower panels in Stippled Polished Plate: upper panels in clear Polished Plate. *Sliding doors to courtyard*: As for lounge. *Service door*: Georgian Polished Wired peep-holes. *Trough lighting.*

BALLROOM (11) *Windows and doors to courtyard*: Clear Polished Plate: lower panels to doors, in "ARMOUR-PLATE." *Alcoves*: Mirrors in recessed panel.

BAR (12) *Counter front*: Surface stippled silvered tinted Polished Plate. (13) *Display shelves*: "ARMOURPLATE." (14) *Back Wall*: Silvered Plate.

STAIRCASE (15) *Half-landing windows*: Clear Polished Plate. (16) *External wall*: Vertical panels of Insulight hollow glass bricks, giving diffused internal lighting. (17) *Balustrading*: "ARMOURPLATE" with acid line design, edge lit.

CONFERENCE ROOMS (18) and (19): ¼" Polished Plate, double glazing.

STAIRCASE IN COURTYARD (20) *Balustrading*: Wired Glass.

BEDROOM BLOCK (21) *Corridor windows*: Double glazed with ¼" Polished Plate for sound and thermal insulation.

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appliance. It can also be used to heat a towel-rail and one or two radiators. A casing round the boiler, cylinder and flue-pipe is open at the bottom for the admission of air. The warmed air is then discharged through a duct to the living-room, the landing, or both. An efficiency of 82 per cent. is stated to have been obtained in a test. (The minimum rate of fuel consumption is not stated.)

District heating involves the generation of heat, with or without electricity generation, in a central station, and its distribution by steam or hot-water to the consumers. The former method—thermo-electric schemes—is more usual in Russia and Europe; but the latter (straight heat station) is most common in USA. The cost of heating by thermo-electric stations works out at about 5d. per therm when only the extra cost of the plant and fuel is charged to the district heating service (costs for electricity generation being as before). The cost of heating by a straight heat station is about 1d. per therm more. It will probably be necessary for district heating to serve heavy loads (offices, flats, factories, etc.), to balance the costs against the thinly-spread domestic load.

It is pointed out that a district heating scheme could eliminate 1,000 separate boiler installations in four areas in London totalling 2,700 acres, apart from the domestic premises; and would release the attendants for other work, would avoid fuel delivery and the emission of fumes and smoke.

Apart from the efficiency and economy, one must also consider labour, convenience, health, etc. The domestic use of coal and coke involves fuel and ash-handling, and the emission of smoke and fumes, and they are generally inconvenient. To be fair to the "convenient" fuels—gas, electricity and district heating—coal and coke burning appliances should be debited with a suitable charge. There is also the further factor of flexibility, which has not been included in the tables.

The main conclusions are:—

(i) There is a sphere of usefulness for all the fuels.

(ii) Taking convenience, etc., into account, there may not be much to choose between the cost of coal, gas and electricity for heating.

(iii) Central heating requires less fuel than other methods, but the capital and maintenance costs are greater.

(iv) Some form of stove (such as that described) is the most economical form of heating; and it would also save coal. If all heating of houses were carried out by such combined stoves, 20 million tons of coal could be saved.

(v) District heating would also be economical, and would be very good from point of view of coal conservation. There is a potential saving of 22½ million tons of coal. Schemes for district heating from thermo-electric stations should be proceeded with, where suitable.

(vi) Fixed costs of houses may preclude the use of efficient appliances, and the Ministry of Fuel and Power should be in a position to approve plans and suggestions for the heating of houses.

1780 *Smoke Reduction*

SMOKE REDUCTION ON OPEN FIRE. *R. H. Rowse*, B.SC., F.INST.P. (*Note from Fuel Research Station of Department of Scientific and Industrial Research.*) Fundamental requirements of any smoke-reducing apparatus are robustness, simplicity and freedom from moving parts and reasonable certainty of working under all conditions. Appliance described, developed at FRS, reduces smoke from open fires by 50 per cent. or more. Diagram of appliance included.

Large volumes of smoke and sulphur-dioxide pour into the atmosphere from domestic chimneys. Sulphur-dioxide cannot be eliminated by altering design of apparatus, but can be reduced by removal of sulphur from coal before burning. This was being done before the war by cleaning the coal, about half of the coal produced being so treated.

Smoke is formed when coal is incompletely burned and considerable reduction can be obtained by altering the design of the appliance. The object is to obtain a mixture of smoke and air at sufficiently high temperature to cause ignition. For domestic use simplicity of operation and robustness are essential features, and moving parts should be avoided. Any smoke-reducing device should not reduce the efficiency of an appliance in other ways, and it should be effective under all conditions. This latter point is important as experiments show that some arrangements which produce considerable reduction under certain conditions, may, under other conditions, increase it.

Before useful experiments could be made it was necessary to have suitable methods of measuring smoke emission. Such methods were developed and an arrangement for reducing smoke emission reached an advanced state of development before the war. Work has since been interrupted, but the device developed, for open grates reduced smoke emission by 50 per cent. and more, and there is good reason to suppose that it would be equally applicable to other domestic solid fuel burning appliances.

The device consists of a fire brick back rising from the level of the fire bars and at a suitable height turned out at roughly right angles towards the front, thus forming a kind of open combustion chamber. Partially burnt smoke-laden gases rise from the fire and pass into the combustion chamber, where by virtue of its shape they are intimately mixed with the air required for combustion at a temperature sufficiently high to ensure that they ignite and burn. The gases pass out under the front of the combustion chamber, and thence into the flue.

The arrangement is simple and robust, and should not reduce the efficiency of the fire whatever type of fuel is used. It is covered by a British Patent.

1781 *Fuel Statistics*

HOW TO WATCH FUEL USE. *W. S. Bard* (*Heating, Piping and Air Conditioning, February*, 1944, p. 69.) Outline of application of statistics to fuel records, to determine standard consumption for purposes of checking and for estimating future consumption.

1782 *Fuel Conservation*

SEEKING FUEL CONSERVATION BY ONE BOILER FOR SEVERAL BUILDINGS. *R. B. Duncan* (*Plumbing and Heating Journal. Edwin Scott, Philadelphia, Pa., September*, 1944, *p.* 39). Advantages of block heating. Examples described.

The use of a common boiler house for a group of buildings results in a considerable saving of space and chimney construction and in labour for operation, as well as economy of fuel. It is stated that in one modern apartment building project, housing 100 families per block, the fuel consumption amounted to only about 26 lb. of coal per family per week for heating and hot-water supply.

The examples described include a system employing hot water with forced circulation serving 40 buildings (600 families), and a low-pressure steam system for 11 12-storey buildings for about 1,200 families. In the former scheme, 8 boiler houses are used; and 2 in the latter scheme.

1783 *District Heating*

COAL ECONOMY AND DISTRICT HEATING. *L. C. C. Rayner* (*Plan*, 1944, *No.* 1, *p.* 5.) Discusses efficiency of electricity generation and of production of gas and coke. Shows how district heating by thermo-electric stations may improve overall efficiency of electricity and heat generation, and lead to economy of coal.

1784 *District Heating*

AUTOMATIC CONTROL OF DISTRICT HEATING INSTALLATIONS. *P. G. Kaufmann* (*Heating and Ventilating Engineer, July*, 1944, *p.* 12). Theory and practice of methods of control used in Russia. Two chief methods are control of flow temperature and control of time for which heating is available. Both claimed to give room temperature fluctuations of less than 1° F.

ACOUSTICS and Sound Insulation

1785 *Broadcast Studios*

ACOUSTICAL DESIGN AND TREATMENT FOR SPEECH BROADCAST STUDIOS. *E. J. Content and L. Green.* (*Proc. of the Institute of Radio Engineers, February*, 1944, *p.* 72.) Optimum reverberation time. Shape of reverberation response curves. Discussion of acoustics in several studios based on principles stated.

The references to optimum reverberation time in studios add nothing to previous material, though there is a useful summation of opinion in the form of a new set of curves.

For the general shape of the reverberation response curve the present authors take MacNair's suggestion, now widely accepted, that there should be much longer reverberation at low pitches than in the middle frequencies, and a small increase at high frequencies as well. A curve is provided which gives the MacNair data in terms of the percentage increases for high and low pitches related to the value of 512 c.p.s. The optimum reverberation time is normally quoted only for 512 c.p.s., so a general correction of the kind given is of value. Low and high frequencies play a very important part in acoustics; much more so than was once thought.

For speech studios it has been found by these authors that the general MacNair curve is not ideal. Reverberation at low frequencies is desirable for music, but makes speech "boomy." They suggest a flat curve up to 1,000 c.p.s., rising 20-25 per cent. in the higher register. High frequencies are necessary for good intelligibility.

They have built several studios in which attempts have been made to obtain their suggested curve, and the resulting curves not only correspond well with their intentions, but the studios are said to be very satisfactory.

In the course of the paper reference is made to certain special acoustical products of an American firm. Apparently slag wool, faced with perforated asbestos cement sheets, has been made up in three forms, one to absorb at low frequencies, one at high, and the third at all pitches. It is greatly to be regretted that little interest

appears to be taken by English firms in developing such treatments. The importance of catering separately for various frequency ranges seems scarcely to have been considered in this country.

EQUIPMENT

1786 ***Plugs and Socket Outlets***

PLUGS AND SOCKET OUTLETS. *A Supplementary Report of the Electrical Installations (Study) Committee of the Ministry of Works.* Review of design factors. One standard plug not recommended. Ring mains recommended.

There have been frequent references in these columns to the debate, pro and con, in the electrical industry, relating to the standardization of plugs and socket outlets. The position is resolving itself at last and the Electrical Installations (Study) Committee has issued recommendations in a Report supplementing their main Report (No. 11 in the Ministry of Works' series). There appears every likelihood that the recommendations will be given effect.

The Committee finds the present position "far from satisfactory" and regards the standardization of one single size and type of plug and socket outlet for all domestic uses as undesirable. It feels that to uprate the common 5-amp. plug to 10 amp. would not be satisfactory, partly because the existing types would not all be safe, and also because confusion would be greater than with the introduction of a new design. Then, too, there are occasional loads which are greater than the uprated 5-amp. plug could take. The Committee therefore recommends that a new 3-Kw. design should be prepared, and notes that this should not have to be any larger than the existing B.S. 5-amp. 3-pin type. It is suggested that BEAMA should prepare designs for submission to the BSI. The invitation seems to have been accepted.

Ancillary to the question of the plug and socket, the Committee recommends the use of ring main installations in houses. Thus two of the main questions of house wiring practice are at last determined.

PLUMBING and Sanitation

1787 ***General Survey***

RATIONAL DESIGN OF HOUSE PLUMBING. *A. Longworth. (Journal of the Royal Sanitary Institute, July,* 1944.) General survey with number of detailed suggestions. One - pipe system. Anti-siphonage pipes. Prevention of noises.

Apart from a rather general treatment of the whole subject this paper refers in some detail to the use of "one-pipe" and "one-stack" systems of drainage, the latter being a one-pipe system without anti-siphonage pipes. The author is doubtful as to the wisdom of dispensing with the anti-siphonage pipes in spite of certain tests which have been made. He recommends the use of a 3 inch diameter main waste pipe as being adequate and self-cleansing. Among other items the prevention of noise in plumbing installations is dealt with in some detail.

1788 ***General Review***

SANITATION IN POST-WAR BUILDING. *Herbert J. Manzoni (Journal of the Royal Sanitary Institute, July,* 1944.) General review of sanitation in widest sense, including drainage, water supply, ventilation, lighting, noise, atmospheric pollution, warmth, fatigue, colour and mass.

One-pipe system of drainage may be satisfactory in houses without the use of anti-siphonage pipes, but it is doubtful if saving in cost over two-pipe plumbing is appreciable except in larger buildings.

Refuse disposal is at present unsatisfactory. Garchy system has advantages for high density flat dwellings, but does not seem applicable to houses.

Probably poor water supply is the reason for health of country dwellers being no better than that of town dwellers.

Among references to other subjects there is a brief note on the influence of colour which is suggestive that further study of this aspect of health would be valuable.

QUESTIONS and Answers

THE Information Centre answers any question about architecture, building, or the professions and trades within the building industry. It does so free of charge, and its help is available to any member of the industry. Answers are sent direct to enquirers as soon as they have been prepared. The service is confidential, and in no case is the identity of an enquirer disclosed to a third party. Questions should be sent to: THE ARCHITECTS' JOURNAL, *45, The Avenue, Cheam, Surrey.*

1789 ***Landscape Design***

Q *On page* 82 *of the* ARCHITECTS' JOURNAL *for August* 3, 1944, *Tom Mellor refers to the Architectural Review's work in relating the work of the Surrealists and that of the eighteenth century landscape designers to contemporary problems of urban reconstruction, and also for opening our eyes to much previously neglected English Architecture of great æsthetic interest. Are there any publications which point this out?*

A We submitted your inquiry to Mr. Mellor, who has replied as follows:—In reply to your correspondent's query about my article, I would refer him generally to back numbers of the Architectural Review from 1935 onwards.

The sentence he quotes described three lines of approach: (1) the Surrealists—particularly through their influence on such British Artists as Paul Nash, John Piper, Graham Sutherland, and Kenneth Rowntree; (2) the work of the 18th century landscape designers; and (3) the rediscovery of "much previously neglected British Architecture of great æsthetic interest."

With regard to (1), I can only refer your correspondent to the works of the artists concerned—Nash, Piper and Rowntree have written articles for the Review which he might look up.

(2) is also dealt with in various articles in the Review, and a summary of that journal's policy and an attempt to relate (1) and (2) to each other and to a visual planning is given in an article in the January, 1944, issue entitled *Exterior Furnishing.* This gives a summary of articles published during the last eight years. He might also look at *Gardens in the Modern Landscape* by Christopher Tunnard.

An article on the Victoria Pub (Architectural Review, Vol. 87, 1940) sums up what I meant by (3). He should also certainly read *The Seeing Eye, or How to Like Everything (Architectural Review,* Vol. 86, 1939, by John Betjeman).

SOCIETIES AND INSTITUTIONS

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.

RIBA

Examinations

The RIBA Intermediate Examination was held in London, Manchester, Leeds, Edinburgh and Belfast from the 10th to 16th November, 1944. Of the 124 candidates examined, 41 passed and 83 were relegated. The successful candidates are as follows:—

Andrews, Cyril G.; Bird, Paul B.; Blastland, William C.; Bond (Mrs.) Mary B.; Bowes, Joseph (subject to approval of remaining testimonies of study); Boyer, E. Stanley; Brown, David; Brown, James H. C.; Cooper, Raymond (subject to approval of remaining testimonies of study); Crockett, W. G. M.; Denniss, Gordon K.; Dickie (Miss), Christian I.; Elliott, Leonard W.; Evans, Philip C.; Farquhar, James A.; Feast, Douglas O.; Grant-Nelson, A. W. Mackay; Gray, Percy; Harrington, Roy; Harvey, William J.; Higgins, James H.; Johnson (Miss), Elizabeth M.; Kenning, Raymond W.; Kington, Norman D.; Knight, William; Lavender (Miss), Joan C.; Mathias, Peter; Maw, Philip G.; Measday, Clifford M.; O'Leary, Brian J. F.; Pearson, Ronald L.; Poole, Ralph S.; Porter, Samuel H.; Robson, Kenneth L.; Thomas, Harries; Wakefield, Victor H.; Waters, George A.; Westaway, Eric M.; Winter, Douglas; Wood, Cyril R. M.; Woodford, Charles A.

At the Examination held in July, 1944, for the RIBA Diploma in Town Planning, the following were successful, and have been awarded the RIBA Diploma in Town Planning:—

Aldred, Douglas Winston; Caldwell, James Edwin Lees; Lamb, Antony R.; Reekie, R. Fraser.

The following candidate, having previously passed the examination conducted by the Town Planning Joint Examination Board, has gained approval for the requisite

probationary work, and has also been awarded the RIBA Diploma in Town Planning: Mckee, James A. Roy.

Publications Received

TVA. David Lilienthal. (Penguin Books, 9d.)

Towards a Plan for Oxford City. Lawrence Dale. (Faber, 6s. 0d.)

Homes of Tomorrow. Worthing Housing Committee. (Worthing Council of Social Service, 2s. 6d.)

Housing Manual, 1944. (HMSO, 2s. 0d.)

Housing Manual, 1944 — Appendices. (HMSO, 1s. 6d.).

How to Study an Old Church. A. Needham. (Batsford, 6s. 0d.).

Building Construction (Vols. 2 and 3). W. B. McKay. (Longmans, Green, 9s. 0d. each.)

Our Building Inheritance. Walter H. Godfrey. (Faber, 10s. 6d.)

Architecture Arising. Howard Robertson. (Faber, 15s. 6d.)

Henry Yevele. John H. Harvey. (Batsford. 15s. 0d.)

York Monuments. J. B. Norrell. (Batsford. £3 3s. 0d.)

Heating and Ventilating. R. J. Overton. (Sutherland Publishing Co., 16s. 0d.)

Augustus John. J. Rothenstein. (Phaidon Press, 20s. 0d.)

How will Planning Affect Land Ownership? E. S. Watkins. (Architectural Press, 6d.)

Will Planning Restrict Freedom? H. J. Laski. (Architectural Press, 6d.)

What Will Planning Mean in Terms of Money? E. F. Schumacher. (Architectural Press, 6d.)

World Timbers (Vol. 1). (Timber Development Association.)

Sound Insulation and Acoustics: PWB Studies No. 14. Ministry of Works. (HMSO, 1s. 0d.)

Architecture and Personalities. Sir Herbert Baker. (Country Life, 2 gns.)

The Planning and Management of Building Contracts. Ministry of Works. (HMSO, 1s. 0d.)

Elements of Building Mathematics. F. H. Fallows. (J. M. Dent, 3s. 3d.)

Cottages for Rural Workers: Competition Results. (Northants Women's Institutes.)

Temporary Accommodation. Ministry of Health. (HMSO, 6d.)

The Machinery of Town and Country Planning. Michael P. Fogarty. (Catholic Social Guild, 1s. 0d.)

Building Science. A. G. Geeson. (English Universities Press, 21s. 0d.)

Planning, 1944. (American Society of Planning Officials, $3.00.)

Balbus: A Picture Book of Buildings. Oliver Hill and Hans Tisdall. (Pleiades Books, 7s. 6d.)

Building Materials and Components. British Standards Institution. (HMSO, 12s. 6d.)

Demonstration Houses: Northolt. Ministry of Works. (HMSO, 1s. 0d.)

Monmouthshire for Postwar Industry. (Hughes & Sons, 1s. 0d.)

A Constructional Engineer's Compendium. (United Steel Co., £1 1s. 0d.)

The Condition of Man. Lewis Mumford. (Secker and Warburg, £1 5s. 0d.)

A Guide to Heating, Ventilation and Lighting. W. D. Seymour. (Oxford University Press, 6s. 0d.)

New Roads for Britain. G. C. Curmock. (British Road Federation, 2s. 6d.)

A History of the Countryside. Margaret and Alexander Potter. (Puffin Books, 9d.)

The Englishman's Castle. John Gloag. (Eyre & Spottiswoode, 16s. 0d.)

What Kind of Homes? (Hackney and Stoke Newington Social Workers Group, 9d.)

Merseyside of the Future. James R. Spencer. (Liverpool Daily Post, 2s. 6d.)

New Architecture of City Planning. Paul Zucker. (Philosophical Library, NY, $10.00.)

Community Centres. Ministry of Education. (HMSO, 9d.)

Lighting of Buildings: Post-War Building Studies, No. 12. Ministry of Works. (HMSO, 2s. 6d.)

Walls, Floors and Roofs: Post-War Building Studies. No. 15. Ministry of Works. (HMSO, 9d.)

Business Buildings: Post-War Building Studies. No. 16. Ministry of Works. (HMSO, 1s.)

Model Specification for Roads and *Model Specification for Concrete Roads.* (Institute of Municipal and County Engineers, 2s. 6d. each.)

Local Government in England and Wales during the Period of Reconstruction. Ministry of Health. (HMSO, 4d.)

Brickwork for Apprentices. J. C. Hodge. (Edward Arnold, 6s.)

Design and the Designer in the Light Metal Trades. (HMSO, 1s.)

Durham Cathedral City. Thomas Sharp. (Architectural Press, 6s.)

Rebuilding Britain: A 20-Year Plan. Sir Ernest Simon. (Victor Gollancz, 6s.)

Wood Flooring. (Timber Development Association.)

Planning Proposals for the Belfast Area. (HMSO, 2s. 6d.)

Constructional Steelwork Simply Explained. Oscar Faber. (Oxford University Press, 6s.)

Homes for All: BBC Discussions. (Littlebury, 7s. 6d.)

ANNOUNCEMENT

Mr. E. B. Musman has resigned from his temporary wartime appointment as Regional Officer, PAD No. 9 (Midland) Region, Ministry of Supply, and has resumed private practice on his own account as under: E. B. Musman, B.A., F.R.I.B.A., Chartered Architect, 7, Queen Anne's Gate, Westminster, S.W.1.

CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal." War Address: 45 The Avenue, Cheam, Surrey, and should reach there by first post on **Friday** *morning for inclusion in the following Thursday's paper.*

Replies to Box Numbers should be addressed care of "The Architects' Journal." War Address: 45 The Avenue, Cheam, Surrey.

Public and Official Announcements

Six lines or under, 8s.; each additional line, 1s.

THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. ADDRESS: 75 EATON PLACE, LONDON, S.W.1. TEL.: SLOANE 5615. 991

BERKSHIRE EDUCATION COMMITTEE.

The Committee invite applications from persons with suitable experience and knowledge of building work for appointment to their staff. Candidates should be able to prepare Specifications for Alterations and Maintenance work to Schools and Institution buildings, and should be capable of supervising the carrying out of the work involved and/or making plans and surveys of existing buildings.

The salaries attaching to the vacant posts are as follows:—

(*a*) £330 per annum by £15 to £375 per annum for the Senior of the two posts.

(*b*) £255 per annum by £15 to £315 per annum for the Junior post.

The posts will be subject to the provisions of the Local Government Superannuation Act. The successful candidates will be required to pass a medical examination and to devote the whole of their time to the service of the Committee. The appointments will, in the first instance, be on a temporary basis, but the persons appointed will be eligible to apply for permanent positions in due course. Applications, with recent testimonials, should reach the undersigned not later than 10th February, 1945.

W. F. HERBERT,
Education Secretary.

Shire Hall, Reading. 993

ISLE OF ELY COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the temporary appointment of a SENIOR ARCHITECTURAL ASSISTANT. Candidates must have a thorough knowledge of architectural practice and the building trades, and be competent to handle works under supervision.

The salary will be at the rate of £400 per annum, plus war bonus, which is now £49 8s. per annum.

The appointment is for a period not exceeding two years, and will be subject to two months' notice on either side and the Council's staff Regulations.

The candidate appointed will be required to pass a medical examination.

Canvassing in any form will disqualify, and candidates must disclose in writing whether to their knowledge they are related to any member or holder of senior office under the Council.

Applications, giving age, qualifications and experience, accompanied by copies of three recent testimonials, should be sent to the County Architect, County Hall, March, not later than the 10th February, 1945.

R. F. G. THURLOW,
Clerk to the County Council.

County Hall, March.
20th January, 1945. 986

CHIEF ARCHITECTURAL ASSISTANT, permanent, required by the Borough of SOUTHALL, Middlesex.

Candidates must be A.R.I.B.A. or hold an equivalent qualification, and have had considerable experience with local authorities. Town Planning experience an advantage.

Salary £365 to £425, plus war bonus, at present £49 8s. p.a.

The appointment is subject to the provisions of the Local Government Superannuation Acts, 1937, the successful candidate being required to pass a medical examination.

Applicants should write, quoting EA.1246XA, to the Ministry of Labour and National Service, Appointments Dept., Central Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2, for the necessary forms, which should be returned completed on or before 12th February, 1945. 996

BRECONSHIRE JOINT PLANNING COMMITTEE.

Applications are invited for the post of ASSISTANT to the above Committee at a salary of £300 per annum, rising by annual increments of £20 to £380. Preference will be given to those who held an Architectural and/or Town Planning qualification and have a knowledge of surveying. The appointment is for the period during which a scheme is being prepared, and is terminable by one month's notice on either side. Applications, stating age, qualifications and experience, together with copies of three recent testimonials, should reach the undersigned not later than Monday, March 5th, 1945.

P. R. H. S. HOLBOURN,
Clerk to the Committee.

County Hall, Brecon, Wales.
19th January, 1945. 989

ARCHITECTURAL ASSISTANT, temporary, required by the Borough of ROYAL LEAMINGTON SPA.

Candidates should be A.R.I.B.A. or hold an equivalent qualification, and should have had extensive experience, particularly in housing schemes.

Salary £400 to £500 p.a., plus cost of living bonus, at present £49 8s. p.a., commencing salary according to qualifications and experience.

Applicants should write, quoting EA.1242XA, to the Ministry of Labour and National Service, Appointments Dept., Central (T. and S.) Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2, for the necessary forms, which should be returned completed on or before 13th February, 1945. 995

BOROUGH OF BILSTON.

PERMANENT ARCHITECTURAL ASSISTANT.

Applications are invited for the above position from persons not liable for military or national service. The salary will be £350, rising subject to satisfactory service by annual increments of £25 to £400 per annum, plus war bonus, at present £49 8s.

The appointment will be subject to the Local Government Superannuation Act, 1937, and will be terminable by one month's notice on either side. It is desirable that candidates should be members of the R.I.B.A., with experience in the preparation of layout plans for houses and the design and erection of houses and other municipal buildings.

Applications, endorsed "Architectural Assistant," and accompanied by copies of recent testimonials should reach the undersigned not later than 8th February, 1945. Canvassing in any form will disqualify.

A. V. WILLIAMS,
Town Clerk.

Town Hall, Bilston.
22nd January, 1945. 998

OXFORDSHIRE COUNTY COUNCIL.

APPOINTMENT OF COUNTY PLANNING OFFICER.

The Oxfordshire County Council invite applications for the appointment of County Planning Officer at a salary within a scale of £800 per annum, rising by annual increments of £50 to £1,000 per annum, according to experience, subject to the initial salary not exceeding £900 per annum. War bonus at present rates will be paid in addition, and travelling expenses allowed on the County Council scale.

The person appointed will be required to devote the whole of his time to the service of the Council, and to that of such of the local Planning Committees functioning in the County as may desire to call on his services.

Applicants must be fully conversant with the Town and Country Planning Acts and Orders, and should be members of the Town Planning Institute. Qualifications in architecture and/or engineering and/or surveying will also be an advantage.

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

Full particulars of the appointment and forms on which applications must be made may be obtained from the undersigned. Applications must be received not later than the 31st March, 1945. Canvassing will be a disqualification.

In the case of overseas candidates applications by letter will be accepted, in which should be stated age, qualifications and experience, and date when able to commence duties, together with the name of three referees.

F. G. SCOTT,
Clerk of the Council.

County Hall, Oxford.
24th January, 1945. 994

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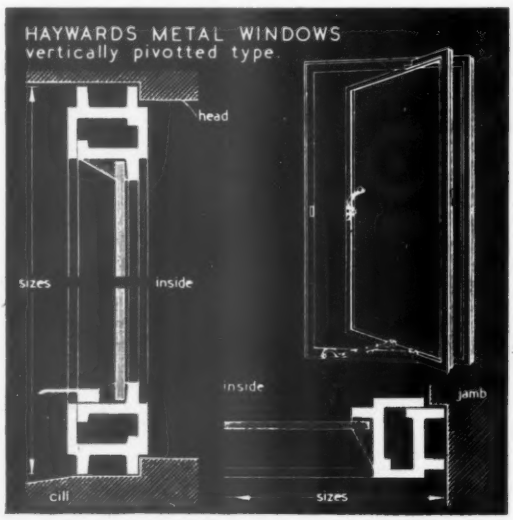

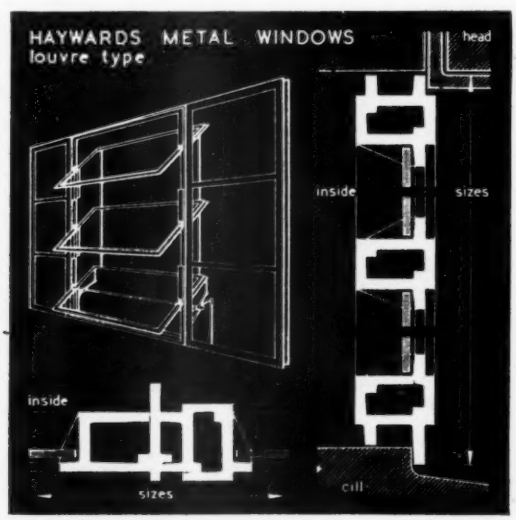

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