N E A R I N G C O M P L E T I O N G I F T T O T H E L A T E K I N G



THE house at Burhill, near Walton-on-Thames, which was to have been presented to King George by the Royal Warrant Holders' Association, to commemorate the Silver Jubilee. The photograph, taken from the air, shows the carcassing of the house completed.

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THE ARCHITECTS' JOURNAL for February 6, 1936





THE SPECIAL AREAS

Two photographs of the Exhibition devoted to the Special Areas of England and Wales, now being held in the hall of the Charing Cross Underground Station, London. The exhibition shows the Areas as they now are; the beginning of improvements; the attivities of the Special Areas' Commissioners; and "What the public can de about it," depicting resorts in the neighbourhood of the distressed areas which are available for holidays.



PROGRAMME

OWARDS the conclusion of the leading article of its New Year issue this JOURNAL hinted that during 1936 it would try to formulate a plan for better surroundings of living for the population of this crowded country. This determination arose from our belief that the energies of architects must be, in part, devoted to the building requirements of society as a whole, or of great divisions of society, rather than spent upon the peculiar needs of isolated clients.

But planning is everyone's catchword nowadays politicians, social reformers, patent medicine salesmen and dress reformers are all alike in their ardent overuse of " that soporific phrase—national planning."

So it would seem wise, in times when plans are mostly wildly unpracticable or wholly unintelligible, to explain our view of planning before too many readers turn pale before our threats.

The aspect of planning with which we intend to concern ourselves eventually is that of the use of the surface of the country. This aspect has already been recognized as of consequence : in our view it must within a decade become predominant, and in so doing will impose upon architects, if they show themselves able, responsibilities enormously larger and more important—we choose our words with care—than they are now undertaking.

That is the first step in our determination. And it is big enough. Architects are already well occupied with their present tasks of detail planning and construction. Have they the time, given the opportunity, to plan intelligently for a whole country?

We believe that they can, that such a planning will suffer immeasurably if it lacks the co-operation of architects in its preparation and execution. But architects can only extend their sphere so widely if all that is susceptible to order and classification in architectural practice today is so arranged.

The belief that this arrangement is possible has been reflected, it is hoped, in the pages of the JOURNAL during recent years, in which we have made efforts, small though they may have been, to begin this huge work. As a first step, during 1933 Sheets from the Information Book of Sir John Burnet, Tait and Lorne were published. And those who had known the annoyance and waste of time which the finding out of the dimensions of a tennis court or a billiard table can cause in an architect's office, welcomed this first architectural rationalization, which now seems so simply and obviously useful.

From useful data it was logical to proceed to the

summarizing of building products in the Library of Planned Information under the editorship of the same firm. These sheets still continue, and though no perfection is claimed for them, it is justifiable to hope that in their final form they will enable an office to eliminate most of the costly repetitive hackwork, and most of the protracted hunting through possible catalogues, which formerly accompanied each job from foundations to finishes.

We also published in 1933 Information Supplements on recent developments in structure, and on the modern kitchen ; as well as an analysis of the slum and housing problems in London and the six largest provincial cities in an endeavour to provide the architect with a summary of one of the greatest problems of the day.

In 1934 we introduced Working Details as a library of structural method to accompany the library of materials, and continued our summarizing of housing in six Supplements which included housing policy in Britain and abroad, analyses of housing costs, economic and sociological aspects, and building organization.

1935 saw our attempts to bring modern social needs before the architect in the most useful form, take shape in two additional new features in the JOURNAL. The series called Analysis of a Building was introduced with the object of portraying in detail the influence of social needs, function, structural method and materials, and cost upon the final form of selected contemporary buildings. As a result of the continuously increasing amount of technical equipment called for in present-day building, the Technical Section was begun at the same time, in which the latest practice in heating, air conditioning and mechanical equipment was reviewed by Dr. Faber and Mr. J. R. Kell. In addition, two special issues, on flats and cinemas, an information supplement on swimming pools and four housing supplements were published during the year.

Such is the record of the JOURNAL during the last three years. The responsibility of planning, design and superintendence must always weigh heavily upon the architect, but we may hope that if the information we have given has been made use of, we have at least reduced wasted time.

Next week the JOURNAL will contain the announcement of a series of articles with which it intends this year to continue its efforts; a series which, it is hoped, will be of interest and value to at least a good minority of its readers. THE ARCHITECTS' JOURNAL for February 6 1936

gentle as those which appear in the architectural papers of today, but I doubt it. Judging by the speeches of politicians, for instance O'Connell, the law of libel was a very flimsy thing and even the architectural papers of 50 years ago were pretty frank.

Whether the editor of an architectural paper was ever horsewhipped I can't say, but in the past it was a much more popular sport than it is today, although I am told that in Spain editors still have to be good swordsmen.

Personally, I think it would be all to the good if we dropped some of our gentility and got a little more vigour into our criticism.

MORE OPEN SPACES

Last week-end several purchases of land for public open spaces were reported : two in Surrey as part of the Green Belt round London, one the delightful Bedford estate below Box Hill, and others in Hendon, Middlesex.

With its latest purchases about one-tenth of the area of the Borough of Hendon is public open space, which means that there is somewhere about one acre for each 150 inhabitants. This sounds fairly adequate and it would be interesting to know what other boroughs provide. I fancy that in most places it is very much less.

RADIO IN FLATS

I was talking the other day to the author of the Radio Report which was published in the R.I.B.A. Journal for January 18. The report, I understand, was intended to place before architects the not unreasonable idea that radio as a public service was now regarded by most people as essential as gas, water and electricity.

The fact that radio cannot be received easily in many of the flat blocks built today is primarily the responsibility of the building owner and ultimately of the architect who advises him.

The writer of the report told me that he is being telephoned almost daily by architects who have neglected this responsibility. Why they should telephone him, except in panic, I cannot imagine, for the report (which I read) states quite clearly the main alternatives which are available today, including figures of cost.

The B.B.C. has, I notice, taken the matter sufficiently seriously to have made a broadcast of the report and to have published a lengthy abstract of it in both its technical and popular publications.

A building owner cannot, of course, be compelled to make each flat capable of receiving radio signals, but the point is that it is up to architects, and to architects alone, to make him conversant with current tendencies in this matter and to put the responsibility for ignoring them (if such a contingency arises) on his shouldersand in writing, too.

RADIO AND NOISE

This reminds me of the even more urgent question of I don't know if the criticisms of the designs were as the use and mis-use of radio in collective buildings. The

WHITBY AGAIN

HE present dilemma of the Whitby Urban District Council has already been mentioned in these notes: how the Council desires to keep the red roofs down by the harbour which give so much individuality to its town, whilst at the same time getting rid of the slums which in many cases are covered by those roofs.

In another issue I suggested that the tiles might be re-used for the new houses ; perhaps an obvious suggestion, but nevertheless one which would keep much of Whitby's charm, despite a less crowded siting of the houses.

But Whitby has done even better. Its Council has asked for the help of the R.I.B.A. in its difficulty, and an architect appointed by the President is to meet the Whitby authorities to talk over the matter.

Whitby is a small place as towns go, but its example in taking its architectural responsibilities seriously, its realization of the importance to the country of its finding a fine solution to its own special problem, ought to be taken to heart by cities far richer and busier-but less educated.

And what is more to lots of people, I think that this decision will pay. I, at any rate, feel that after this, I must go back to Whitby for another holiday.

BARRY'S PREMIUM

In the 100 years ago column of a Sunday paper I noticed that 97 schemes were submitted for the new Houses of Parliament and that the winner was awarded £1,500a premium which compares more than favourably with those offered today, especially if the value of money is taken into account.

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The Architects'

Journal S.W.1





The late Mansfield D. Forbes.

great majority of people *want* to receive radio broadcasts (and presumably, in the future, television transmissions).

But I have spoken to many people (including a prominent member of the Anti-Noise League) who would pay quite a high rent for a flat in a block where every tenant undertook to listen-in only through the undisturbing media of headphones.

It is a pretty idea, but one which surely breaks down on psychological grounds—for who could point to a loudspeakerless block of flats without experiencing at least a slight sensation, a slight suspicion, of unworldliness?

MANSFIELD FORBES

In a letter (printed on another page) certain friends of M. D. Forbes, whose death I referred to last week, take exception to my remarks about him and draw attention to *The Times* obituary.

Let me say at once that the obituary in *The Times* gave a vivid and brilliant portrait of this remarkable man. In view of which it hardly seems necessary to say much about my remarks which may have been inept and were in any case personal and in no sense meant as an obituary.

I think, however, one thing should be added. Loyalty can render a disservice to any man by wrapping up his memory in a warm woollen jacket of conventional sentiment. Mansfield Forbes—Manny, to a vast circle of friends—was a character humane, generous, loyal, disinterested, gifted, and active for good. But to placate one's sense of loss merely by saying this would be to bury him under noble platitudes, incurring his own celestial and derisive laughter.

He was of all people individual, specific, and "actively differentiating," and his memory should not be reduced

to the common multiple of All the Virtues to be tucked away neatly in the Pantheon with all the other statues.

ARCHITECTS FOR ARCHITECTURE

Following the extract I quoted here from the Cardiff *Western Mail* last week, I now quote from the last paragraph of a letter from Professor Reilly, published some days ago, in which he referred to the red coloured paving which is to be laid in front of Brunswick Square and in Brunswick Terraces at Hove.

He appears to me to sum things up admirably :---

The general point is that such things as this foreground colour are settled in this country by the town surveyor or the town engineer. There is with us usually no town architect, as in France, in a position of authority to put his views forward. Towns should have one adviser at least with a trained eye to protect their beauties.

SCHOOL OF PLANNING

On Thursday last I, along with several other architects, paid a visit to the A.A. School of Planning for National Development. And I, along with several other architects, came away much impressed by the soundness and breadth of the work being undertaken.

The walls of the School were filled by the work of these post-graduate students—chiefly of an analytical nature. One room, to take an example, discussed in vivid graphic form the suggestion to reserve the Chilterns as part of a National Park System.

The Chilterns were shown to us under every condition : orographical, geological, paths, roads, administrative, population, occupations, accessibility, health, etc., and the argument for their allocation as parkland seemed invincible.

During the evening Mr. L. D. Gammans gave a talk on "Land Settlement and Unemployment," telling us in no uncertain terms what land settlement could, and probably could not, do towards solving the unemployment problem. If only half the lecturers know their job as well as Mr. Gammans does and can talk about it as well as he did last Thursday, then the Planning School forms indeed a first rate forum for the exchange of first rate ideas.

COUNTRYSIDE SLUMS

Had I the Rothermereish habit of taking my hat off to comparative strangers, I should hastily pay a similar tribute to the rector of Westend, Hampshire, who has had the courage to condemn the "picturesque thatched dens with honeysuckle round the door," for which many of his parishioners still pay about 128. 6d. a week.

He seems to have made himself a bit unpopular locally, but I do hope he will have the courage to go on. These teeny weeny, ever-so-elfin "picture" cottages are all very well as far as they go; but they don't go very far, certainly not as far as the "shelter" that all our young moderns are talking about.

ASTRAGAL

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NEWS

POINTS FROM THIS ISSUE

- An architect has been appointed to design a model school in Camberwell 222 " Councillors . . . classified as noxious areas " 246 At the beginning of this century it was only possible to obtain bricks of the brightest red 246
- . . Unadorned concrete is not going to satisfy us for the surface of our buildings any more than it did the Romans . . . to cover it with plaster is but a povertystricken expedient "..... 247
- There are some sixty standard designs of lock springs 248

HAMPTON COURT BRIDGE

The question whether or not the four kiosks designed by Sir Edwin Lutyens for Hampton Court Bridge shall be erected is to be discussed again by the Middlesex and Surrey Joint Committee for Thames Bridges. Sir Edwin has made certain suggestions to the Committee.

RURAL HOUSING COMMITTEE

The Minister of Health has appointed, with the approval of the Treasury, a Rural Housing Committee, the object of which is to make recommendations to the Minister as to the Exchequer subsidy to be given for houses provided by rural district councils to relieve overcrowding among the agricultural population.

The committee will consist of Sir Felix J. C. Pole (chairman), Mr. E. G. Gooch, Mrs. Peter Hughes-Griffiths, Mr. E. W. Cemlyn-Jones, Mr. R. Kettle, Mr. F. W. Showers, and Sir Seymour Williams.

The Exchequer subsidy provided under the Housing Act, 1935, may vary between f_{2} and f_{2} a year. The work of the committee will consist in examining the applications received from rural district councils and recommending to the Minister the exact amount of subsidy which should be given within these limits. In making its recom-mendations the committee will have regard to the financial resources of the council building the houses and the rent which the agricultural population can be expected to pay.

MODEL ELEMENTARY SCHOOL

Mr. Oliver Hill, F.R.I.B.A., has been appointed (by the Council for Art and Industry) architect for the rebuilding of

THE ARCHITECTS' DIARY

DIAKY Thursday, February 6 INTERNATIONAL EXHIBITION OF CHINESE AKT. At the Royal Academy, Burlington House, Pieccadilly, W.1. ARCHITECTURAL ASSOCIATION, 36 Bedford Square, W.C.1. Annual Exhibition of Photo-graphs by Members. Until February 15. CHISWICK AND HAMMERSMITH IMPROVE-MENT SOCIETY. At the Hamperhire House Club, Hampshire Hog Lane, Hammersmith, Exhibition of photographs and maps of the suggested new road to relieve Hammer-mith Broadway and other streets, also ava-gested diternative schemes. 11 a.m. to 10 p.m. Until February 7. INSTITUTION OF STRUCTURAL ENGINEERS.

Until February 7. INSTITUTION OF STRUCTURAL ENGINEERS. South-Western Counties Branch. At the Technical College, Plymouth. Film denoted to the Welding and Evertion of Stellcorr tor "Three-Storeyed Building. 7.30 p.m. AUCTIONEERS" AND ESTATE AGENTS' INSTITUTE, 29 Lincoln's Inn Fields, W.C.2. "The Restriction of Ribbon Development Act, 1935." By J. A. Rosenear. 7 p.m. SOUTH WALEN LANDERT OF AUGMENTS

SOUTH WALES INSTITUTE OF ARCHITECTS Central (Cardiff) Branch. At Cardiff "How the Housing Problem is Solved Abroad." By F. R. Yerbury. Cardiff. Solved

Friday, February 7 INSTITUTION OF STRUCTURAL ENGINEERS. Wedern Counties Branch. At the Merchant Venturers' Technical College, Bristol. "The Reconstruction of Temple Meads Station, Bristol." By J. F. Bickerton.

Bristol." By J. A. Monday, February 10 CHARTERED SURVEYORS' INSTITUTION. Great George Street, S.W.1. "The Law of Great George Street, S.W.1. "The Law of Party Walls Outside London." By W. T. 6.30 p.m.

Tuesday, February 11

uesday, February II INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. At the Baltic Lounge, Skaneea. "Cinema Theatres." By A. G. Thompson. 7 p.m. ARCHITECTS' AND TECHNICIANS' ORGANI-SATION. At the Conway Hall, W. C. 1. "Tourn Planning and Building Legislation and its Effect on Architecture and Design." By B. Lubetkin. Sp.m.

Lucetkin, 8 p.m. ILLUMINATING ENGINEERING SOCIETY, At the Institution of Mechanical Engineers, Storey's Gate, S.W.1. "Classification of Symmetrical Light Distributions." By H. Buckley, "Thermal Tests for Illuminating Glassware." By W. R. Stevens. 7 p.m.

Glassware." By W. R. Stevens. 7 p.m. Wednesday, February 12 LIGHTING SERVICE BURRAC, 2 Saroy Hill, W.C.2. "Glass in Relation to Lighting in Architecture." By B. P. Dudding. 7.30 p.m. INSTITUTION OF STRUCTBALE Branch. At the College of Technology, Manchester. "City HOUSING: Matters of Interest to the Structural Engineers." By R. A. H. Livett. 7 p.m. INSTITUTION OF HEATING AND VENTLAT-ING ENGINEERS. At the Indiation KILL, C.1. "Venitiation of the Mersey and Other Tunnels." By Professor J. S. Hadane. INSTITUTE OF WELDING. At the Indiation Institute of WELDING. At the Institutio of Mechanical Engineers, Storey's Gat S.W.1. "Pressure of Vessels." By C. I Davy. 6.30 p.n.

Lyndhurst Road, L.C.C. school, Camber-well, which is to become London's model elementary school.

THE SPECIAL AREAS

An exhibition dealing with the Special Areas of England and Wales was opened in the hall of Charing Cross Underground Station, Villiers Street, W.C., on January 30, by Mr. P. Malcolm Stewart, the Commissioner for the Special Areas of England and Wales. In his speech at the opening ceremony Mr. Stewart read the following letter from King Edward, written shortly before his coming to the throne :-

"Dear Mr. Stewart .-- I am interested to hear of the exhibition, descriptive of the Special Areas, which is shortly to be opened at Charing Cross Underground Station, and I hope that this will achieve its object in making more widely known what is

being done to improve the position in these areas and the ways in which people can help this work forward.—Yours very truly, (Signed) EDWARD P."

The aim of the exhibition, two photographs of which are reproduced on page 218, is to appeal to the general public to assist in the recovery of the Special Areas by showing them what they can do to help. It was planned and designed by Pritchard, Wood and Partners, in conjunction with the Staff of the Commissioner for the Special Areas of England and Wales, the Ministry of Labour and the London Passenger Transport Board. The exhibition will remain open until February 11.

14-MILE RIVERSIDE WALK

The purchase of Buccleuch House, Richmond, by the Borough Council, will enable an unbroken riverside walk of 14 mile along the Thames to be made between Kingston and Hammersmith. At present the towpath has to be left at this point and pedestrians have to walk along a narrow and dangerous road past the house.

HONAN SCHOLARSHIP

At a recent meeting of the Liverpool Architectural Society, it was announced that the Honan Scholarship for 1936 (value £50) has been awarded to Mr. P. E. D. Hirst, a graduate of Liverpool School of Architecture. The subject set was a block of residential flats on a central site in Liverpool.

LEEDS SCHOOL OF ARCHITECTURE

Sir Raymond Unwin is to visit the Leeds School of Architecture, Leeds College of Art, on February 7, when he will deliver a lecture entitled "The Architect and Town Planner."

SCOTTISH ARCHITECTS

At the last meeting of the Council of the Royal Incorporation of Architects in Scotland, held in Edinburgh, Mr. J. T. Middleton, W.S., was elected secretary and treasurer, in succession to Mr. A. Nicol Bruce, who is giving up at the present time all secretarial work for health reasons. The following new members were elected : Messrs. Thos. Stenhouse, Leven; P. H. D. Ronaldson, Robert Woodcock, jun., G. H. Lawrence, and H. A. R. Govan, Edinburgh -as associates ; and Messrs. I. M. Mackay, Barnhill ; W. B. Taylor, Broughty Ferry ; and Stuart MacMath, Langside-as students.

THE ARCHITECTURAL ASSOCIATION

Mr. L. W. Thornton White, A.R.I.B.A., has been appointed vice-principal of the Architectural Association School of Architecture.

A CORRECTION

In the description of a house at Maidenhead, designed by E. C. P. Allen, in our issue for January 30, it was stated that the cost of the building worked out at 1s. 5d. This is incorrect ; the price per cubic foot of the house was is.

R.I.B.A. EXHIBITION

The Council of the R.I.B.A. announces that the Rt. Hon. The Earl of Derby, K.G., P.C., has consented to open, on Wednesday, February 19, the forthcoming exhibition of "Everyday Things," organized by the Institute.

The exhibition, which contains more than 2,000 separate exhibits, all of British manufacture, aims at showing that good design can be obtained in inexpensive mass-produced objects for household and similar use.

The exhibits' have all been carefully selected by a committee of architect specialists; in consequence the exhibition will reveal the architect in his capacity of selector, a function which he is often required to fulfil in his practice. In some cases also it will show him as the actual designer.

The exhibition will be open to the public at the R.I.B.A., 66 Portland Place, W.1, from February 20 to March 14 from 10 a.m. to 8 p.m., Saturdays 10 a.m. to 5 p.m., admission free. A special illustrated catalogue is being prepared in which the retail prices of all objects displayed will be given.

£100,000 NURSES' HOME

The L.C.C. proposes to spend \pounds 100,000 on a new nurses' home for Hammersmith Hospital. A six-storey building with 304 bedrooms is contemplated.

DUNDEE COLLEGE OF ART

At a recent meeting of the governors of the Dundee Institute of Art and Technology the question of an assessor for the competition in connection with the new Duncan of Jordanstone College of Art was discussed. It will be recalled that Mr. H. W. Burchett, A.R.I.B.A., who was chosen to act as assessor, was unable to accept the appointment.

The Lord Provost read a letter which he had received from Mr. Burchett, who suggested the name of an architect who might be suitable as assessor in the proposed competition, but who was an elderly gentleman, and consequently disqualified to act in terms of the governors' decision to procure an assessor not exceeding 50 years of age. After much discussion it was unanimously decided to write to the R.I.B.A. requesting that the President should send the governors a list of six architects under 50 years of age, with experience in the planning of art or technical colleges, or similar buildings, from which the governors might select one to act as assessor.

POSTER COMPETITION

Conditions of a poster competition in connection with the Paris International Trade Fair to be held from May 16 to June 2 next, have just been issued by the London offices of the Fair. The following prizes are offered : 1st prize, 5,000 francs and a plaquette ; 2nd prize, 2,000 francs and a gold-plated medal ; 3rd prize, 2,000 francs and a silver medal ; 4th prize, 1,000 francs and a silver medal ; and 5th prize, 1,000 francs and a silver medal. In addition, there will be a further 10 prizes of 250 francs, each with a bronze medal.

Full particulars of the competition are obtainable from the London office of the Fair, 17 Tothill Street, Westminster, S.W.I. The latest date for submission of designs is April 28.

THE BURY COMPETITION

As announced in last week's issue, Mr. J. Hubert Worthington, M.A., F.R.I.B.A., the assessor of the competition for a proposed town hall, Bury, has made his award as follows :--

Design placed first, No. 17 (£500) : Mr. Reginald Edmonds, A.R.I.B.A., of 24 Bennett's Hill, Birmingham.

Design placed second, No. 55 (£300) : Messrs. Bradshaw Gass and Hope, FF.R.I.B.A., of 19 Silverwell Street, Bolton.

Design placed third, No. 31 (£150) : Messrs. Harvey and Wicks, F. and A.R.I.B.A., and Mr. H. Jackson, A.R.I.B.A., of 5 Bennett's Hill, Birmingham.

Highly commended, No. 14: Messrs. H. V. Ashley and Winton Newman, FF.R.I.B.A., of 14 Gray's Inn Square, W.C.1.

Also mentioned in the award : No. 48, Mr. Basil G. Duckett, of Harrow; No. 21, Mr. Reginald H. Uren, A.R.I.B.A., of London; No. 27, Messrs. A. F. G. Barnard and C. A. V. Smith, AA.R.I.B.A., of London; and No. 3, Mr. Arthur Bailey, A.R.I.B.A., of Chislehurst.

On this and the eight pages following are reproduced the three premiated designs, the assessor's award and a critique of the competition.

THE ASSESSOR'S REPORT

I BEG to report that I have carefully examined the 73 sets of designs submitted in open competition, and congratulate the promoters on having obtained such an excellent response to their invitation. The standard set has been a high one, and owing to the large proportion of competitors who fulfilled the conditions in a competent manner it was difficult to reduce them down to the three for whom premiums were available.

I had, however, no difficulty in selecting the winner, and I award the first premium to the design numbered 17, the second premium to the design numbered 55, and the third premium to the design numbered 31, and I specially mention design numbered 14.

Owing to the restriction of the site, which was bounded by three streets and a railway embankment, the designs generally conform to a symmetrical type, with the ceremonial entrance on the south, the Assembly Hall entrance from Tenterden Street and the office entrances from Manchester Road and Knowsley Street; but I will comment on some variations later.

The design placed first solved the problem with a masterly ease of planning, which not only fulfils the requirements conveniently, but does so in a manner that is monumental without extravagance. It is, in short, a Town Hall.

Whereas most of the competitors fill the site up to the three defined frontages, so that their schemes become rectangular blocks of offices surrounded by streets, the particular excellence of this plan lies in its composition and the generous spaces thrown open around it, due to the bold recesses on the Knowsley Street and Manchester Road frontages and the open spaces gained at the north-west and north-east corners, in addition to the southern square.

Thus this competitor sets a notable civic building in an open space in a way to which few of the others can lay claim. Though the shadows of the beautifully rendered elevations and sections give some idea of the vigour and boldness of these "set backs," which are the *tour de force* of this scheme, the point will be more fully realized should a perspective drawing or a model be made.

Dignity is obtained by good proportion and fenestration, by the decorative use of heraldry and by emphasis imparted to entrances and special points of interest. The building expresses the "Dignity and Civic Purpose of a Progressive Borough" that was asked for in the conditions.

Turning to the plan in detail, it will be seen that the Assembly Hall, excellently arranged in itself and its accessories, has a fine central entrance from Tenterden Street. Though slightly raised above the street by a dignified flight of steps, it is really on the ground floor; competitors being divided between this solution and a position on the first floor. For public letting this groundfloor position is undoubtedly convenient, as many steps are avoided. At the same time access to the rest of the building is easy. The main entrance is on the south side, facing the open space in front of the railway, with a balcony that will add much to the impressiveness of great occasions. Internally the ceremonial parts are schemed with a fine distinction. A dignified en-trance hall and grand staircase lead to the main landing and anteroom, from which convenient access is given to the Council Chamber, Committee Rooms, Mayor's and Mayoress's Parlours and Reception Room. The Town Clerk's Reception Room. department is placed in conjunction. For the rest, the plans of the municipal departments are simple, direct, easily accessible and well lit. They are flexible and easily adaptable to change should reorganization be desired. The arrangement of the Borough Treasurer's Department and of the car park and basement is particularly good.

There are a few defects that may be easily remedied. For instance, better use might be made of the south-east corner room on the first floor. This excellent outlook is wasted on the Town Clerk's stationery and store. Again, it might be preferred to light the Assembly Hall with side windows instead of top light.

It will be remembered that in Answers to Questions £152,000 was mentioned as the maximum amount which it is proposed to spend at the moment. Whilst the 2s. a cubic foot laid down is not a lavish figure for a grit stone building of this character, and it was intended to leave part of the top floor as a shell, so skilfully has the winner planned his building, and with such economy of means, that it may be possible to complete the whole scheme at once. In making the award due consideration has been given to the condition which stated that economy in planning would be considered. It is a design that will build well, and I feel confident that Bury will have reason to be proud of her new Town Hall.

The design to which the second premium The plan is outis awarded is No. 55. The plan is out-standing not only for its simple directness and ample lighting, but also for the architectonic qualities of the ceremonial rooms, and, in particular, the spacious entrance hall and the grouping of the Council Chamber, its anteroom, the Mayor's Reception Room, and the Assembly Hall, all on the first floor. Though this latter room appears dull from a glance at the plan, it will be found, on studying the sections, that it is a chamber of noble proportions. The sections, generally, are well balanced and interesting. The elevations are competent and well composed, but a little dull compared with No. 17, mainly due to the slightness of the breaks in the The central portion of the south frontages. front is imposing, but the over-emphasis of the architectural treatment of the flanking wings spoils the scale of the main windows over the entrance.

The third premium is awarded to No. 31, primarily for the vigour and originality of his plan. When studied in conjunction with his sections it will be seen how beautifully the interior unfolds, mainly due to the placing of the Mayor's Reception Room and the Assembly Hall on a mezzanine, cleverly arranged *en suite*.

Whereas many of the competitors have a rather stereotyped solution, it is refreshing to see the imaginative qualities of this unusual interior. The entrances, main stair, Council Lobby and Chamber may be instanced. The departments are simply planned and excellently lit.

Except for the south elevation, which has a robustness excellently indicated on the half-inch scale detail, the exterior is comparatively disappointing, but the man who can design this entrance front and this interior would soon remedy this by further consideration.

The scheme, compared with 17 and 55, is comparatively extravagant.

Design No. 14 is highly commended because of its simplicity and economy and the excellent working arrangement of the ceremonial suite on the first floor. Compared with the premiated designs, however, the plan is a little lacking in architectural emphasis, and, generally speaking, is not so well lit, particularly in the corridors.

The elevations are quiet and well proportioned, but are a little dull and lacking in the sense of Civic Purpose that was asked for.

I should like to draw attention to certain variants on the generally accepted theme. No. 48 shows an interesting semi-circular

end to the south, which would give a fine effect from the Manchester side. There are defects, however, in the detailed planning, and though comparable in general lay-out with No. 14 it is not so economical and simple.

No. 21 solves the plan well, on \square long axis, and shows originality and symmetry, with \square tower in the Swedish manner.

No. 27 is in many ways an efficient and eco-

nomical scheme, but fills up the site too much. No. 3 has particularly fine elevations, with four angle cupolas and a Palladian pomp, but the corridors generally are poorly lit, and the important rooms on the south front lose the sunlight owing to a huge and somewhat superfluous colonnade. The Council Chamber is in a noisy position, and the scheme is not economically planned.

THE DESIGNS REVIEWED

[BI' W. G. HOLFORD]

THE Assessor states in his award that he feels confident that Bury will have reason to be proud of her new Town

Hall ; and we have no doubt that she will be. Mr. Hubert Worthington knows his Lancashire, and must have had a good idea of what would suit the inhabitants of Bury. Mayor, Councillors and officials included. His point of view was stated in very positive terms in the conditions. "Competitors terms in the conditions. "Competitors are reminded," he wrote, "that Bury is a northern industrial town with plenty of mills *already*, and this will be taken into account in making the award. It should be borne in mind that the promoters wish for a design that shall express the dignity and civic purpose of a progressive borough." The design which was subsequently awarded the first premium complies with these conditions in every detail, and if all goes well the promoters are going to secure just the kind of building they asked for. From this point of view the competition has been a success : borough officials are obviously proud of the winning design, the " dignity and civic purpose " is admirably expressed. With the exception of the one word " progressive," the conditions of the competition have been fulfilled to the letter.

It is only when the results are judged by a standard more exacting than the Assessor's programme that the success of the com-petition is found to be incomplete. If these designs for the new Town Hall represent a true reflection in architectural terms of the Borough's requirements, then Bury cannot honestly be called " a progressive Borough." The solutions which are here offered to the problem of providing in one building an assembly hall of many purposes, a cere-monial suite of rooms, and a flexible series of offices, do not make any notable contribution to architectural achievement. They do not widen its creative range, improve its technique, or even utilize in an imaginative way its existing resources. Tradition is maintained, but not carried forward. Planning and construction are adequate, In my opinion but not imaginative. achieved is of the kind the dignity that is assumed like a Mayor's chain; it is a dignity conferred by robes of office and not by personality. The heraldry that is so conspicuous a feature of most of the designs is an outward indication of the general attitude of reliance on tried but often outworn methods, and on past conventions. Heraldry was once impressive, significant and practical, an art whose con-

ventions everyone understood. Used as it is today to give a rather artificial sense of importance to municipal buildings, it becomes merely an applied decoration, without significance or interest.

Criticism of this kind is, however, more justly levelled against the competition as a whole, than against the particular designs submitted. The competitors were bound to observe the conditions, and it is in relation to those conditions that the results should first of all be assessed.

Of the four premiated or commended designs, that of Mr. Reginald Edmonds is undoubtedly the best. The Assessor has made it °clear in his report that the competition was won on points of planning and composition. Whilst there are many ingenious plans, the winner's is probably the simplest ; and it is the only one which combines this advantage with effective composition of the component parts of the building. The office wings are well set back from the street ; there are open spaces at each of the northern corners of the site ; the assembly hall is plain for all to see, and is not tucked away inside ; the rooms for the most part face outwards, and the whole plan of the building is well expressed by its mass.

It will be noticed that the winning plan is a fairly long one, and that the narrow compactness which alone permits the setbacks and open spaces, is achieved at the sacrifice of certain other amenities. The council chamber and adjoining light wells are rather constricted. The council cham-ber itself is too long and narrow in proportion. The courts, or light wells, are also narrow and the section shows that a large part of the borough treasurer's department, the collecting hall and internal audit in particular, is not very well lit. The projecting wings create problems of circulation, and although they are the most amply lit of all the rooms in the building, they are by no means the most important. The stair cases which one might have expected to find in each of the southern angles of the building have been forced towards the centre, and placed, each around a single lift, on either side of the central grand staircase. Here their symmetry, though unavoidable, is of small advantage. The council suite on the south front is near enough to the site line to ensure a good view of the railway cutting and the Whitehead Memorial Tower from the committee rooms and ceremonial balcony. It is, of course, possible that this ugly clock tower may be removed and the cutting bridged, thus forming a link between the forecourt and the public gardens. This would be a great advantage.

The elevations of the winning scheme are well proportioned and show fine large windows. Details and decorations are somewhat dull and heavy, both on the façades and in the assembly hall, but will no doubt be improved in execution. There is an odd convention which governs the heights of windows. On the side elevations, for example, the windows are all of the same width and composed of panes of standard size; but the top floor windows are five panes in height, the first floor six and the ground floor, where more light is needed, only four. It is curious that the system of the piano nobile in Italian Renaissance palaces should still influence the fenestration of a twentieth-century town hall, particularly in that section of it where nearly all the offices are of the same importance.

This fact is even more marked in some of the other designs (such as No. 14). But whereas the winning design has plain strong walls and windows, almost Doric in feeling, those of the second premiated design, submitted by Messrs. Bradshaw Gass and Hope, are weak and worried. The modernistic grilles, the engaged columns, and the neo-classic details, do not improve the flat façades, nor make up for the lack of good massing and composition. The plan, however, is a serviceable and competent one. It has four interior light wells with the council chamber in the centre. The assembly hall is also enclosed in the rectangle and is on the first floor. This means that the public must climb the stairs and cross a corridor, which might possibly be used also by the office staff, in order to reach it. The main stair which rises from a vestibule of rather awkward shape does not lead directly to the council chamber. Councillors branch to right or left along the corridors and turn in from the opposite end. The Council Chamber itself is a fine room and the council suite. together with the mayor's parlour and town clerk's office, is well planned on the south yard is not as simple as in the winning design. It is interesting to note that the drawings for this scheme were all presented to $\frac{1}{16}$ in. scale, with the exception of the site plan ; while the winner drew his plans to $\frac{1}{16}$ and his elevations to $\frac{1}{8}$ in. scale. Competitors will remember that the conditions asked for complete drawings to 1 in. scale, including four plans, four elevations and several sections, besides the in. detail and a block plan. This was a formidable demand indeed, and has proved have been quite unnecessary. In to October the Answers to Questions allowed the reduction to 16, and thus cut down the drawings to a reasonable size.

The design submitted by Messrs. Harvey, Wicks and Jackson, which was awarded third place, is more interesting, though less simple, than the second premiated design. The assembly hall and mayor's reception room are on a mezzanine floor, very ingeniously planned. It is a pity that the plan is not very economical, for there are some fine rooms, the entrance hall and council chamber in particular, and there





South elevation.



North clevation.



West elevation.



Section C-C.

WINNING DESIGN: BY R. EDMONDS

is more architectural dignity in this interior, combined with variety of shape and proportion than in any other scheme. Unfortunately the exterior is a box, more suited to a crowded city site than to this comparatively open one. The building is turned inwards, and the most important elements hidden from external view.

The same is true of the design by Messrs. Ashley and Winton Newman, which was highly commended, and here, in addition, some of the offices face on to small interior courts. The rooms are all less interesting than those of the third premiated design, and the elevations delicate but weak. There is an ingenious arrangement of staircase reception room and council chamber, this last being on the cross axis Space is wasted in corridors, foyers and stairs and this helps to bring the building line, as it does in the design previously mentioned, very close to the pavements of the streets that bound the site on three sides.

Here again the assembly hall is on the first floor and the access to garages and covered vard is rather awkward.

It remains to be seen if any of the other competitors have set themselves to solve the further problems which were not contained in the explicit conditions with anything like the competence with which the written conditions have been fulfilled by the premiated designs.

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LETTERS

FROM

READERS

Mansfield Forbes

SIR,-As personal friends of the late Mr. Mansfield Forbes may we express our regret that in the Notes and Topics in your issue for January 30 considerably less than justice was done to him? We take exception not only to the initial statement that Forbes's death would not be mourned widely, but to the whole tone of the writer's observations concerning a personality so distinguished and beloved.

May we be allowed to draw the attention of your readers to the following excerpt from the authoritative obituary notice which appeared in The Times of January 29 : "As a man he was completely open hearted, utterly unaffected -despite his numerous eccentricitiesand as generous minded as it is possible to be. He was almost invariably merry, and he could on occa-sion act the buffoon magnificently. Above all, he had a rare gift, amounting almost to genius, for bringing people together and, through his enthusiasm and vision, setting them off on new lines of thought and action. He himself, having blazed the trail, invariably passed on to something else, leaving others to consolidate the work and, incidentally, take the credit. He will be remembered by a multitude of friends, many of whom drew inspiration in one form or another from their friendship with him and whose work will prove a lasting and, as he would have wished, anonymous memorial to him."

This is finely and truly said, and we, the undersigned, wish to associate ourselves with it.

> HOPE BAGENAL CHRISTIAN BARMAN A. C. BOSSOM GEORGE CHECKLEY SERGE CHERMAYEFF WELLS COATES AMYAS CONNELL ELIZABETH DENBY A. TRYSTAN EDWARDS A. C. FROST WALTER GOODESMITH OLIVER HILL GEORGE KENNEDY RAYMOND MCGRATH A. R. POWYS GILES GILBERT SCOTT P. MORTON SHAND HAROLD TOMLINSON

[Astragal writes :

The statement that M. D. Forbes's

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EIGHTEEN SIGNATORIES

"CASEMENTS"

"A LONDON STUDENT"

death would not be mourned widely was a misprint, as the distinguished signatories to the above letter might have guessed before going to such pains to point it out. My remarks were not meant to do "justice" to Mr. Forbes. They were personal notes. That they were inadequate to their subject, for whom I have an admiration certainly not less than that held by the abovenamed gentlemen, I am only too ready to believe. I can assure them, however, that they have misunderstood my intention, which was an honest one.]

This matter is referred to in Astragal's notes this week .- ED., A. 7.

Builders' Catalogues

SIR,-" Student," in your issue for January 23, raises a point of great interest to manufacturers, such as ourselves, who are spending a great deal of money in "broadcasting" information about our materials. Naturally, architects actually in practice must be our first field, but we do believe in the principle of "catching 'em young," and would therefore like to ensure that students, also, had full particulars. Nevertheless, from the business point of view, they must be regarded as a long-term investment, paying no dividend for several years. I wonder if "Student" has any idea of the cost of sending a catalogue to every student? They number, I believe, about 3,000. Even an abbrevia-ted version would cost, say, $\pounds 40$, to which must be added postage, amounting to £12 10s .- a total of £52 10s., omitting the cost of envelopes and the labour involved. Our full cataloguewhich is the only one likely to be of real value to the student-would cost three or four times as much.

What are we likely to get in return? Circular letters to practising architects, offering our catalogue, produce-if we are lucky-about 2 per cent. of replies, of which only a very small proportion result in actual business. In the case of students, no orders can possibly mature for at least a year or so, at the end of which time the catalogue is presumably irretrievably lost. All that remains, we hope, is some vague knowledge of our materials in the student's mind. But this knowledge, the student-if he is really trying to learn-will, in any case, regularly acquire from our press advertisements; these, admittedly,

aim at the practising architect, but are, we hope, also read by the student. Honestly, "Student," can one justify "broadcasting" catalogues to students? If those who really want them care to write, we shall, of course, be delighted to send them. As a matter of fact,

we think that even now they are not expensive at the cost of the 1d. stamp and post-card asking for them.-" CASEMENTS "

Architectural Education

SIR,-As one having first-hand know-ledge of the type of school referred to in Messrs. Davies and Sturrock's letters might I be allowed to point out certain facts suggested in them?

The virtual isolation of the years is the greatest stumbling block to advancement, which could at least be overcome if students were allowed to discuss and debate their opinions only. This, however, is virtually not permitted. Criticism of the curriculum is not only discouraged, but well nigh forbidden. The student is not considered as a thinking individual, but as a schoolboy to be seen and not heard, while being judiciously spoon-fed with selected classicalities.

The student committees have no use or purpose other than that of arranging "social functions" and lectures by various architects, the choosing of the latter being strictly censored and controlled.

They have, by constitution no power to criticize, suggest or reform anything connected with the running of the school or its curriculum.

The last paragraphs in both letters clearly indicate that neither of the writers, in their great good fortune, know by experience the systems of these institutions. In order to "clear up and reorganize their committees," it is necessary to change the entire organization of the school. Only by a massed front of opinion would that be made possible, and as Mr. Davies so accurately points out, the system, though stimulating (as all opposition must needs be) for the alert student, not only bewilders but awes the more general herd into acquiescence and silence as the easiest way of avoiding the displeasure of their authorities.

It is therefore difficult for those students who realize how far short of the necessary standard of education their instruction falls (who, may I assure Messrs. Davies and Sturrock, are increasing slowly but steadily every year in these schools), to play a lone hand in an effort to reorganize the system of their school with so little support and the certainty of their bringing down upon themselves per-sonally, the deepest displeasure of the gods that be ! "A LONDON STUDENT"

THE A CHITECTS' JOURNAL for February 6, 1936



DESIGNED BY

G.E.BRIGHT

PURPOSE.—The building results from an attempt to provide a block, containing nearly 200 flats, at moderate rentals, with the advantages in the way of wide views and thorough superintendence which have hitherto only been possible in more costly schemes. Rents range from \pounds_{115} to \pounds_{160} per annum.

SITE.—The site is at Highgate, 400 feet above sea level, is $4\frac{1}{2}$ acres in area and has wide views over London and to the north. The portion of the site not occupied by the building is to be laid out as gardens for the tenants.

The photographs show : above, a view of the north wing; right, a general view showing the entrance gates.









THE ARCHITECTS' JOURNAL for February 6, 1936 237 HORNSEY LANE, HIGHGATE, Ν.



IN





PLAN.—The plan form was adopted for the following reasons : it allows every room to have an unobstructed view over adjoining land; it allows access to the flats to be very strictly controlled by a small staff from the centralized principal and service entrances; every tenant is able to feel that he has a "front" flat—an important consideration in the matter of letting; and

only a small proportion of the flats face north. Each flat has a service cupboard adjoining the corridor containing refuse bin, foodstuffs compartment and meters, which enables tradesmen and officials to deliver goods or take particulars when the flats are unoccupied.

Private lock-up garages are provided on the site for a number of cars.

CONSTRUCTION.—Steel-framed, with 11 in. hollow infilling walls; floors and roofs are R.C. hollow tile with roofs finished with asphalt. Partitions are of breeze slabs and windows are steel in wood surrounds. Balconies are of reinforced concrete and panels between windows, and plinth,

are of white cement rendering.

The photographs show : above, a detail of a secondary staircase ; a view of the main entrance ; left, a detail of the sun balconies.

THE ARCHITECTS' JOURNAL for February 6, 1936 236 NORTHWOOD HALL: BLOCK OF FLATS DESIGNED GE R Y T GН B R T

FINISHES.—Main stair is grano finished and carpeted, and handrail is chromium-plated with wrot-iron balustrade. Entrance floor is of rubber. Main corridors are finished in $\frac{1}{2}$ in. rubber, and flat lobby and bathroom floors are of $\frac{1}{2}$ in. rubber, kitchen floors of quarry tiles.

SERVICES.—Heating is by radiators from a low-pressure accelerated system from automatically stoked solid-fuel boilers. Hotwater supply is also central. Living rooms have open fireplaces, and other rooms have power points for additional heating. Kitchens are equipped for cooking by gas or electricity, and with refrigerators and built-in cupboards. The building has two passenger lifts and a service lift, centrally placed.

The photographs show two views of the entrance hall. On the facing page is a detail of the south-west angle of the building, showing the continuous main staircase window.

For list of contractors and sub-contractors see page 248.









D E S Τ. I G N E D B r C E C I L H 0 W T I T



PLAN AND SITE.—The scheme provides houses for elderly persons, grouped around an assembly hall and rest-room. The houses are mostly single-floored but a proportion of two-floored houses are included in the scheme. The houses vary in accommodation from one livingroom and one bedroom to a few containing living-room, sitting-room and three bedrooms. Two small groups of washhouses are provided. The site was formerly a nursery

washhouses are provided. The site was formerly a nursery garden and orchard and many of the fruit trees have been retained. The grounds immediately adjoining the buildings are under the care of the trustees. On this page : a view of the quadrangle and a detail of the assembly hall.

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CONSTRUCTION AND ELEVATIONAL TREATMENT.— The construction is of a high-grade traditional quality. The cavity walls have bronze ties, the roofs are of timber, boarded and finished with Staffordshire brown brindle tiles, main floors are of oak boarding, joinery in living rooms of waxed Columbian pine, and in bedrooms of deal, white-enamelled. The facing

bricks are 2 in. mixed brown with wide flush joints tinted buff. The wrot-iron grilles are finished in white metal, with bronze finish in special cases. Window-boxes and shields to arch-ways are of cast lead. Pavings and kerbs are in York stone and fencing in untreated oak. Above is a general view of a group of cottages.



 $D E S I G \mathcal{N} E D B \mathcal{X} T.$

CECIL HOWITT





COTTAGE : GROUND AND FIRST FLOOR PLANS

SERVICES.—The scheme has a central system of water softening and of hot water supply, the latter being from automatically-fed boilers and being pumped around the buildings in insulated mains. All the usual fittings, as well as linen cupboards, are supplied from this source.

The fireplaces in the living-rooms are of the open type, with smal side boilers and hot plates. Sculleries, living rooms and bedrooms are fitted with specially designed cupboards.

Left, the assembly hall. The panelling is of waxed oak, the floor of oak boards, the fireplace of stone, and the ceiling fibrous plaster.

For list of general and sub-contractors see page 248.

FILING REFERENCE:



Above is a photograph of the interior of the surgery in the out-patients' department. The radiators are arranged to swing away from the wall for cleaning purposes. Elevations and the essential sections and details are shown overleaf. See also detail No. 401.



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FILING REFERENCE: .





This operating theatre is largely top lit, the normal window being glazed with obscured glass. Overleaf are an axonometric, key plan and section. Radiators are arranged to hinge away from the wall for cleaning purposes (see detail No. 399).



Axonometric, key plan and section of the operating theatre illustrated overleaf. 244

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Cliff Quay from the air. From "East Suffolk Regional Planning Scheme."

LITERATURE

THE PROGRESS OF PLANNING :

EAST SUFFOLK

[BY THOMAS SHARP]

East Suffolk Regional Planning Scheme. By Patrick Abercrombie and Sydney A. Kelly. Liverpool University Press and Hodder and Stoughton. Price 7s. 6d.

TITH this scheme Professor Abercrombie and Mr. Kelly do for East Suffolk the excellent work they have already done for Bristol and Bath, Cumberland, Doncaster and those other localities covered by the long list of regional reports they have produced during the last ten or twelve years. This report is rather shorter than most that they have done, for by now the reiteration of accepted planning principles, however necessary it may be, must be becoming a little wearisome to them. So, in this instance, they have wisely done little more than touch on general principles, and only then in their application to this particular region.

Suffolk must probably be classified as one of the least known counties of England. That is largely because it does not provide the romantic " scenery " which seems to be the only kind that matters nowadays. Here are no mountains, fells or moorlands. The highest ground is less than three hundred feet above sea level. So, according to the romantic, it should be flat and uninteresting. But it isn't. There is, as a matter of fact, a considerable diversity of landscape. On the north-west there is, in Hartismere, a bleak area entirely remote and altogether lacking in public services; along the coast there is a great area of heathland, and in the centre a luxuriant agricultural country rich in interesting villages and humanized with a great number of skilfully made and admir-ably sited parks. In addition to these contrasted scenes, the several remarkable river estuaries, which are almost entirely unspoiled, make Suffolk, in fact, one of the most interesting counties in the country.

It is, at the same time, an extremely easy county to plan. There are few complexities about it. Besides agriculture and the fisheries of Ipswich and Lowestoft, there are few industries, and these are mostly situated in the county town. Felixstowe is a seaside resort of some importance, and Aldeburgh and Southwold, though their glories are mostly dimmed, are minor competitors in the same line of business. For the rest, Bungay, Eye, Debenham, Framlingham and a score of other places, continue, and are likely to continue, in their quiet way as small market towns with a bright past and a dim future.

The authors themselves confess as nuch. "East Suffolk," they say, "is much. one of those counties which do not show as many signs of change as do other parts of this island : indeed, it is fortunate to have escaped some of the less desirable forms of modernization that have occurred during the past quarter of a century. The county contains some of the quietest rural country to be found anywhere, and a coast which, owing to its unusual formation, cannot be opened up from north to south with a single road. There are advantages today in a little remoteness which may have retarded a sudden onrush of accessibility until proper means are found of dealing with

To an area like this the Town and Country Planning Act may be more successfully applied than it may be to complex and rapidly developing areas. But as to actual planning proposals there is little to be done. The necessity is rather to be "prepared to cope with growth when it occurs than to attempt a forecast of what that growth shall be." So by far the greater part

of this volume, probably nine-tenths of it, is a survey of existing conditions. And a very excellent survey it is : town by town, village by village, it is described and is illustrated by those elegant maps for which Professor Abercrombie is so well known. For the most part too, it is well written, though occasionally some slackness is evidenced, as, for instance, on the dust cover itself, where it is claimed that "This report represents one of the most recent attempts to apply the powers of the 1932 Town and Country Planning Act to a predominantly Rural Council"; as though-which the authors can hardly have intended-the Councillors themselves were to be sterilized in an open space or classified as noxious areas ! Such unfortunate lapses as that, however, are rare, and this report can be recommended as excellent of its kind and an admirable guide-book into the bargain.

M O D E R N ARCHITECTURE

Following are some extracts from a paper entitled "Modern Architecture — Fashions and Tendencies," read by Mr. Oswald P. Milne, F.R.I.B.A., at a meeting of the Royal Society in London yesterday (February 5).

When I first came to London the force of the Gothic revival had spent itself. We were much preoccupied with the teaching of William Morris and his school. We were conscious that the beauty of building depended on the right use of material; that texture and colour were important matters ; that the machine-made copy of something formerly wrought by hand had no spiritual value. It was due to these ideas that we demanded such ordinary building materials as brick to be manufactured of an honest baked clay of good colour. At that time it was only possible to obtain bricks of the brightest red. In those days, when I told a maker that I must have a brick of varied colour and roughish texture he said "For the last thirty or forty years we have been doing everything we can to produce a brick of perfectly even colour, smooth and squareedged, and now you come along and demand the reverse."

Norman Shaw, designing in the free Renaissance manner, was the master we looked to, and Voysey with his long low white houses with black chimney pots and sloping buttresses was the vogue—a very pleasant vogue and an influence from which much attractive domestic work sprang.

On the Continent a fashion—Î cannot call it more—dubbed "L'Art nouveau" was holding sway. We, with our native caution for anything new, did not embrace this wholeheartedly, but the more advanced young architects over-emphasized the entasis of columns, trimmed their work with flat O.G. mouldings, and introduced hearts and birds as decoration in unsuitable places.

They proclaimed enthusiastically that at length a new and fundamental art had been born—but their enthusiasm was not unlike that of some of my younger friends today, who hail the fashion of the moment—the flat roof, the angle window, the line of solid balcony—as the essence of a new art.

There followed, before the war, a period when the cult of the antique was dominant. The cultivated man and his wife lived amid Tudor, Queen Anne or Chippendale furniture, so that a great industry in the most realistic fakes of such furniture, even down to the wood-worm holes, flourished.

But in architecture this was by no means a negative decade : such men as Lutyens were showing how, used with imagination, English styles of the past could be invested with a freshness and life to serve new needs and new social conditions. Scott, at that time a young man and the heir of two or three generations of architectural talent, was doing the same for Gothic forms in church building in Liverpool and elsewhere. Lanchester was evolving the modern civic hall. In the main we have gone back to the last traditional phase of English architecture -Georgian-for inspiration, and were adapting this to meet new demands. Ideas as to the need of definite planning of our towns were in embryo; Sir Raymond Unwin was giving proof at Letchworth and Golders Green that the planned town or suburb, with the buildings designed by the trained architect, were pleasanter places to live in than the haphazard development of the Victorian period or the ignorant performances of the speculative builder. Yet this lesson is still today very far from being learned.

Then came the war with its stark realities making a deep incision across the world. Changes in social and industrial organization in ordinary times move along so smoothly that mankind does not perceive where they are tending, but the World War, like an earthquake, shook down the walls of habit and made us look around with new eyes, to discover that our landmarks had changed.

We were forced to realize fully that mechanical power and economic forces were in control of our civilization. Cheap labour was a thing of the past, so in every direction ingenuity was bent towards displacing manpower by the machine. Born of catastrophe, new ideas as to the ordering of human destinies were engaging men's minds. In Bolshevic Russia there was to be a clean cut from the old order. The machine was a god to be worshipped. An architecture suited to the new ideal was to divest itself of sentiment and tradition, and buildings were to be consciously designed merely to function as a machine for living.

This idea was not confined to Russia. Germany developed a functional and robotlike architecture. In France the philosopher-architect, Corbusier, preached and endeavoured to formulate an architecture suited to the machine age.

Although in England, after the war, inherently conservative, we felt this new architecture to be too freakish for our taste, yet something of its vital influence touched us. There was a movement for greater freedom of outlook. Instead of looking backwards to traditional forms for

inspiration, we hesitatingly admitted that a changed world might need a new dress to express its mechanical-mindedness. Although we moved slowly there can be no doubt that a new, interesting and inventive spirit began to animate not only our architecture but also the decorative arts.

With this new freedom the architect can attack his problem with no preconceived ideas as to the architectural lines of his plan or the style of its exterior. The plan need not follow convention ; the thing that matters is what is going to happen in the building, what use every part is going to be put to, and how the whole can be arranged so as best to meet these needs. This is not to say, as the functionalist would have us believe, that good and scientific planning is a new thing. Fine buildings have always been dependent on good planning, just as poor architecture has been the result of muddled planning. It does mean that we are once again putting the horse in front of the cart. We are first of all thinking of the function of the building; then, if to that we can add the qualities of space. dignity, proportion and contrast, the real architectural qualities, so much the better.

The trappings associated with traditional architecture are also being cast aside, both within and without. The columns and pilasters, the pediments and cornices, the egg-and-tongue moulding and conventional architectural ornaments are being abolished. The result is that to get any quality into our work, and I maintain that it is quality that really matters in any building, we depend on mass and line for our effect, rather than upon detail.

It is these qualities of simple massing that one finds is characteristic of modern architecture, though somewhat bald and primitive they may often appear to be. For the very reason that the architect is striving after the means of expressing his mechanical environment does his work incline to simple line and mass. He no longer wants to copy forms expressive of other ages and as yet he has not to his hand anything to take its place. He has, so to speak, scraped from off his building all conventional ornament, and has left nothing but bare surfaces. The very word "ornament" makes him shudder. I pointed out earlier in this lecture that

I pointed out earlier in this lecture that styles grow by evolution rather than by active or conscious invention, so that it is only in the process of time that this may transform his negative building into something that may be termed as style. Architecture would be poor indeed if it had to stand still at the point to which the modernists have reduced it, nude, primitive and bald. Humanity will not remain content with the bare bones of functionalism, however nearly it may meet the facts of our problems. Man cannot be satisfied with materialism, his spirit demands something higher than a mere working machine for the fulfilment of life.

There is no doubt that a new generation is asking for things that correspond with its own outlook and not with those that recall the craft of other times ; and so in the decorative arts and in the design of everyday things invention and play of imagination are at work. Alongside this adventure in design has come a huge wave of scientific invention, the machine being its godparents. New materials and new methods in the

The architect, freed from the shackles of designing in a past style, has to his hand all these new materials and new ways of using them. He is at the same time confronted with many social changes, making new demands on planning and organization. Is it to be wondered at that architecture today is dressed in many guises? The material that has chiefly caught the imagination of the new world is reinforced concrete. Here is something that has properties fundamentally different from those of the older methods of building. Instead of the main structure being built up of a great number of small separate pieces of material stuck together by mortar or cement, it is moulded into shape by running liquid material into forms, and the finished article is a monolith. Now it must logically follow that a true reinforced concrete building, if it is going to express its real qualities is not going to resemble any building of the past. To present this concrete structure in seemly form is one of the problems of the architect today. What is he doing with it? Some would have it left in all its naked engineering ; others are trying to clothe it in a way that may express the underlying idea. The results so far are mostly bleak and barren. The skeleton is there, but the flesh and skin are lacking.

I believe that unadorned concrete is not going to satisfy us for the surface of our buildings any more than it did the Romans, and to cover it with plaster is but a povertystricken expedient, unsuited at any rate to the town or to buildings of any importance. As soon as its slick whiteness and newness fades, it wears a bedraggled, shabby and squalid look. To my mind it is only when a pleasing and economic material that can be used as a permanent shuttering is evolved, that concrete will come into its own as suitable for fine building.

In spite of excesses, fashions and absurdities, I am wholeheartedly in sympathy with the spirit and idea that informs the best of modern architecture. For it recognizes the machine and its possibilities of repetition and mass production ; it recognizes that the slick and mathematically true surface of machine-made material can produce a quality of its own.

It is perhaps the genius who will evolve from the negative tendencies of today a fine and glowing style for the future, but it is more likely that this evolution will come through the work of architects, who, endowed with common sense, at the same time have a full knowledge of the newer materials and their possibilities.

materials and their possibilities. Here in England it seems to me indispensable that they should be steeped also in English traditions of building, and that only by knowing and fully realizing how skilled the old builders were in their craft can they carry the art of architecture forward. The idea that to be modern and create a new style it is better to know nothing about the old traditional styles is mere folly. If English architecture of the future is to have character, as our buildings in the past had, it must have that native graciousness that made out architecture a thing bound up with our character, our climate and our countryside.

TRADE NOTES

[EDITED BY PHILIP SCHOLBERG]

Heating Data

M Y note on boilers and essential data last week reminds me that Crane, Ltd., have a standard handbook and catalogue, which, apart from fully dimensioned particulars of all their radiators, fittings, boilers, etc., has about 30 pages of technical data mainly intended for the heating engineer, but also very useful to the architečt.

Heat transmission coefficients, for instance, are given seven pages with sections of the type of construction described, and there are the usual handy conversion factors which are not needed often enough to be worth memorizing, but which are usually so difficult to find when one is in a hurry. Altogether one of the better books to have about the office.

Springs

I suppose that the actual design of springs, the specification of thicknesses, number of coils and diameter, etc., is hardly ever the architect's job. A new booklet from Herbert Terry's of Redditch does, however, give simple formulæ for spring calculations which at least give some idea of the, approximate size of a spring to do any particular job.

Apart from questions of design, it is not until one looks through a catalogue of this kind that one realizes the enormous number



Heat transmission coefficients, a page from the Crane handbook referred to on this page.

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of different designs for the same type cf spring that the specialist manufacturer has to keep in stock. I should have expected the motor industry to need a good many different patterns, but it comes rather as a surprise to discover that there are over sixty standard designs of lock spring. Some of them, no doubt, are more frequently used than others, but no manufacturer can afford to keep a stock of anything that is not in fairly frequent demand.

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Standardization in the building industry seems to be as far off as ever it was, and in this particular example there is not even the usual excuse that the demands of local authorities vary in different districts.

Aerodrome Equipment

At the exhibition of Aerodrome Equipment, held at the end of last week in British Industries House I discovered one or two new products which might well be useful to architects.

Apart from a new type of hangar door by the Educational Supply Association, and an electric well pump by Parker Winder and Achurch, both of which will be described more fully in future notes, I noticed a new glass substitute called Hurlinite, which consists of wire mesh dipped in a transparent acetate.

Various meshes are available, and it is suggested for use in glazed partitions, factory lighting—in fact, anywhere where obscured glass would normally be used. Price varies from 4s. to 10s. 6d. per square yard, according to the mesh employed.

At the moment it is difficult to say very much about it. The material, I understand, was originally developed for use in the sliding roofs of cars, and it is therefore probable that it is perfectly waterproof. Mr. Yorke, however, has promised to give it a trial on an actual job, and the results will be reported in due course.

R. I. B. A.

COUNCIL MEETING

Following are some notes from a recent meeting of the Council of the Institute :

Proposed Banister Fletcher Essay Prize.—The Council accepted the offer of Sir Banister (Flight) Fletcher (Past President) to found a prize for an essay to be called "The Banister Fletcher Essay Prize." Full particulars of the competition will be published at an early date.

The Soane Medallion 1931-1932. — The Council approved the report on his tour submitted by Mr. R. H. Matthew, Soane Medallist, 1931-1932.

Mosaic Work in Westminster Cathedral.— The Art Standing Committee reported that they had addressed a letter to the Archbishop of Westminster expressing their satisfaction at the action of the Archbishop in suspending the mosaic work in Westminster Cathedral and urging the appointment of a small commission of art authorities, artists and architects to advise on the future decoration of the interior of the building. The action of the committee was approved and confirmed by the Council.

Proposed Formation of a British Association for Testing Materials.—The Science Standing Committee reported that Mr. Alan E. Munby [F.] has been appointed as an additional representative of the Royal Institute to attend the preliminary conference which is being called to consider the proposed formation of a "British Association for Testing Materials."

Annual Award for Brick Buildings of Merit.— Mr. L. H. Bucknell [F.], Chairman of the Art Standing Committee, was appointed to represent the R.I.B.A. on the jury for the above award organized by the Tylers and Bricklayers Company.

University of London Architectural Education Committee.—Mr. T. A. Darcy Braddell [F.] and Mr. Hubert Lidbetter [F.] were renominated as the R.I.B.A. representatives on the University of London Architectural Education Committee for the twelve months beginning March 1, 1936.

Salaried Members Committee.—On the recommendation of the Women Members Committee Miss A. M. Hargroves [A.] was appointed as an additional member of the Salaried Members Committee.

Reinstatement.—The following ex-members were reinstated : As Fellow, Mr. Horace Field [Retd. F.]. As Licentiate, Mr. Henry Vivian Shebbeare.

Transfer to the Retired Members Class.— The following members were transferred to the Retired Members Class: As Retired Fellows: Mr. Allen Foxley, the Hon. George Sturrock, and Messrs. Arthur Walter Tribe and Herbert Hardy Wigglesworth. As Retired Associate, Mr. Thomas McLaren. As Retired Licentiates, Messrs. Ernest Greenleaves and Albert Edward Savage.

Resignations.—The following resignations were accepted with regret : Messrs. Spencer Carey Curtis [F.], Edward Gibbs Holtom [F.], Archibald Frederick Preston [F.], James Bickle Sanders [F.], Herbert Wade [F.], William Gilmour Wilson [F.], George John Oakeshott [Retd. F.], Herbert Jones [A.], Wilfrid George Gradon [L.], Frederick Hughes [L.], Ernest William Crickmay [Retd. L.], Arthur Floyd [Retd. L.], Arthur George Cross [Subscriber].

INSTITUTION OF STRUCTURAL ENGINEERS

Following is a list of meetings arranged by the Institution of Structural Engineers to take place this month :

Branch Meetings.—Friday, February 7: Western Counties Branch. "The Reconstruction of Temple Mead Station, Bristol" by Mr. John F. Bickerton at the Merchant Venturers' Technical College, Unity Street, Bristol, 7.15 p.m. Tuesday, February 11: South Wales and Monmouthshire Branch. "Cinema Theatres" by Mr. A. G. Thompson, at the Baltic Lounge, Swansea, 7 p.m. Wednesday, February 12: Lancashire and Cheshire Branch. "City Housing" (matters of interest to the Structural Engineers), by Mr. R. A. H. Livett, at the College of Technology, Manchester, 7 p.m. Saturday, February 15: Western Counties Branch. Annual Branch Banquet, Grand Hotel, Bristol. Monday, February 17: Midland Counties Branch. "The Influence of Direct Labour on the Design and Construction of Small Highway Bridges" by Mr. C. O. L. Gibbons at the James Watt Memorial Institute, Birmingham, 6.30 p.m. Wednesday, February 19 : Scottish Branch. "Economical Cinema Design" by Mr. J. Fairweather, at 129 Bath Street, Glasgow, 7.15 p.m. Thursday, February 20 : Yorkshire Branch. "Reinforced Concrete Structures for the Retention of Water and Other Fluids" by Mr. W. Hunter Rose, at the Hotel Metropole, Leeds (Joint Meeting with the Institutions of Civil Engineers and Municipal and County Engineers), 7.30 p.m. Friday, February 21 : South Wales and Monmouthshire Branch. Annual Dinner, Metropole Hotel, Swansea.

THE BUILDINGS ILLUSTRATED

NORTHWOOD HALL, HIGHGATE (pages 233-237). The general contractors were Richard Costain, Ltd. The principal sub-contractors and suppliers included :---

W. T. Lamb and Sons, Ltd., red facing bricks ; Midhurst Brick Co., Ltd., midhurst white bricks (between windows) ; Diespeker & Co., Ltd., hollow tile floors ; Permanite. Ltd., damp courses : "Ledcor " Permanite (parapet), Permanite hessian (floor levels) ; Nautilus Gas Fire Co., Ltd., gas flues ; General Asphalt Co., Ltd., asphalt; Mac-Andrews and Forbes, Ltd., internal doors; Turtle and Pearce, Ltd., flagstaff; Dawnays, Ltd., steel construction ; Crittall Manufacturing Co., Ltd., steel windows; Luton Borough Engineering Co., roof railings and balustrading to staircase, etc. ; Waygood-Otis, Ltd., lifts ; Norris Warming Co., Ltd., heating and hot water installation ; F. A. Norris & Co., Ltd., iron staircase to boiler house ; J. W. Gray and Sons, Ltd., lightning conductor ; Gas Light and Coke Co., Ltd., gas installation and refrigerators; Rollo Products, Ltd., paving and dado to boiler house ; Cement Marketing Co., Ltd., Snowcrete to ground floor storey ; Ed. Marshall, Ltd., Pemseal anti-vac traps.

FAIRHOLME ESTATE, BEDFONT, MIDDLESEX (pages 238-240.) The general contractors were Gee, Walker and Slater, Ltd. The principal sub-contractors and suppliers included :---

Structure—T. Lawrence and Sons, bricks; J. F. Shackleton and Son, Ltd., stone; Moreland, Hayne & Co., Ltd., structural steel; R.I.W. Protective Products, Ltd., Toxement waterproofing materials; Henry Hope and Sons, Ltd., casements; W. Palfreyman and Sons, roof tiling.

Finishes—Hollis Bros., Ltd., wood block flooring; H. H. Martyn & Co., Ltd., decorative plaster.

Equipment—Dryad Metal Works, Ltd., cast lead and metal work; G. N. Naden and Sons, Ltd., central heating and water softening; Gas Light and Coke Co., Ltd., stoves and gasfitting; Pearson Bros., Ltd., grates and gas fixtures; Beeston Boiler Co., Ltd., boilers; W. J. Furse & Co., Ltd., electric wiring; Best and Llovd, Ltd., electric light fixtures; Parker, Winder and Achurch, Ltd., sanitary fittings; A. Brown & Co., door furniture; John P. White and Sons, Ltd., joinery, garden furniture, mantels; Smart and Brown, Ltd., textiles and furniture; Bratt Colbran & Co., Ltd., mantels; Sutton and Sons, Ltd., shrubs and trees; G. and F. Cope & Co., clocks; John Daymond and Son, Ltd., signs, house numbers.

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LONDON & DISTRICTS (15-MILES RADIUS)

BATTERSEA. Clearance Scheme. The B.C. is to prepare a clearance scheme for the Mendip Road area.

BERMONDSEY. Warehouses, etc. Plans passed by the B.C. : Cold stores and warehouse, New Church Street, for Chambers Wharf, Ltd. : offices and warehouse, Horseferry Wharf, Rotherhithe Street, for Vitrea Sheet Glass Co., Ltd.

CHELSEA. Flats. Messrs. A. I. Richards and Partners have prepared plans for the erection of a block of flats on the site of 11-23 College Place, Chelsea.

EALING. Flats. The T.C. has approved plans as follows :- Messrs. George Young (Floriston), Ltd., Northolt, 11 blocks of flats at Reading Road and Wood End Lane; F. H. Shearley, Road and Wood End Lane; F. H. Shearley, 26 flats, at Green Man Lane and Gardens; Mr. H. Ingham Ashworth, 44 flats at Church Road; Mr. Henden Winder, 18 flats, Windmill Road; Messrs. Sowery Brothers, three blocks of 36 flats, Gunnersbury Avenue. ELTHAM. Shopping Pavade. Messrs. Marshall and Tweedy have prepared plans for a shopping parade in Well Hall Road. Messrs. Morrell, Ltd., Grosvenor Gardens, S.W.I, are the builders.

builders.

builders. GREENFORD. Shops. Mr. J. Ambrose Dart-nall is the architect for 10 shops with living accommodation, proposed to be erected at Market Parade, for Mr. A. Moss. GREENWICH. Extensions. The L.C.C. has ap-proved plans by the governors of the Roan School for Girls, Greenwich, for the modernisa-

tion and extension of the premises at a cost of £20,000.

420,000. HARROW. Shops and Flats. The U.D.C. has approved plans submitted by Messrs. Grainger and Apthorpe for the erection of 22 shops with flats over in Northolt Road, South Harrow.

LEWISHAM. Shops and Flats. Plans passed by the B.C. : garage and showrooms, Ladywell Road, for Mr. L. E. Tompkins ; shops and flats, Bromley Road, for Mr. A. Frampton ; shops, site of 156-8, High Street, for Messrs. S. Walker and Son : an environment of the state o sue or 150-0, rugn Street, for Messrs. 5. Walker and Son ; 32 houses, Marvels Lane, for Messrs. Ball (Builders), Ltd. ; shops and flats, West Hill and Kirkdale, for Messrs. Marshall and Tweedy ; flats, 5-8, Elliot Bank, Forest Hill, for Mr. E. W. Lancaster ; flats, Dacres Road and Perry Vale, for Messrs. Elgood and Hastie ; two houses, Lodge Estate. Forest Hill for Mr. two houses, Lodge Estate, Forest Hill, for Mr. H. Macintosh.

MARYLEBONE. Flats, etc. Plans passed by the New buildings, 52-4, High Street, and Beaumont Street, for Messrs. Banister, B.C. : 29-37 Beaumont Street, for Messrs. Banister, Fletcher and Sons; flats, Albert Road, and Fletcher and Sons; Hats, Albert Road, and Frederick Street, for Messrs. Marshall and Tweedy; offices, 9-13, New Cavendish Street, for Associated London Properties, Ltd.; shops and flats, 51-3, Henry Street, and 39-41 Eamont Street, for Mr. R. J. Hugh Minty; alterations, 3-4, Spanish Place, for Messrs. Stanley Minchin, Ltd.

alterations, 3-4, Spanish Place, for Messrs. Stanley Minchin, Ltd. PERIVALE. Factory. Mr. W. Clark has pre-pared plans for the erection of a factory at Bilton Road, for Messrs. J. Lesquendieu. POPLAR. Extensions, etc. Plans passed by the B.C. : Factory extensions, Violet Road, for Messrs. Spratts Patent, Ltd.; alterations, Sabbartan Arms P.H., Upper North Street, for Messrs. Watney, Combe, Reid & Co., Ltd.; tenements, Athol Street, for Frobisher Trust, Ltd.; rebuilding Moulders Arms P.H., Bromley High Street, for Mr. W. Stewart; factory, Old Ford Road, for Mr. H. V. Ker. STANMORE. Cinema, etc. Messrs. Holloway Bros. (London), Ltd., propose to erect a cinema, 14 shops and flats, eleven lock-up garages and a car park. In the same scheme they intend to creect 36 flats, in three blocks, in Dennis Lane.

car park. In three blocks, in the Plans have been approved. WESTMINSTER. Flats and Offices, etc. Plans sub-mitted to the City Council : Building, Leicester Square, for Mr. Andrew Mather ; flats and offices, Grosvenor Place, Upper Grosvenor Street and Hobart Place, for Mr. F. Billerey ; warehouse and bakery, Trevor Square, for warehouse and bakery, Trevor Square, for Messrs. Harrods, Ltd. ; flats, 8 Chesham Street, for Messrs. Stanley Minchin, Ltd. ; rebuilding,

Westminster Arms P.H., Marsham Street, for Messrs. Hoare & Co., Ltd.; tailors' shops, works and lecture hall, Saville Road and Old Burlington Street, for Messrs. Irwin and Mutton; news cinema, 457 Strand, for Mr. T. H. Nunn; flats, 19-28 Ennismore Gardens, for Mr. E. Light ; flats, 3-5 Rutland Mews, for Mr. E. Kingdon Rowe; restaurant, shops, offices and showrooms, 16-17 Gt. Marlborough Street and Ramillies Place, for Mr. W. Henden Winder; guest house, South Street, for Sir Edwin Lutyens ; site development, Adelphi, for Messrs. Colcutt and Hamp.

SOUTHERN COUNTIES

BARTLEY. Schools. The Hampshire Education Committee is to erect a senior school for 360 pupils at Bartley; and a senior school for 280 pupils at Porchester.

BOURNEMOUTH. Development, etc. Plans passed by the Corporation : Development, Broadway by the Corporation : Development, Broadway estate, off Broadway Lane, for Bournemouth Land Society ; development, Iford House estate, off Castle Lane, for Mr. A. W. Weston ; alterations, South Western Hotel, Holdenhurst Road, and additions, Horse and Jockey Inn, Wimborne Road, for Messrs. Eldridge, Pope & Co., Ltd. ; alterations and additions, 4-12 Old Christehurch Road, for Messre Plummer Old Christchurch Road, for Messrs. Plummer Roddis, Ltd. : additions, citadel, Palmerston Road, for Salvation Army ; alterations, Amusement Hall, Palmerston Road, for Wincer Estates ; additions, Congregational Hall, Ropley Road, for deacons ; 12 flats, Argyll Road, for Mr. H. K. Dyson ; 10 flats, Rother-field Road, for Mr. R. Maurice ; block of offices, Christchurch Road, for Messrs. Bow-maker, Ltd. ; four flats, McWilliam Road, for Mr. R. Troke ; four houses, Stourvale Road, for Messrs. Geo. Ive and Sons, Ltd. ; three bunga-lows, East Howe Lane, for Mr. W. Watton ; two houses, Solent Road, and four flats, South-wick Road, for Messrs. Rosser and Sturman ; Old Christchurch Road, for Messrs. Plummer wick Road, for Messrs. Rosser and Sturman ; eight flats, Barnes Crescent, for Mr. W. J. Chapman; 48 flats, Meyrick Road, for Chine

Investments, Ltd.; 24 flats, Lower Char-monster Road, for Mr. D. Jolliffe. BRIGHTON. Alterations, etc. Plans passed by the Corporation : Alterations, Clarance Hotel, North Street, for Clarance Hotel, Ltd.; alterations and additions, Great Eastern P.H., Trafalgar Street, for Tamplin's Brewery, Ltd.; alterations, Regal Cinema, Western Road, for Mr. Stanley Goldman; 14 houses, Wilming-ton Way, for Messrs. Braybons, Ltd.; stores ton Way, for Messrs. Braybons, Ltd.; stores and guildroom, Patcham By-pass, for Brighton Co-operative Society, Ltd.; four houses, Tivoli Crescent, for Mr. Andrew Lower; alterations and additions, 154-5 Edward Street, for Messrs. G. Virgo and Sons. EASTBOURNE. School. The Education Com-mittee recommends the purchase of a site abutting on Eldon Road for the erection of a Wirth School for Circle

High School for Girls. GUILDFORD. Houses. The Corporation is to erect 164 houses on the Westborough estate, at a cost of £59,290.

GUILDFORD. Houses, etc. Plans passed by the Corporation : Two houses, London Road, for Mr. G. Harms; printing works, Martyr Road, for Surrey Advertiser; five houses, Carroll Avenue, for Messrs. R. Holford & Co.; estate development, off Horseshoe Lane, Merrow, for Mr. N. Nunn ; factory, Walnut Tree Close, for Messrs. Colebrook & Co. ; block of offices, High Street, for Abbey Road Building Society ; alterations and additions, 62-4, High Street, for Messrs. W. E. White and Son ; 43 houses, Manor Road, for Messrs. Walter Stokes, Ltd.

SOUTH-WESTERN COUNTIES

EXETER. School. The Education Committee has obtained sanction to borrow £19,970 for the erection of a senior school in Ladysmith Road.

EXETER. Aerodrome. The Corporation is to acquire 187 acres of land at Waterslade Farm for an aerodrome.

MIDLAND COUNTIES

BURSLEM. Extensions, etc. Plans passed : Exten-sions, Regal Pottery, Elder Road, for Mr. Wm. Shufflebottam ; additions, 18 Market Place,

for Mr. G. Rawlinson; four houses, Murhal Road, for Mr. J. W. Walton; 10 houses, Bank Hall Road, for Mr. G. Talbot; two houses, Rothesay Avenue, for Messrs. Barlow Bros.; works extensions, Leek Road, for Messrs. Bullers, Ltd.

COVENTRY. School. The Coventry Educa-tion Committee is to erect an elementary school

at Coundon, at a cost of $\pounds 18,325$. sroke-on-TRENT. Maternity Home. The Corporation has instructed the city architect to prepare plans for the erection of a maternity home in connection with the London Road institution.

STOKE-ON-TRENT. Houses, etc. Plans passed by the Corporation : Nine houses, Newcastle by the Corporation : Nine houses, Newcastle Road, for Messrs. Hobson and Parkinson ; eight houses, Hillfield Avenue, for Messrs. P. Bailey & Co., Ltd. ; club additions, Newcastle Road, for Jubilee Men's Club ; four houses, Highfield Avenue, for Messrs. W. Ball and Sons ; two houses, off Boma Road, for Mr. J. E. Robinson ; new premises, Campbell Road, for Dart Cash Carrier Co., Ltd. ; four houses, off Newcastle Road, for Messrs. Shaw and Roden ; four houses, off Longton Road, for Messrs. Cooper and Jones ; 82 houses, Blurton Road, for Mr. H. W. Cartlidge ; four houses, Victoria Street, for Mr. S. Mason ; 51 houses, off Heathcote Road, for Mr. H. Hoskins ; stores, Sandon Road, for District Co-operative Society, Ltd. ; six for District Co-operative Society, Ltd.; six houses, Meir Avenue, for Messrs. Holloway & Co.; extensions, Carlton Works, Copeland Street, for Messrs. Wiltshaw and Robinson; shop extensions, George Street, for Messrs. Swettenham, Ltd.; two houses, Hunters Croft, for Mr. A. H. Hood.; two houses, Longton for Mr. A. H. Hood ; two houses, Longton Lane, for Mr. F. Muston

NORTHERN COUNTIES

ESTON. Houses and Bungalows. The U.D.C. has obtained sanction to borrow $\pounds 89,126$ for the erection, by direct labour, of 292 houses and 48 bungalows on the Grangetown estate.

48 bungalows on the Grangetown estate. HANLEY. Kiln, etc. Plans passed : Electric kiln, Eagle Pottery, for Messrs. J. and G. Meakin, Ltd.; theatre additions, Beresford Street, for Repertory Theatre ; alterations, 20 Lamb Street, for Messrs. H. Samuel, Ltd.; club, Warrington Road, for Bucknall Men's Club; four houses, Leek Road, for Mr. R. J. Cooper ; two houses Longton Boad for Mr. Cooper ; two houses, Longton Road, for Mr. S. Mason ; eight houses, Etruria Vale Road, 5. Mason ; eight houses, Erfuria Vale Koad, for Mr. E. Harris ; 20 houses, Ross Street, for Northmere Building Co. ; alterations, 19, Pic-cadilly, for Messrs. Whyles Bros. MANSFIELD. Fire Station and Dwellings. The Corporation has instructed the borough engineer to prepare plans for the erection of a fire station and dwellings in Bernerers Street.

to prepare plans for the erection of a nre station and dwellings in Rosemary Street. MORECAMBE. Hall. The Corporation is to prepare plans for the erection of a conference hall, at an estimated cost of $\pounds_{30,000}$. SMETHWICK. Schools. The Education Com-mittee has appointed Messrs. George Randle and Son as architects for the new schools at

and Son as architects for the new schools at Smethwick Hall.

TODMORDEN. Houses. The Corporation is to erect another 28 houses on the Cowhurst estate.

TODMORDEN. Open-air Bath. The Corpora-tion has asked the borough engineer to prepare plans for the construction of an open-air bath in Ewood Lane. TYNEMOUTH. Fadlory. The Corporation has

old a site on the Chirton Hill estate to Messrs. T. Wakefield and Son for the erection of a factory.

TYNEMOUTH. Houses, etc. Plans passed by the Corporation : 11 houses, Brooklands Terrace, TYREMOUTH. HOUSES, etc. rians passed by the Corporation : 11 houses, Brooklands Terrace, for Mr. H. W. Kay; hotel, Front Street, for Messrs. J. Oswald and Sons, on behalf of the Newcastle Breweries; two houses, Elsdon Terrace, for Messrs. Marshall and Tweedy; alterations, High Lighthouse, Dockwray Square, for Tyne Improvement Commission; extensions, nursery school, Howdon Road, for Mr. A. K. Tasker.

Hall. The Corporation has TYNEMOUTH. agreed to arrange for a site on the housing estate for the erection of a welfare hall by the Balkwell Tenants' Association.

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RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for

			I s. d.	II s. d.		T		I 8. d.	II s. d.				I. d.	II 8. d.
AL	ABERDARE	S. Wales & M.	1 51	1 11	A2	LASTBOURNE PART	S. Counties	1 51	1 11	A	Northampton	Mid. Counties	1 64	12
A A	Abergavenny	S. Wales & M.	1 6	1 11	A	Edinburgh	Scotland	1 61	1 2	A	North Shields	N.E. Coast	1 61	1 2
Aa	Abingdon	S. Counties	1 5	1 01	A	E. Glamorgan-	S. Wales & M.	1 6	1 11	AI	Norwich	E. Counties	1 6	1 11
A A.	Addlestone	S. Counties	1 5	1 02		Valley District				A	Nuneaton	Mid. Counties	1 61	12
A	Adlington	N.W. Counties	1 61	$\frac{1}{1}\frac{2}{2}$	A2	Exeter	S.W. Counties	*1 51	1 11		0			
ĉ	Aldeburgh	E. Counties	1 21	11	D	is mouth	D. W. Councies	* *2	4 02	A	OARHAM	Mid. Counties	1 5	1 02
A	Altrincham	N.W. Counties	1 61	1 2	A.	FELIXSTOWE	E. Counties	1 5	1 02	A	Oldham	N.W. Counties	1 61	1 2
A	Ashton-under-	N.W. Counties	1 61	1 2	A	Filey	Yorkshire	1 5	1 01	A ₁	Oxford	S. Counties	1 6	1 11
в.	Lyne	S. Counties	14	1 0	B ₁	Folkestone	S. Counties	1 4	1 0		D			
1					A	Frome	N.W. Counties	1 61	1 2	A	PAISLEY	Scotland	*1 61	12
в.	BANBURY	S. Counties	14	1 0	Da	erome	D. H. Councies	1 02	***	B ₃	Pembroke	S. Wales & M. Scotland	1 3	112
Bi	Bangor	N.W. Counties	14	1 0	A	GATESHEAD	N.E. Coast	1 61	1 2	A	Peterborough	E. Counties	1 6	1 11
A3	Barnsley	Yorkshire	1 61	1 2	B	Gillinghanı	S. Counties	1 41	- 1 01	A	Plymouth	S.W. Counties	*1 61	12
B -	Barnstaple	S.W. Counties	1 4	1 01	A A.	Gloucester	S.W. Counties	1 53	1 11	A	Pontypridd	S. Wales & M.	1 6	1 11
A	Barry	S. Wales & M.	1 61	12	A2	Goole	Yorkshire S Countier	1 51	1 11	A	Portsmouth	S. Counties N.W. Counties	1 54	1 12
B1	Basingstoke	S.W. Counties	1 4	1 0	A2 A2	Grantham	Mid. Counties	1 5	1 01		~	ATT TO COMMENCE	* 08	
A	Batley	Yorkshire	1 64	1 2	A	Gravesend	S. Counties	1 6	1 11	A	OCEENSFERRY	N.W. Counties	1 61	12
Az	Bedford	E. Counties N.E. Coast	1 51	$ \begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \end{array} $	A	Grimsby	Yorkshire	1 61	1 2					
A 8	Tweed		1 1		В	Guildford	S. Counties	1 44	1 01	Α.	READING	S. Counties	1 54	1 12
A2 B	Bewdley	Mid. Counties S. Counties	1 3	111		H	Vorkshire	1 61	1 9	B	Reigate	S. Counties	1 41	1 01
-3	Birkenhead	N.W. Counties	*1 71	1 22	A	Hanley	Mid. Counties	1 6	12	A,	Rhondda Valley	S. Wales & M.	1 6	1 14
A.	Birmingnam	N.E. Coast	1 6	1 14	A	Harrogate	Yorkshire N.F. Coast	1 61	1 2	A	Ripon	Yorkshire XW Counting	1 5	1 01
A	Blackburn	N.W. Counties	1 64	1 2	B	Harwich	E. Counties	1 41	1 01	B	Rochester	S. Counties	1 41	1 01
A	Blackpool	N.E. Coast	1 61	1 2	BI	Hastings	S. Counties	1 4	1 0	AI	Ruabon	N.W. Counties	1 6	1 11
BI	Bognor	S. Counties	1 4	1 0	B	Hereford	S.W. Counties	1 4	1 01	A.	Rugeley	Mid. Counties	1 5	1 11
A.	Boston	Mid. Counties	1 5	1 03	A2	Hertford	E. Counties	1 51 .	1 12	A	Runcorn	N.W. Counties	1 61	12
Az	Bournemouth	S. Counties	1 34	1 11	Â	Howden	N.E. Coast	1 61	12		C			
A	Bradford	Yorkshire	1 61	12	A	Huddersfield	Yorkshire	1 61	$12 \\ 12$	A1	OT. ALBANS	E. Counties	16	$1 1_{\frac{1}{2}}$ 1 2
A	Brentwood	E. Counties S. Wales & M.	1 6	1 1 2	**	T				B3	Salisbury	S.W. Counties	1 31	112
B	Bridgwater	S.W. Counties	1 41	1 01	A	LELEY	Yorkshire	1 61	12	A	Scarborough	Mid. Counties	1 61	1 2
AI	Bridlington	Yorkshire	1 6	$1 \frac{1}{2}$	A	Immingham	Mid. Counties	1 61	1 2	A	Sheffield	Yorkshire	1 61	12
Az	Brighton	S. Counties	1 51	1 11	B2	Isle of Wight	S. Counties	1 4	1 01	A A.	Shrewsbury	Mid. Counties	1 54	1 11
A	Bristol	S.W. Counties S.W. Counties	1 31	112		T				A2	Skipton	Yorkshire	1 51	1 11
A	Bromsgrove	Mid. Counties	1 51	1 13	A	JARROW	N.E. Coast	1 61	1 2	A2 A1	Solihull	Mid. Counties	1 6	1 12
B	Bromyard	N.W. Counties	1 6	1 2	-	V.				Az	Southamton	S. Counties	1 51	1 1
A	Burslem	Mid. Counties	1 6	12	A	Kandal	Yorkshire N.W. Courties	1 61	1 2	A ₁	Southend-on- Sea	E. Counties	10	1 14
A	Trent	Mid. Counties	1 04	1 4	A3 A3	Keswick	N.W. Counties	1 5	1 02	A	Southport	N.W. Counties	1 6	1 2
A	Bury	N.W. Counties	1 61	1 2	A1	Kettering	Mid. Counties	1 6	1 11	A,	Stafford	Mid. Counties	1 6	1 14
A	Buxton	A.W. Count les	10	1 18	B12	King's Lynn	E. Counties	14	10	A	Stirling	Scotland N.W. Counties	1 7	1 22
	CUMPPIDOR	E Counties	1.6	1 11		T				A	Stockton-on-	N.E. Coast	1 61	12
B1	Canterbury	S. Counties	14	1 0	A	ANCASTER	N.W. Counties	1 6	1 2		Tees Stoke-on-Trent	Mid. Counties	1 64	1 2
A	Cardiff	S. Wales & M. N.W. Counties	1 64	$12 \\ 12$	A	Leeds	Yorkshire	1 61	1 2	B	Stroud	S.W. Counties	1 4	1 04
B	Carmarthen	S. Wales & M.	1 4	1 01	A	Leek	Mid. Counties	1 61	$12 \\ 12$	A	Sunderland	N.E. Coast S. Wales & M.	1 64	12
B	Carnarvon	N.W. Counties N.W. Counties	1 44	1 2	A	Leigh	N.W. Counties	1 6	12	A	Swindon	S.W. Counties	1 5	1 64
A	Castleford	Yorkshire	1 6	1 2	B A.	Lewes	Mid. Counties	1 51	1 12		1			
A	Chainam	E. Counties	15	1 01	A	Lincoln	Mid. Counties	1 6	12	A1	AMWORTH	N.W. Counties	16	1 11
A	Cheitenham	S.W. Counties	1 5	1 04	A.,	Llandudno	N.W. Counties	1 51	1 11	A	Teesside Dist	N.E. Counties	1 6	1 2
Å	Chesterfield	Mid. Counties	1 6	12	A *	Llanelly	S. Wales & M.	1 61	1 2	As	Teignmouth	S.W. Coast	1 51	1 12
BI	Chichester	S. Counties N.W. Counties	14	10		Do. (12-15 mil	es radius)	1 71	1 22	Â,	Torquay	S.W. Counties	16	1 11
B,	Cirencester	S. Counties	14	10	A	Long Eaton	Mid. Counties	1 6	12	B2	Trunbridge	S.W. Counties	1 31	1 07
A	Clitheroe	N.W. Counties Scotland	1 64	$12 \\ 12$	A,	Luton	E. Counties	16	1 11		Wells	MEL Classifier	7 07	1.0
Â	Coalville	Mid. Counties	1 61	12	A	Lytham	N.W. Counties	1 64	1 2	A	Tunstall	Mid. Counties	1 64	12
A	Colne	N.W. Counties	1 6	1 11		MAGGERG	NW Counties	1.6	1 11					
A,	Colwyn Bay	N.W. Counties	1 51	1 1	A1	FIELD	M.W. Councies	1.0	Y YE	A	WAREFIELD	Yorkshire	1 61	12
A1 A-	Consett	N.W. Counties	1 54	1 12	As	Maldstone	S. Counties Mid. Counties	15	1 07	A	Walsall	Mid. Counties	1 6	12
A	Coventry	Mid. Counties	1 6	1 2	A	Manchester	N.W. Counties	1 61	12	A,	Warwick	Mid. Counties	1 6	1 11
A	Cumberland	N.W. Counties	1 5	1 0	A B.	Mansfield	Mid. Counties S. Counties	1 0	1 0	A	Wellingborough	Mid. Counties	1 6	1 1
	D				A	Matlock	Mid. Counties	15	1 07	A,	Weston-sMare	W. Counties	1 51	1 11
A	DARLINGTON	N.E. Coast	1 61	12	A	Middlesbrough	N. E. Coast	1 61	1 2	A	Whitby	Yorkshire N.W. Counties	1 5+	1 12
A	Darwen	N.W. Counties S. Counties	1 6	1 2	A2	Middlewich	N.W. Counties	1 51	1 11	A	Wigan	N.W. Counties	1 6	12
A	Denbigh	N.W. Counties	1 5	1 01	B2	Monmouth	S. Wales & M.	1 3	11	B	Winchester Windsor	S. Counties	1 41	1 0
A	Devsbury	Yorkshire	1 64	12	-	& S. and E.	TP			A	Wolverhampton	Mid. Counties	1 61	1 2
B	Didcot	S. Counties	1 4	1 01	A	Morecambe	N.W. Counties	1 6	12	A:	Workson	Yorkshire	1 5	1 0
B.	Dorchester	S.W. Counties	14	10	-	NI	N NY (1 1)		1	A	Wrexham	N.W. Counties	16	1 1
A	Driffield	Yorkshire Mid. Counties	1 5	1 02	A:	Neath	S. Wales & M.	1 61	1 2	A	wycourbe	S. COMINCO		
A	Dudley	Mid. Counties	1 6	12	A	Nelson	N.W. Counties	1 6	1 2	P	YARMOUTH	E. Counties	1 44	1 04
A	Dumfries	Scotland	1 6	1 1 1	A	Newport	S. Wales & M.	1 61	12	B	Yeovil	S.W. Counties	1 41	1 01
Å	Durham	N.E. Coast	1 61	12	A	Normanton	Yorkshire	1 61	12	A	YOFK	I OFKEIIITE	1 04	4.4
		• In these	areas the	rates of v	wages	for certain trade	es (usually painter	s and pla	asterers)	ary	sugnuy from thos	e Riven.		
					I'he ra	ites for every trad	e in any given area	WIII De Bi	ent on requ	uest.				

CURRENT PRICES

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473 421 371

water steam

521 471

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality and include delivery to site in Central London area, unless otherwise stated. For delivery outside this area, adjust-

s. d.

WAGES

ment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

SLATER AND TILER

First quality Bangor or Portmadoc slates

Bricklayer .				• E	per hour		I	8	d/d	F.C.F	R. Lond	ion s	tation :				
arpenter .	• •		•	*	11		I	8	24" × 20" D	Juches	000			nor N		S.	. d.
fachinist .			:				ĩ	8	24 × 12 D	farchie	onesses		•	. per m	2	0 17	0
ason (Banker)					23		I	8	20" × 10" Co	ounter	sses			* **	I	0 5	0
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rane Driver					**		ī	7	Nails, com	DO	:	*		th.			98
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ATERIAL	2																
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llue Lias Lime						I	16	6	Good carca	assing	timber	r		. F.C.		2	2
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ortland Cement.	in 4 t	on	lots (d	b/b					Deal, Joine	er's				* 22 2			5
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Vhite Portland Co	ement.	in	I ton	lots	29	8	IS	0	99	Cuba	n			* ## #	2	1	i i i
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an Breeze			2		P2		6	36	Pine Vello	OW		•	•	* #9 5	9	I	II
oke Breeze					11		8	9	n Oreg	OD							4
								-	" Brit	tish Co	olumbi	an		* 19 1			4
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SEST STONEWARE	DRAL	N	TIPES	AND	FITTIN	GS			Walant Burn	ma	20	•		* 23 3		I	2
					4	d.		d.	wainter, A	Tench	all			* 22 1	P	2	3
straight Pipes		. p	er F.F	R.	0	9	I.	I	Whitewood	d. Am	erican	1	:		9	2	3
Bends			each		I	0	2	6	Deal floori	ings,	1"			. Sq.		1	6
laper Bends			22		3	6	5	3			1.			* **		II	6
kest Bends .		*			4	3	6	3	**		1"					1 2	0 1
angle Junctions	•		83		3	0	5	3	2.2		14"	•		* ##		1 5	0
straight channels			er F I	R.	4	96	0	6	Deal matel	hinge	18			* **		I IC	0
" Channel bends			each		2	9	4	0	Local match	mugs,	3"		:	* 22		14	0
Channel junctions			2.9		4	6	6	6			1"					1 43	0
Channel tapers			2.0		2	9	4	0	Rough boa	arding	. 1"			4 99		16	5 0
Yard guilies			2.2		6	9	8	9	53		1"			* 22		IS	5 0
nterceptors			2.0		16	0	19	6	Pl. 22	**	IF.			* ##		1 6	. 0
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nspection bends					9	0	15	0	Requireres	d.	d. d	. d	. d. d	. d. d.	d.	d. 6	l. d
ingle junctions	*		22		8	9	18	0	Birch			1		1			
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BRICKLAYER									Mahogan	IV A	34 -		41 -	7 61	_		
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and and	· Y	*		•	89	4	II	0									
Blue Bricks, Pres	sed	1		•		1	3 17	6	SMITH	AND	FOU	NDE	R				
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" Brin	dles				99	-	7 0	0	(The fol	llowin	g are t	he st	andard	list pric	es 6-	077 -	whie
Bull Bull	nose				99	-	0	0	should	ld be	deduct	ed th	ie vari	ous per	enta	ges a	as se
Red Sand-faced	acing	S			8.9	1	b 18	6	forth	below	.)			- post		0-0 0	
Multicoloured Fe	Arche	10				I	z 0	0	-				1	" ł"	I"	11"	2'
Luton Facinge	cings	*	*	•			7 10	0	Tubes, 2'-	I4' lor	ng, per	ft. ru	n 4	51	.91	III	1/1
Phorpres White	Facing	s	:		22		3 17	3	Pieces, 12"	-23"	ong	eacl	n 10	I/I I	III	2/8	4/
" Rustic	Facing	S			12		3 12	3	Longscree	3 "11 WS 17	"-221"	long	7	7/2	1/3	1/8	3/
Midburst White	Facing	S					5 0	Ő	about sole	3"	M-1"1	ong .	8	*/3	1/4	1/10	5/
Glazed Bricks, I	VOLY, I	Whi	te or	Salt					Bends .			0 1	. 8	III	171	2/71	5/
Stretchere	inty:					-			Springs no	otsoch	seted		5	7 1	/111	III	3/1
Headers .		*			8.6	2	A 0	0	Socket un	nons .	• •	9	2/-	3/-	5/6	6/9	10/
Bullnose		•		*		2 2	7 10	0	Elbows, so	quare		1	10	I/I	1/6	2/2	41
Double Stretcher	5				22	2	9 10	0	Crossee	• •	•	,	· I/-	1/3 1	10	2/6	51
Double Headers						2	6 10	0	Plain sock	ketsan	d ninn	les '	2/2	4/9	4/1	5/0	IO/
Glazed Second Q	uality,	Le	ss .				I C	0	Diminishe	ed socl	kets .		, 4	6	Q	I	- 2
n Bulls and	Crean	115,	Add		8.9		2 0	0	Flanges .			2	, 9	I/-	1/4	1/0	2
" Breeze Dartiti	on Bla	ilee	*		ner V	6	5 10	0	Caps .			,	, 3	1 5	8	I/-	21
21° m	ou BIO	CRS	•	*	.per Y.	3.	2	7	Backnuts	5			, 1	3	5	6	I/
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4 11 11	12				P			6	» with	01 455	hings	2		4/-	7/0	10/-	21
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Fortland stone,	w hitb	ed			F.C.		4	4	Water .			61			wat	er	47
Bath stone	Jasene	CI.	*		99		4	7	Steam .			57	1	23	stea	m	42
York stone .		•			9.9		2	5 6				Fre	TINCS				
n 19 Sawi	temp	late	es .		22		-	6	Gas			\$71	Ga	lyanized	gas		40
Davi	ng. 2"				F.S.		. 1	8	Water .			52			Wat	er	41
10 21 A G VI																	-

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ath na ath na GLAZI heet gl lemish Blazone	sawn rent ils . ER lass,21 ,, 26 , Arcti d glass	oz., sq oz. ic, Figu ses	uare ""	s n/e wbite	2 it. s	Ib. bundle lb. F.S.	d.	2 3 8.	8493 da 376
ath na ath na GLAZI heet gl lemish blazone Reeded	sawn rent ils . ER ass,21 , 26 , Arcti cd glass : Cross	oz., sq oz. ic, Figu ses . s Reede	uare ""	wbite	2 ft. s	10. 1b. bundle 1b. 1b. 8. F.S. "	d.	2 3 8.	8 4 9 3 d 2 3 7 6 1
ath na ath na GLAZI heet gl lemish Blazone ceeded cathedr	sawn rent ils . ER ass,21 , 26 , Arcti cl glass ; Cross ; al glass bamm	oz., sq oz. ic, Figu ses . s Reede is, whit	uare ires (e, do	wbite	2 ft. s)* .	Ib. bundle ib. F.S.	d.	2'3	8 4 9 3 d 2 3 7 6 1 6
ath na ath na SLAZI heet gl lemish lazone ceeded athedr plain, rown s	sawn rent ils . ER ass,21 , Arcti d glass : Cross al glass hamm heet g	oz., sq oz. ic, Figu ses. s Reede is, whit iered, ri lass (n)	uare ires (e, do mplo	white	2 ft. s)* . terwit	Ib. bundle ib. . F.S.	d.	2'3	4 9 3 d 2 3 7 6 11 6 0
tair aths, ath na GLAZI bheet gl Bheet gl Blazone Reeded Cathedr plain, Crown s Blashed	sawn rent ils . ER ass,21 , Arcti d glass : Cross al glass hamm heet g opals	oz., sq oz. ic, Figu ses. s Reedo s, whit iered, ri lass (n/ (white	uare "" ires (e, do mplo e 12 and	white white ed, wai in. x.	2 ft. s)* . terwit to in.) rod	Ib. bundle lb. F.S.	d.	2 3 8. 2	4 9 3 d 2 3 7 6 11 6 0
ath aths, ath na GLAZI heet gl lemish Blazone ceeded athedr plain, rown s lashed	sawn rent ils . ER ass,21 , 26 , Arcti d glass : Cross al glass hamm heet g opals cast	oz., sq oz. ic, Figu ses . s Reede s, whit iered, ri lass (n) (white r rolled	ires (e, do mplo e 12 and plat	white white ed, wai in. x. colour te	2 ft. s)* terwit to in.) red)	Ib. bundle lb. F.S. "	d. o and	2 3 8.	4 9 3 d 2 3 7 6 1 1 6 0 0
ath na ath na GLAZI heet gl lemish Blazone ceeded athedr plain, rown s lashed " rough " wired	sawn rent ils . ER ass,21 , 26 , Arcti d glass : Cross al glas hamm heet g opals cast :	oz., sq oz. ic, Figu ses. s Reedo s, whit lass (n/ (white rolled wired	ires (e, do mplo e 12 and plat roll-	white white ed, wai in. x. colour te	2 ft. s)* . terwit to in.) red)	Ib. bundle lb. F.S.	d. o and	2 3 8.	4 9 3 d 2 3 7 6 1 1 6 0 0 5
ath aths, "	sawn rent ils . ER ass,21 , 26 , Arcti d glass : Cross al glass : Cross al glass : Cross al glass : Cross al glass : Cross : Cros : Cross : Cros : Cross : Cross : Cross : Cross : Cro	oz., so oz. ic, Figu ses . s Reede s, whit lass (n) (white rolled wired red ca	ires (e, do mplo e 12 and plat rollest	white white ed, wai in. x. coloui te	2 it. s)*	I.C. Ib. bundle ib. s. F.S. " " " " " " " " " " " " "	d. o and	2 3 8.	4 9 3 d 2 3 7 6 1 6 0 0 5 9
tair aths, "ath na SLAZI heet gl lemish blazone ceeded athedr plain, rown s lashed " rough " wired " Georg " Polis	sawn rent ils . ER ass,21 , 26 d glass : Cross al glass hamm heet g opals ccast : l cast ; gian w	oz., sq oz., sq oz. ic, Figu ses. s Reede ss, whit iered, ri lass (n/ (white rolled wired rata ate. n/a	ires (e, do mpla e 12 and plat rolle st.	wbite wbite ed,wai in. x. colour te ft.	2 ft. s)*	Ib. bundle lb. F.S.	d. o and	2 3 5. 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	8 4 9 3 d 2 3 7 6 1 6 0 0 5 9 11 .
tair aths, "ath na SLAZI heet gl Slazone Reeded athedr plain, rown s "lashed " rough " wired " Georg " Polis	sawn rent ils 	oz., so oz. ic, Figu ses. s Reede s, whit iered, ri lass (n/ (white rolled wired cas ate, n/e	uares (ed e, do mplo e 12 and plai rolle st.	wbite wbite ed,wa in.x. coloun te ft.	2 ft. s)* . terwit to in.) red)	Ib. bundle ib. F.S. "" "" "" "" "" ""	d. o and	2 3 8.	8 4 9 3 d 2 3 7 6 11 6 0 0 5 9 11 1 4
ath ath ath ath ath ath ath ath ath ath	sawn rent ils . ER ass,21 , 26 , Arctid glass : Cross al glass : Cross al glass hamm heet g opals cast : gian w bed pli	oz., sq oz. ic, Figu ss. whit ered, ris lass (n/ (white rolled ired cas ate, n/e	ures (ed e, do mplu e 12 and plat rolle st. 12	white white ed, waite in. x. coloute te ft.	2 ft. s)*	Ib. bundle lb. F.S. "" "" "" "" "" "" ""	d. oand	2 3 8. 2 2	8 4 9 3 d 2 3 7 6 1 6 0 0 5 9 1 1 4 4
ath aths, " ath na GLAZI heet gl lemish Blazone ceeded athedr plain, rown s lashed " rough " wired " Georg " Polis	sawn rent ils . ER ass,21 " 26 " Arcti d glass : Cross al glass hamm heet g opals o cast : l cast ; gian w bed pl	oz., sq oz. ic, Figu ses. s Reedd s, whit iered, ri lass (n/ (white rolled wired cas ate, n/e	ures (ed e, do mplo e 12 and plat rolle st	white white ed, wai in. x. coloun te ed. ft.	2 it. s)* . terwit roin.) red)	Ib. bundle ib. F.S. """ """ """ """""""""""""""""""""	d. oand 2 m 3 m	2'3 3 8. 2 2 2 1 1 1 1 2 2 2 3	4 9 3 d 2 3 7 6 1 6 0 0 5 9 11 1 4 6
athr athr ath na GLAZI Hemish Blazone Reeded athedr plain, rown s lashed " rougt " wired " Georg " Polis	sawn rent ils . ER ass,21 ,, 26 d, Arcti d glass cross al glass cal glass cast : l cast ; gian w bed pli	oz., sq oz. ic, Figu ss, whit iered, ri lass (n/ (white rolled wired ired cas ate, n/e ""	uare irres (e, do plat rolle st.	wbite wbite ed, wai in. x. coloui te 	z it. s)*	Ib. bundle ib. F.S. "" "" "" "" "" "" "" "" "" "" "" "" ""	d. o and 2 m 3 m 9 m	2 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	4 9 3 d 2 3 7 6 1 6 0 0 5 9 1 1 4 6 2 1
aths, aths, ath na SLAZI heet gl "lemish Blazone Ceeded athedr plain, rown s lashed " rough " wired " Georf " Polis	sawn rent ils . ER ass,21 , 26 , Arctid glass : Cross : Cross	oz., sq oz. ic, Figu ses . s Reede s, whit iered, ri lass (n/ (white rolled wired cas ate, n/e ""	ures (ed e, dod plat rolle st. 2 4 8 8 20	wbite wbite ed,wa in. x. coloun te ft.	2 ft. s)* . (terwit to in.) red)	Ib. bundle ib. F.S. """""""""""""""""""""""""""""""""	d. 0 and 2 3 9 7	2 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	4 9 3 d 2 3 7 6 1 6 0 0 5 9 1 1 4 6 2 2 4
tair aths, ath na SLAZI heet gl Blazone Ceeded cathedr plain, rown s 'lashed " rough " wired " Georg " Polis	sawn rent ils . ER lass,21 ,, 26 ,, Arcti d glass hamm heet g opals cast : cast : gian w bed pl	oz., sq oz. ic, Figu ss., whit iered, ri lass (n/ (white rolled wired ate, n/e """"""""""""""""""""""""""""""""""""	uare irres (ed e, do mplo e 12 and plat plat st. 1 2 4 8 200 45	white white in z . colout te ft.	2 ft. s (non- colled, terwite to in.) red)	e,, ib. ib. ib. s. F.S. " " " " " " " " " " " " "	d. o and 2 m 3 m 9 m 11 m	23 5 2 22 1122344	493 d237611 6005911 46227
tair aths, aths, ath na SLAZI heet gl "lemish Blazone Reeded athedr plain, rown s lashed " rough " wired " Georg " Polis"	sawn rent ils ass,21 , Arcti d glass ; Cross al glass hamm heet g opals cast ; gian w bed pl	oz., sq oz. ic, Figu ses s, whit iered, ri lass (n/) (white rolled wired ired cas ate, n/e """"""""""""""""""""""""""""""""""""	uares (ed de, dod plat rolle st. 2 4 8 20 45	wbite wbite ed,wai in. x. colout te ft.	2 ft. s)*	lb. lb. lb. s. F.S. """""""""""""""""""""""""""""""""""	d. o and o and and o and o and and and and o and o and and and and and and and and and and	23 5 2 22 11123445	n 4 9 3 d 2 3 7 6 1 6 0 0 5 9 11 1 4 6 2 2 7 7
tair aths, aths, aths, aths, aths, athens, atheat gl lemish liazone keeded athedr plain, rown s liashed "rough" "wired "rough" "yours "yours"" "yours" "yours" "yours" "yours" "yours	sawn rent ils . ER ass,21 ass,21 ass,21 d glass close clos close close close c	oz., sq oz. ic, Figu ses. s Reedd ss, whit ired cas ate, n/e	inters (inters (ed e, do plat rolle st. 1 2 4 8 20 45 1000 1	es n/e wbite ed, waitin x. colount ed .	2 ft. s)* .	lb. bundle lb. F.S. """""""""""""""""""""""""""""""""	d. o and 2 :: 3 :: 7 :: 1 : ;; 0 ::	23 5. 2 2 112234451	n 4 9 3 d 2 3 7 6 1 6 0 0 5 9 1 1 4 6 2 2 7 7 0
tair .aths, .aths, .ath na GLAZI heet gl Temish Blazone Ceeded .athedr plain, rown s 'lashed " fough " vired " Georg " Polis " '''''''''''''''''''''''''''''''''''	sawn rent ils . ER lass,21 dglass ; Cross ocast : cast ; cast ; gian w bed pl ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	oz., sq oz. ic, Figu ses s Reede s, whit ered, ri nolled wired ired cas ate, n/e	ures (e, do plaiset stl. 2 4 5 100 1 2 20 45 100	white white ed, waitin. x. colour te ft. ft. ft.	z it. s)* 	lb. lb. lb. s. F.S. " " " " " " " " " " " " " " " " " "	d. o and 2 m 3 m 9 m 7 m 11 m 0 m	23 8 2 2 1122344511	# 4 9 3 d 2 3 7 6 1 6 0 0 5 9 1 1 4 6 2 2 7 7 0 3
tair aths, aths, aths, aths, aths, aths, aths, aths, atheat gl ashed "remish blazone ceeded atheatr plain, rown s lashed "rough "ourse" "atheatr plain, rown s lashed "cough "ourse" "atheatr plain, "rough "sourse" "atheatr atheatr "atheatr plain, "rough" "ashed "cough" "ashed "cough" "ashed "cough" "ashed "cough" "ashed "cough" "ashed "cough" "ashed "atheatr "ashed""ashed "ashed "ashed""ashed "ashed""ashed "ashed""as	Sawn rent ils . ER ass, 21 , Arcti d glass hamm heet g o cast ; gian w bed pl cast ; s, she	oz., sq oz. ic, Figu ses. s Reedd s, whit iered, ri lass (n/ (white rolled wired ate, n/e "" "" "" ""	ures (e, do plai plai plai toll st. 4 8 200 15 2 45 1000 1 2 2 2 2	wbite wbite- ed, wa coloun te ed ft. ft. ft. ft.	z it. s)*	lb. lb. lb. ib. s. F.S. """""""""""""""""""""""""""""""""	d. o and c to 2 :: 3 :: 9 :: 7 :: 11 :: 0 ::	23 S R 22 HIZ23445HII	# 4 9 3 d 2 3 7 6 I 6 0 0 5 9 I I 4 6 2 2 7 7 0 3 9
tair atha, atha, athan, athan, bheet gl lemish Blazone Ceeded athedr rown s lashed " rough " wired " Georg " Polis " " " " " " "	sawn rent ils ER ass,21 d glass : Cross al glas t cross al glas hamm heet g opals ccast : gian w bed pl ccast ; siss, she """ pla	oz., sq oz. ic, Figu s Reede s, whit ered, ri lass (n/ (white rolled wired cat ate, n/e """"""""""""""""""""""""""""""""""""	uare "" tres (e, do mplo e 12 and plain plain plain plain plain plain plain plain plain plain plain st. ""	wbite ouble- ed, waarin. x. colounte ed . ft. ft. ft. ft. ft. ft. ft.	2 ft. s)* . crolled, troin.) (red)	1	d. 0 and 2 :: 3 :: 7 :: 1 :: 0 ::	23 5 8 22 HIZ234455 HIXE	# 4 9 3 d 2 3 7 6 1 6 0 0 5 9 1 1 4 6 2 2 7 7 0 3 9 6
ath an aths, aths, ath a slate a heet gl lemish slazone ceeded athedr plain, rown s lashed " rough " wired " rough " wired " rough " " " " " " " " "	sawn rent ils . ER ass, 21 , Arcti d glass hamm heet g opals ocast ; gian w hed pl ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	oz., sq oz., sq oz., isi ic, Figu ses. s Reedd s, whit iered, ri lass (n/ wired rolled wired rolled wired rolled wired rolled wired rolled wired roll, for sect, n/e	uare irres (ed e, do mphi e 12 and plat plat plat 1 2 4 5 100 1 2 2 2 2 2 2 2 2 2 2 2 2 2	wbite wbite- ed, wa colount ed .	2 it. s 2 it. s rolled, terwitt red)	e,, +11 1b. bundle 1b. F.S 	d. o and 2 m 3 % 9 % 7 % 0 %	23 5 8 82 HIZ 3445HIIII	# 4 9 3 d 2 3 7 6 1 6 0 0 5 9 1 1 4 6 2 2 7 7 0 3 9 6 0
tair a.aths, "it haa SILAZI SILAZI Vemish Blazone Reeded athedr Polain, rown s 'ashedt " Goory " Wited " Goory " " " " " " " " " " " " " " " " " " "	sawn rent ils ER ass,21 , Arcti d glass : Cros: al glas : Cros: al glas cast : cast : gian w cast : cast ; yian w , , , , , , , , , , , , , , , , , , ,	oz., so oz. ic, Figu ses . is Reede iss, whit lease (n) (white r colled wired east wired east """"""""""""""""""""""""""""""""""""	unare intes (end end end end end end end end	st n/e wbite ed, wai in. x. column ed ft. ft. ft. ft. ft. ft. ft. ft. ft. ft.	2 ft. s prolled, to in.) red)	10. 10. 10. 10. 10. 10. 10. 10. 10. 10.	d. o and 2 19 3 19 9 11 11 19 0 19	2 3 5. R 2 2 III 2 34	# 4 9 3 d 2 3 7 6 1 6 0 0 5 9 1 1 4 6 2 2 7 7 0 3 9 6 0 0
tair .aths, .aths, .aths, .aths, .aths, .aths, .athat .athat .rowns .ashad .athat .rowns .ashad .athat 	sawn rent ils . ER ass,211 , Arcti d glass : Cross al glass : Cross cast : l cast : l cast : cast ; siss, she """"""""""""""""""""""""""""""""""""	0Z., SQ 0Z. (c, Figu SES. S Reedd sa, whit ired rast wired w	view of the set of the	ss n/e wbite wbite ed,wa- in. x. colou- ted ft. ft. ft. ft. ft. ft. ft. ft. ft. ft.	z it. s rolled, terwit to in.).	10. 10. 10. 10. 10. 10. 10. 10. 10. 10.	d. o and 2 :: 3 :: 9 :: 9 :: 9 :: 9 :: 9 :: 9 :: 9	23 5 R 22 HH223445HH1H3454	8 4 9 3 d 2 3 7 6 1 6 0 0 5 9 1 1 4 6 2 2 7 7 0 3 9 6 0 0 0
tair acths, acths, BLAZI 'lemish Blazone Eceded acthedi " cough " wired Geory " wired " Geory " 'lashed " rough " ''iashed " ''ough " ''iashed " ''iashed " ''iashed " ''iashed " ''iashed " ''iashed " ''iashed " '''iashed " ''''''''''''''''''''''''''''''''''''	sawn rent ils ER ass,211 , Arcti dglass : Cross : cros : cross : cross : cross : cross : cross : cross : c	oz., sg oz. ic, Figu ses. s. wbii lass (n), wired au ate, n/e "" "" "" "" "" "" "" "" "" "" "" "" ""	uare irres (e, do mpli e 12 and plaist. 1 2 4 5 7 7 15 5 7 15 5 7	sn/e wbite ed, wai in. x. cd. ft. ft. ft. ft. ft. ft. ft. ft. ft. ft	2 it. s rolled, terwit to in.) red)	e, , , , , , , , , , , , , , , , , , ,	d. o and 2 :, 3 :, 7 :, 1 I :, 0 ;,	23 8 2 22 1112344511113456	8 4 9 3 d 2 3 7 6 I 6 0 0 5 9 I I 4 6 2 2 7 7 0 3 9 6 0 0 0 0
tair a.aths, .aths, .aths, .aths, .aths, .aths, .athat .athat .rowns .ashad .rowns .ashad .rowns .ashad .rowns 	sawn rent ils . ER iass, 27 alglas hamm heet g opals cast ; ; cross cast ; ; cian w bed pl ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	oz., so oz. (c. Figu ses. s. wbiti latas (a/ (wbite ered, riti mired can ate, n/e "" "" "" "" "" "" "" "" "" "" "" "" ""	uare irres (ed de plaines (e 12 and plaines (e 12 and plaines (e 12 and plaines (e 12 and plaines (e 12 and plaines (e 12 and blaines (e 12 and and and and and and and and	es n/e white ed, waite ed, waite colour te 	z it. s p)* colled, terwiti roin.) redi	Ib. bundle ib. s F.S 	d. o and 2 m 3 % 7 % 7 % 0 %	23 8. 2 2 III 234451 III 34567	# 4 9 3 d 2 3 7 6 1 6 0 0 5 9 1 1 4 6 2 2 7 7 0 3 9 6 0 0 0 0 6
tair acths, acths, BLAZI 'lemish Blazone Ceeded 'acthedr 'lashed '' roung '' wired '' wired '' wired '' wired '' wired '' wired ''''''''''''''''''''''''''''''''''''	sawn rent ils ER ass,ar , 266 , Arctid dglass ; Cross ocast ; gian w bed pl be gopals ocast ; gian w bed pl ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	oz., sq oz. ic, Figu tes. s. sedi tered.ri lass (n) (white trolled wired wired ate, n/e """"""""""""""""""""""""""""""""""""		the set of	z it. s p)• . rcolled, terwith red)	10. bundle 10. bundle 10. b. c. f.	d. o and co to 2 :: 3 :: 7 :: 7 :: 7 :: 7 :: 7 :: 7 :: 7	2'3 s. a 22 III23344551 III345673	# 4 9 3 d 2 3 7 6 1 6 0 0 5 9 1 1 4 6 2 2 7 7 0 3 9 6 0 0 0 0 6 H
tair aths, aths, leasth a glazone ceded plain, rowns a thedr plain, rowns a thedr " cougt " wired " cougt " wired " for a " wired " for a " wired " of a " of	sawn rent ils ER ass,21 ass,21 ass,21 cast; cross cast; cross cast; cross cast; c	oz., sq oz. ic, Figgrad s Reed. s Reed. s Reed. ired. rolled """""""""""""""""""""""""""""""""""		tt. ft. ft. ft. ft. ft. ft. ft.	2 it. s) ⁹ terwit to in.) red)	Ib. bundle ib. s F.S 	d. o and to to 2 :, 9 '' 9 '' 9 '' 9 '' 9 '' 9 '' 9 '' 9 '	23 S R R R R R R R R R R R R R R R R R R	#493 d2 3761 600 5911 462 2770 39600006 H 0
tair acths, acth	sawn rent ils ER ass,21 dglass,21 dglass,21 dglass,22 cast; gian w bed pl cast; gian w bed pl cast; y y y y y y y y y y y y y y y y y y y	oz., sq cz., sq cz. ic, Figg. s Reed. s Reed. s Reed. (white red.ra. """""""""""""""""""""""""""""""""""	uares (mes (ed. ed. plater of the st. plater o	es n/e wbite ed, wa coloum te ft. ft. ft. ft. ft. ft. ft. ft. ft. ft.	z it. s rcolled, terwith red) 	10. bundle 10. bundle 10. b. c.	d. o and 2 :: 3 :: 9 :: 9 :: 7 :: 1 :: 0 :: 6 an: 81 ::	23 S. 2 11123450731	4 9 3 d 2 376 I 6 0 0 5 9 I I 4 6 2 2 7 7 0 3 9 6 0 0 0 0 6 H 0 3
tair aths, aths, leath na GLAZI 'leaish Blazone Keeded 'ashed ''ougt '' wired '' Gugt '' wired '' wire	sawn rent ils ER alss,2r1 , Arcti d glass hamm opals cast : cast : c	oz., sq oz. ic, Figura s Reedt tered, ri ired car ate, n/e """"""""""""""""""""""""""""""""""""	interesting intere	tt. ft. ft. ft. ft. ft. ft. ft.	2 it. s)* 	. F.S. """""""""""""""""""""""""""""""""	d. o and 2 :, 3 :, 7 :, 1 :, 0 ;, 6 an. 81 ;,	23 S. R 22 III234455 III 3456731	493 d23761 6005911 4622770396000066 03
tair acths, acths, acths, acths, acths, acths ac	sawn rent ils ER ER ass, 21 d glass ; Cross al glass opals ; Cross al glass opals ; Cross al glass opals ; Cross al glass ; Cross ; Cross al glass ; Cross ; S, She ; Cross ; S ; Cross ; S ; She ; Cross ; Cross	oz., sog coz. ic, Figgs s Reed. s s Reedit s s (mini- tered, risk wired red rear """""""""""""""""""""""""""""""""""	uares (e, do mplice i 2 and plain p	es n/e unble-a- ed, n. x. coloum te ft. ft. ft. ft. ft. ft. ft. ft. ft. ft.	2 it. s)* 	10. bundle 10. bundle 10. b. c. F.S. n n n n fi n fi	d. o and to to 9 ;; 11 ;; 0 ;; 6 an 8 # ;;	2'3 5. 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	493 d23761 6005911462277039600006H03
tair aths, "aths," "lemish Slazone teeded plain, rown s "lashed " roung" " roung " " roung " " roung " " " " " " " " " " " " " " " " " " "	sawn rent ils ER alss,2r1 , Arcti dglass alglas hamm bed pl cast : cast : c	oz., sog oz. ic, Figg ses. s Reed wired lass (n) (white ired, ri wired car ate, n/e """"""""""""""""""""""""""""""""""""	ures (e, do plaise and plaise ist. 12 2 4 5 5 7 7 5 5 7 5 5 7 5 6 0 2 2 2 2 5 7 7 5 5 7 5 2 5 7 5 2 5 7 5 2 5 7 5 2 5 5	the set of	2 it. s it. s included included included it. s included inc	11	d. o and 2 :, 3 :, 7 :, 0 ,; 6 an. 8 { , 1 :, 1 :, 1 :, 2 :, 3 :, 7 :, 7 :, 1 :, 1 :, 1 :, 1 :, 1 :, 1 :, 1 :, 1	23 s. 22 III 234 56 73 III 34 56 73 III 34 56 73 III 34 56 73 III 34 56 73 IIII 34 57 75 75 75 75 75 75 75 75 75 75 75 75 7	493 d23761 6005911462277039600006603
tair aths, aths, BLAZI Iamish Blazone Reeded athedr Polain, " rown s Iashed " rown s Iashed " rown s "	sawn rent ils ER ER ass, 21 d glass ; Cross al glass ; Cross al glass opals ; Cross al glass opals ; Cross al glass ; Cross ; Cross al glass ; Cross ; S, She ; Cross ; S, She ; Cross ; S, She ; Cross ; Cros	oz., so oz., so oz., figu es. s Reed wired wired ai lass (n/ wired rai rolled wired ai ass (n/ """"""""""""""""""""""""""""""""""""	e, doine rolle e, doine rolle et and plater rolle et	ss n/e white white in. x. cd, wa ft. ft. ft. ft. ft. ft. ft. ft. ft. ft.	2 it. s)* 	1b. bbundle bbundle bbundle bbundle bbundle bbundle bbundle bbundle bbundle bbundle bbundle s. F.S. """""""""""""""""""""""""""""""""""	d. o and 2 :, 3 :, 3 :, 1 :, 0 ;, 6 an, 8 !,	2'3 5. 2 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	493 d2 3761 6005911462277039600006603
tair athan athan SLAZI athan SLAZI athan SLAZI athan a	sawn rent ils., Arctit dglass, 21 dglass, 21	oz., soj oz., soj eks. s Reeda wired lass (n) (white ired, rived wired and interest wired	intes (ed do e, do plaint rolle it. 2 4 8 200 1 2 2 4 5 7 7 5 15, 02., 15, 02., 15, 15, 15, 15, 15, 15, 15, 15, 15, 15	es n/e wbite ed, wai in. x. ed. ft. ft. ft. ft. ft. ft. ft. ft. ft. ft	2 ft. s p*	1b. bundle bundle b. F.S. """""""""""""""""""""""""""""""""""	d. o and to to 2 :, 9 :: 9 :: 9 : 11 :: 0 :: 6 an: 82 :, 82 :, 82 :, 82 :, 9 :: 9 :: 9 :: 9 :: 9 :: 9 :: 9 :: 9	2'3 5. 7 22 1 2 2 2 3 5. 7 3 1 2 2 2 3 5. 7 2 2 3 5. 7 2 2 2 3 5. 7 2 2 2 3 5. 7 2 2 2 2 3 5. 7 2 2 2 2 3 5. 7 5. 7 5. 7 5. 7 5. 7 5. 7 5. 7 5.	493 d2 3761 6005911462277039600006H 03 14 d.
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CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and

EXCAVATO	R AND	CON	CRET	TOR							£	s.,	d.
Digging over s	urface n/	e 12" (deep a	and ca	rt aw	ay			*	Y.S.		2	9
to for	m basem	ent n/	e 5' 0'	and a	art a	way	-			31		9	0
**	22		10'0	" deep	and	cart	away		*	• •		9	6
If in stiff clay	••		15.0	deep	and	cart	away	-	add	**		10	6
If in underpin	ning .								8.2			4	0
Planking and	strutting	to side	r hole	s	tion	•		*		P.S.		I	0 5
**	39 39	to tre	nches							1.7			5
		extra,	only	if left	in			*		NºC.			3
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101111111111111111111111111111111111111					(4-2	-1)				2.2	I	12	6
Rinishing surf-		croto	**	face	und	erpini	ing	•		V's	I	16	0
Finishing suite	ace of cos	iciere,	apace	lave				·		A			1
	an an									. 4			d'
Stoneware dra	ins, laid	compl	ete (d	igging	and	concr	ete	•		s. a		5.	a.
to be priced	separate	ly)						F.R.		I	6	2	3
Extra, only fo	r bends		1	*	*	*	•	Each		2 3	0	3	9
Gullies and gra	atings							3.2		16	6	18	0
Cast iron drain	ns, and la	ying a	and jo	inting				F.R.		4	9	6	0
Extra, only to	r benus			•	^		*	isacii		10	0	*3	0
ODIOWI AND	-												.1
BRICKLAYE Brickwork, Fl	ettons in	lime n	norta	r .					. 1	Per Roo	1 26	10	0
22	n in	cemen	at							21	27	12	6
n Ste	ocks in ce	nent	•	•	•			*		**	34	0	0
Extra only for	circular	on pla	n		*					3.8	3	0	0
	backing	to ma	SONTY		•						I	IO	0
22	underpin	ning	W 1115		:					2.8	5	IO	0
Fair Face and	pointing	interr	aly		·					F.S.			I
Extra over ne	tton brici	WOLK	tor pi	d brie	k faci	ngs al	gs an	inting	rung	13			II
	5.0		b	lue bri	ck fa	cings	and p	ointin	g.	22		Ξ	4
Tuck pointing	**	**	gł	azed h	rick	facing	sand	point	ing	**		3	0
Weather point	ing in cen	ient							-	22			3
Slate dampcon	rse .									2.2			IO
Vertical damp	course	•	•			*		•		**		1	x
ASPHALTER	R											s.	d.
"Horizontal	dampcou	rse	•	*	•	•	•			1.5.		4 7	9
" paving or fl	at .									2.2		6	3
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SLATER AN	D TILE	R									ł,	s.	d.
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to	staircases	S	-	:		-	1			2.3		I	6
Fir and fixing	in wall p	lates,	lintol	s, etc.						F.C.		3	9
Fir framed in	floors	•	•		•	•				2.8		4	6
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2" deal wroug	ht rounde	d roll	à		i.					F.R.		-	8
t" deal groove	d and to	ngued	Boor	ing, l	aid (compl	ete,	includ	ing	Sor.	2	T	0
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profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

CARPENTER AND JOINER-continued s. d. 1 91 1 111 rage size 3 7 3 10 Each F.S. 6 2 0 2 8 2 4 ** . F.R. 3 04 I I 9 2 6 2 I 2 4 1 9 1 3 2 9 1 3 0 2 9 1 3 6 0 SMITH AND FOUNDER £ s. d. Rolled steel joists, cut to length, and hoisting and fixing in 2 s. a. position Riveted plate or compound girders, and hoisting and fixing in PLUMBER Milled lead and labour in flats Do. in dashings Do. in covering to turrets Labour to welted edge Open copper nailing Close Close u Milled lead service pipe and s. d. £ s. d. I 18 6 cwt. 2 7 13 18 18 3 F.R. " " 2" 1‡" 2" s. d. s. d. 4" s. d. 2 0 2 10 5 6 9 2 0 I 0 11 3 9 5 0 8 0 6 3 ----8 9 F.R. Each 1112 9 2 F.R. Each dia. cast-iron rain-water pipe and fixing with ears cast on 4" dia. cast non reas Extra, only for shoes Do, for plain heads I 3 5 6 s d. 2 e 2 9 1 3 PLASTERER AND TILING PLASTERER AND TILING Expanded metal lathing, small mesh Y.S. Do. in n/w to beams, stanchions, etc. ... Lathing with sawn laths to ceilings ... * screeding in Portland cement and sand or tiling, wood block ... floor, etc. ... Do. vertical ... Rough render on walls ... Render, float and set in line and hair ... Render, acking in cement and sand, and set in Keene's cement ... Extra, only if on lathings. ... Keene's cement, angle and arris F.R. Atis I 5 I 7 I 2 I 9 I II 2 9 17 Rounded angle, small Plain cornices in plaster, including dubbing out, per 1" girth 1" granolithic pavings 14" 3 14 V'S. 3 06668 $r_{s}^{1s} \propto 6^{s}$ white glazed wall tiling and fixing on prepared screed $q^{s} \times 3^{s}$ white glazed wall tiling and fixing on prepared screed $r_{s} \times 3^{s}$ with the scalar screed $r_{s} \times 3^{s}$ with the scalar 5.8. 1.8 4 17 2 I ER d. 60000 7 1 2 GLAZIER GLAZIER 21 oz. sheet glass and glazing with putty 26 oz. do. and do. Flemish, Arctic Figured (white) and glazing with putty Cathedral glass and do. Glazing only, British polished plate Extra, only if in beds Washleather F.S. I F.R. 4 PAINTER Y.S. Clearcolle and whiten ceilings Y.S. Do, and distemper walls " Do, with washable distemper " Knot,stop,prime and paint four coats of oil colour on plain surfaces " Do, on woodwork " Do, and brush grain and twice varnish " Stain and twice varnish woodwork " Stain and wax-polish woodwork " French polishing F.S. Stripping of old paper Piece Hanging ordinary paper from PAINTER ş. d. 91 I 3 36 3 6 1 11 4 6 1 2 2 9





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INFORMATION SHEET · 310 ·

PLUMBING

Subject :

The Distribution of Cold Water Services

This Sheet sets out in diagrammatic form a system of cold water distribution to a multi-storeyed building. The pipe runs carrying water direct from the supply mains have been shown in red to clarify the reading of the drawing.

Arrangement of Plumbing :

Throughout the Sheet, pipe lines and branches have been shown in simple straightforward arrangement, irrespective of whether they would in practice be exposed or concealed.

In practice variations would be made

according to the conditions to ensure that pipes were concealed wherever possible.

Systems of Distribution :

The selection of a system of distributing water to the various points of a building will depend upon the pressure at which the water is delivered from the main, and also upon whether the supply is constant or intermittent. Thus, the supply to the whole of the pipes and fittings may be under pressure, or entirely through the medium of a cistern or cisterns, or it may be supplied partly under pressure and partly by cisternage. The latter method has been illustrated. Pipe sizes throughout will depend upon the number and capacity of the various fitments. If the water supply is intermittent the rising main should be sufficiently large to charge all the storage cisterns in the time, but if the supply is constant $\frac{1}{2}$ in., $\frac{3}{4}$ in., I in. or up to 3 in. pipes will be required, depending to some extent upon the height of the

Weight per Lineal Yard of Lead Pipe.

The tables below give the minimum weights of lead supply and distributing pipes according to the Ministry of Health Model By-Laws.

		I. LE	AD SUP	PLY PIP	ES				
Bore not exceeding :			§ in.	불 in.	₿ in.	l in.	I‡ in.	11 in.	2 in.
Weight per lineal yard-			lb.	Ib.	lb.	Ib.	lb.	lb.	lb.
(a) For pressure not exceedi	ng	110 ft.	4	6	0	12	16	18	24
(b) For pressures exceeding head of water but not	g I exce	10 ft. eeding	4	0	,	12	10	10	14
250 ft. head of water (c) For pressure exceeding 2!	 50 fr	. head	5	7	12	16	21	27	33
of water			51	9	16	21	28	36	48
	II.	LEAD	DISTRIE	BUTING	PIPES				
Bore not exceeding : Weight per lineal yard—			a in. Ib.	lin.	≩ in. Ib.	l in. Ib.	Il in. Ib.	1½ in. 1b.	2 in. Ib.
(a) For cold water pipes	***	•••	4	5	8	11	14	18	24

Similar weights in accordance with the Metropolitan Water Board are as follows : SERVICE PIPES

Weight.—Every service pipe of lead or ternary alloy lead shall be of not less than the following weight per lineal yard and where the pressure exceeds 250 ft. head of water shall not exceed 2 in. in internal diameter : Bore of Pipe. Inches Bore of Pipe. Inches

		lb.	12 16.	34 Ib.	I Ib.	11 1b.	112 1b.	2 b.	21/2 1b.	3 Ib.
(a)	For any pressure not exceed-									
	ing 250 ft. head of water	5	7	11	16	21	27	38	59	85
(b)	For any pressure exceed-									
	ing 250 ft. head of water, but		0			-	25	10		
	not exceeding 400 ft	6	9	15	21	28	35	48	-	
	Provided that ternary alloy lead in the following table may be used	d pipes d in the	of wei	ghts per f supply	er linea / pipes	fixed	not les above	s than ground	those and w	ithin
	building :		B	ore of	Pipe.	In	ches.			
		3	J.	3	Í	11	13	2	23	3
		lb.	Īb.	Îb.	Ib.	Ib.	ib.	lb.	Ib.	Ib.
(a)	For any pressure not exceed-									
	ing 250 ft. head of water	31	5	71	11	14	18	25호	40	57
(b)	For any pressure exceeding 250 ft. head of water, but not									
	exceeding 400 ft	4	6	10	14	19	231	32	_	-
		DISTR	IBUTI	NG PIP	ES					
We	ight Every distributing pipe of	lead sh	all be	of not	less that	an the	followi	ng wei	ight pe	r line
	yard :			F	lore of	Pine	Inck	201	•	
		3	1	3	1	11	11	2	21	3
		lb.	IĎ.	Ib.	Ib.	Ib.	ib.	Iĥ.	Ib.	Ib.
(a)	For cold water pipes	4	5	8	II	14	18	24	38	54
	Provided that ternary alloy lead	d for di	s of we	ights p	er line	al yard	not les	s than	those	set ou
	in the following capie may be used		36110.00	me pip	ore of	Dine	Incl			
		3	1	3	I I	Tipe.	11	2	71	2
		1b	1D	Ib	lb	lb	Ib	lb	1b	Jb.
For	hot or cold water pipes	3	4	6	81	11	131	19	291	42

cistern, and the available pressure and supply.

The following are some of the requirements of the Ministry of Health Model By-laws relating to cold water cisterns : **Cisterns**:

Every cold water cistern shall be watertight and shall be constructed of slate, earthenware, stoneware, lead, iron, or copper, or of a corrosionresisting alloy, or of wood lined with lead weighing not less than four pounds per square foot in flushing cisterns, and not less than five pounds per square foot in all other cisterns, or of wood lined with copper of not less than twenty-two Imperial Standard Wire Gauge or of other equally suitable material. The materials used shall be of sufficient strength and thickness, and if the cistern be constructed of iron or steel, the iron or steel shall be galvanized, or otherwise suitably pro-tected against corrosion, after the tected against corrosion, after cistern is constructed, and the thickness of the metal used, if wrought iron or steel, shall be not less than sixteen Imperial Standard Wire Gauge before being galvanized or otherwise protected against corrosion.

Every storage cistern shall be properly covered, but not so as to be airtight, and shall be placed in such a position that the interior thereof may be readily inspected and cleansed.

The inlet pipe of every flushing cistern (other than automatic flushing cisterns) and of every storage cistern or range of storage cisterns shall be provided with a ball tap.

Every storage cistern shall be of a capacity of not less than twenty-five gallons and, if intended to be used as a feed cistern as well as a storage cistern for other purposes, it shall be of a capacity of not less than fifty gallons.

Capacity of Cisterns (as recommended by the Institute of Plumbers) :

Where a constant supply is afforded and the storage cistern is to be used as a feed cistern for supplying cold water to a domestic hot water apparatus, as well as a storage cistern for other purposes, it shall be of a capacity of not less than 50 gallons. The following calculations are suggested as a basis for estimating the actual (not nominal) capacity of the cistern required. Fo

r	each	bath		20 g	allon	1
		lavatory basin		3	99	
		water closet		3		
		sink		5		
	**	slop hopper		3		
		shower fitting		10	9.9	
1	thad	a of ininting	Guina	ote	50	

Methods of jointing, fixing, etc lead pipes have been dealt with in previous Information Sheets.

Information from : The Lead Sheet and Pipe Development Council Golden Cross House, Address : Duncannon Street, W.C.2 Whitehall 3715 Telephone :







INFORMATION SHEET · SANITARY FITTINGS · 3 · EARTHENWARE WATER CLOSETS. SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WCI · OTAL & Bayne.

INFORMATION SHEET . 311 . SANITARY FITTINGS

THE ARCHITECTS' JOURNAL Flushing Cisterns : LIBRARY OF PLANNED INFORMATION

SHEET INFORMATION 311

SANITARY FITTINGS

Earthenware Water Closets, Product : **Cisterns and Bidets**

For Fireclay Water Closets see Information Sheet No. 317, issued by the W. R. Pickup, Ltd., Branch, Horwich, Lancs.

Utility :

Earthenware fittings are manufactured particularly for use in domestic and similar installations, where rough usage is not to be expected, and where quality of design, finish, and texture are of importance.

Types :

Water closets are of the syphonic or of the wash-down type, with either box or semibox flush rim for low-down suites. Syphonic water closets must always be fitted with a three-gallon cistern, whether fitted at a high or a low level.

Weight :

Earthenware water closets vary in weight from 23 to 30 lb. according to the design.

Colour :

Closets are finished throughout in white, or in a variety of standard colours.

Traps :

Water closets are made with either S-traps (for ground floor situations), P, or Q-traps for upper floors.

Water Seal :

The minimum depth of seal is $1\frac{1}{2}$ in. for most local authorities and 2 in. for the City of London.

Vents :

Water closets are made with or without vents. Vents are frequently desirable and are essential in certain cases to prevent the drawing of the water seal by the action of adjoining w.c.'s in a range, or w.c.'s on floors above, if discharging into the same soil stack. Vents may be obtained in either of several positions.

The L.C.C. require vent arms to be not less Telephone : than 3 in. from the crown of the trap.

See Information Sheet on Fireclay Water Closets.

Earthenware cisterns are of the water waste preventing type to conform with the requirements of the various local water authorities, or of the valve type, giving great reliability and a strong flush. The latter do not, however, comply with some of the requirements of the water authorities, and may, therefore, be used only when the water supply is obtained through a meter, and in areas outside the control of the water authorities.

See also note on Water Waste Preventors on the Information Sheet on Fireclay Water Closets.

Height and Projection of Suites :

The heights and projections given on the drawings on this Sheet are minima and should be followed as closely as possible.

Flush Pipes, Connections and Seats :

These items are dealt with fully in the Information Sheet on Fireclay Water Closets.

Hand of Traps :

The hand of a w.c. trap (referring to the direction of the outlet) is always specified as viewing the w.c. from the front.

Flushing :

Owing to their uniformity of shape, earthenware w.c.'s flush very efficiently when correctly installed with the appropriate cistern and fittings. Faulty setting of the w.c., bad plumbing or poor alignment of the flush pipe are the usual causes of inefficient flushing.

Bidets:

Two simple types are shown providing hot and cold supply to rim only, or hot and cold supply to rim and ascending spray.

Previous Sheets:

Previous sheets of this series are :---No. 246 Slab Urinals No. 255 Stall Urinals

Information from : Associated Clay Industries, Ltd. (Robert Brown and Son, Ltd., Branch)

Address :		Ferguslie	Works,	Paisley
Telephone	:		Paisle	y 3151

fice : 554-8, Grand Buildings, Northumberland Avenue, W.C.2 London Office : Whitehall 4115





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THE ARCHITECTS' JOURNAL LIB- Tests on Midhurst Whites : RARY OF PLANNED INFORMATION

INFORMATION SHEET

· 312 ·

CALCIUM SILICATE BRICKS

Type of Product :

Midhurst Whites

This is the second of a series of Information Sheets setting out the standard sizes and shapes of the Midhurst White moulded bricks.

Standard Size :

Midhurst Whites are made to conform with the R.I.B.A. standard sizes and are $8\frac{7}{8} \times 4\frac{5}{16} \times 2\frac{5}{8}$ in.

Special Sizes :

The standard size of brick can be varied to give any required thickness, and the method of manufacture permits of the economical production of special sizes and shapes to specification.

Method of Manufacture :

See notes on Information Sheet No. 309.

Strength :

To comply with the British Standard Specification No. 187 (March, 1934) a sand-lime brick "shall consist of an intimate and uniform mixture of siliceous sand and slaked lime, mechani-cally pressed together and combined by the action of high pressure steam.

Classification :

The Specification classifies bricks as follows :

Class A: Engineering Bricks (for

heaving loading). Class B : Building Bricks (for external walls).

Class C : Building Bricks (for internal walls).

Strengths Required in Each Class :

The Specification calls for the following minimum strength for each class of brick :

Class A : Crushing strength required :

2,500 lb. per sq. in. Class B : Crushing strength required :

1,750 lb. per sq. in. Class C : Crushing strength required : 1,000 lb. per sq. in.

The strengths are to be obtained in tests on bricks in the wet state.

The strength of the bricks is usually less when in the wet state than when dry.

Tests carried out by Messrs. David Kirkaldy and Son, on Midhurst Whites have given a crushing load of 3,260 lb. per square inch, which is 16 per cent. greater than the strength required by the B.S.S. for Class A bricks, 62 per cent. more than is required for Class B bricks, and 225 per cent. more than is required for Class C bricks.

Previous Sheets of No. 306 and No. 309.	this series are
Manufacturers : The	e Midhurst Brick Co., Ltd.
Address : Windsor	House, Victoria Street, S.W.I
Telephone :	Victoria 5551-2
Works : Midhurst and	Cocking, Sussex

Schedule of Moulded Bricks

Previous Sheets :

Single Bullnose		Radiu 11" 21"
		21"
Bullnose Stop Single	Left hand Right hand Left hand	1 ¹ / ₈ " 2 ¹ / ₄ "
Bullnose Header Singl	e	11"
Bullnose Stretcher Sir	igle	1."
Double Bulinose		1 ¹ / ₈ " 2 ¹ / ₁ "
Double Bulinose Stop		
Bullnose on End (Cow Cownose Stop Double Headed Bullno	vnose) ose	24" 24" 24" 14"
Double Stretcher Bull	Inose	2]"]"
Bullness Internal Pete	un Dieht hand	24"
on end	Left hand Right hand	21" 21"
Bullnose Internal Ret	urn Right hand	11"
on edge	Left hand	11"
	Left hand	21"
Bullnose Internal Ret	urn Left hand	11
on flat	Right hand	21
	Right hand	21"
Bullnose External Ret	urn Right hand	11
on flat	Left hand Right hand	21"
	Left hand	2
Bullnose External Ret	urn Left hand	18
on eage	Left hand	21"
	Right hand	21"
Stop end to Double B Stop end to Standard Cill Brick	ulinose Double Bulinose	21" 11"
Bullnose Mitre	Left hand	21"
	Right hand	21
	Right hand	110
Bullnose Mitre Block		21
Bullnose Mitre Block	Left hand Right hand	21
on cage	Left hand	11
D	Right hand	11"
Pistol Brick (Circular	Corner)	Ang
Squint Brick		30
		45
		40
		60
Anala Datal		70
Angle Brick		113
		135
		135
		153
		123

280 290 291	Angle Brick Birdsmouth	135° 130° 135°
300 301 302 303 304 305	Header Splay	837-817 947-837 857-787 857-837 857-837 857-837 857-837 857-837
350	Cant Brick	
360	Double Cant	Dishs hand
365 366 367 368	Cant Stop	Left hand Right hand Left hand
375	Plinth Header	
385 395 396	Plinth Stretcher Plinth Internal Return	Right hand
400 401	Plinth Internal Return	Right hand Left hand
405 406	Plinth External Return	Right hand Left hand
415 416	Plinth Internal Angle	Right hand Left hand
425 426	Plinth External Angle	Right hand Left hand
435	Cant Mitre Block	
440	Cill Brick	3". "
451 452 453	Curvert Header	3"-21" 3"-21" 3"-23"
460 461 462 463 465 466	Culvert Stretcher	3"-2" 3"-21" 3"-21" 3"-23" 21"-21" 23"-21"
		Radius
480 481	Concave Header	4' 9" 3' 9"
490	Concave Stretcher	5' 2"
500 501 502 503 504	Chimney (or Well Header)	Diameter 4' 0" 6' 0" 8' 0" 11' 0" 13' 0"
505	Chimney (an Mall Sanataha	16' 0"
511	Chimney (or well stretche	6' 0" 8' 0"
513		11' 0"
515	-	16' 0"
520	Convex Header	4' 9"
530	Convex Stretcher	4' 9"
560	Arch Brick	
600 650 700	Special Purpose Bricks Air Brick Key Brick	