THE ARCHITECTS' JOURNAL

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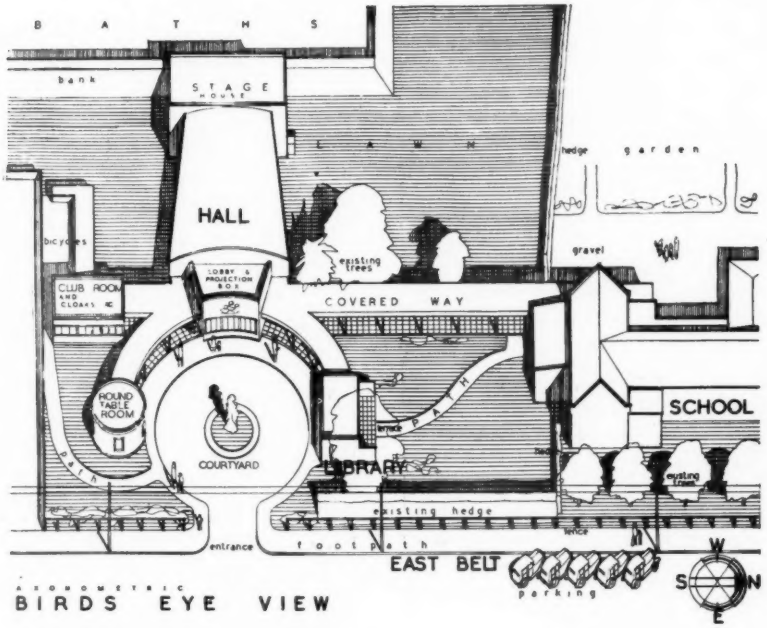
The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, AUGUST 29, 1940. NUMBER 2380 : VOLUME 92

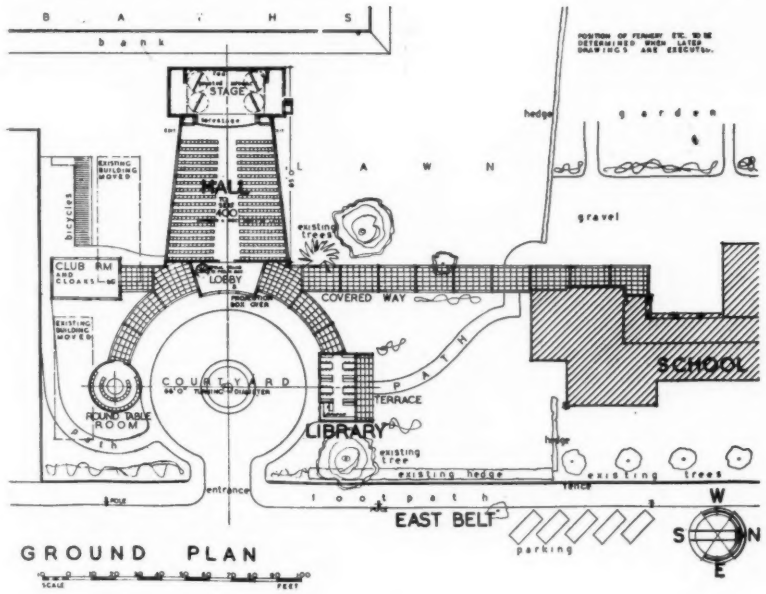
PRINCIPAL CONTENTS

EDUCATIONAL CENTRE, CANTERBURY, NEW ZEALAND

ARCHITECT: PAUL PASCOE

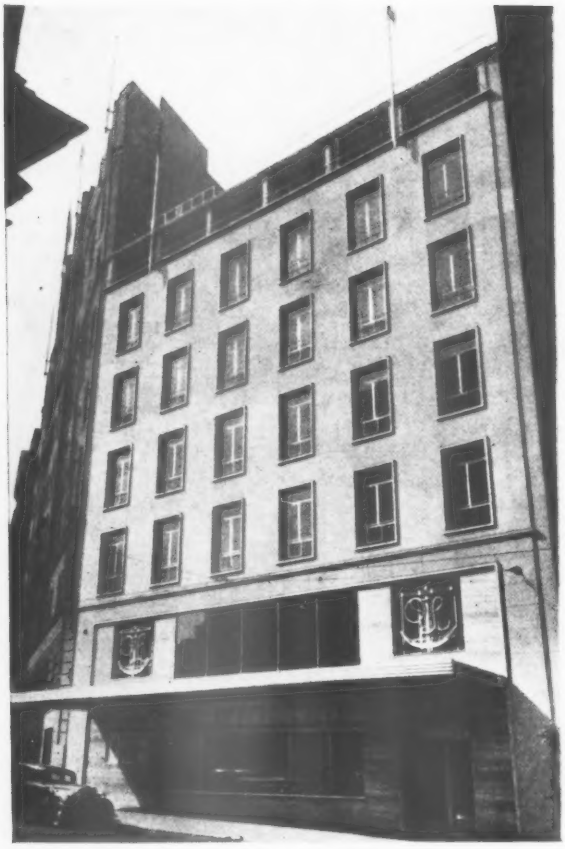


AXONOMETRIC
BIRDS EYE VIEW



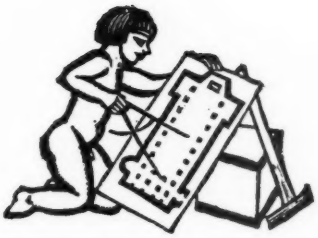
GROUND PLAN

The purpose of this proposed Rangiora Community Educational Centre at Canterbury is similar to the Cambridgeshire Village Colleges which have been illustrated in the JOURNAL. *The units comprise: 1, hall; 2, library; 3, round table discussion room; 4, club room. The building is for the use of the existing High School (shown on the right of the illustrations) and will also serve as the adult recreational centre for the town. The building will be constructed of reinforced concrete. Architect, Paul Pascoe.*



Left, perspective of a new office building in Sydney, which was hung in this year's Royal Academy Exhibition. Associated Architects: Fowell, McConnell and Mansfield (of Sydney) and Brian O'Rorke (London). Above is a general view of the main front, and on the left is the booking hall. The ground and mezzanine floors are faced with antique Italian travertine, and the rest of the front with pale grey Hawkesbury sandstone. Projecting architraves are of Portland stone. The colour scheme of the interior is based on small areas of sea blue and coral against a neutral background. Walls, piers and counter front in the booking hall are faced with travertine.

NEW SYDNEY BUILDING FOR ORIENT LINE



THE ONE IN FIFTY

IN the JOURNAL for August 8, *Astragal* told the story of a small-house job which was abandoned after his clients during four months had asked for more than could be obtained for the money available. It was a story which differed from a hundred others only in one way. Immediately the architect's scheme had been dropped, the clients commissioned and built a speculative house which possessed none of the accommodation which *Astragal* had denied them and lacked an appreciable amount of what he had offered to provide. And *Astragal's* note ended with an implied question—Why is it that even educated clients are uneasy and distrustful in their relations with an architect, and yet are confident and easily persuaded when dealing with a builder?

In a letter which *Astragal* publishes this week, a correspondent tries to answer this question and emphasizes that it is now, when all housing is at a standstill, that architects should make certain of the right answer—and the remedy.

ST. M. H.'s own answer can be summarized very shortly. The speculative house, he reminds architects, *is* cheaper ; it can nearly always be seen before purchase ; its external and internal appearance is reassuringly familiar and being familiar appears likely to be more easily resold if need arises ; it is backed by huge publicity and temptingly simple and all-inclusive hire-purchase offers.

The architect can throw precious little into the balance against these advantages. His manner towards small-house clients is sometimes too professional ; the practical worth of his house lies in unappreciated planning or unseen construction ; it is illustrated in drawings which some people cannot understand ; and the procedure of building by specification, tender, contract and certificates is frightening to the plain citizen.

This is an old story of obstacles which architects have failed to remove in twenty years. There is every reason for them to think about it again—now. After the first Great War architects lost their share in the housing boom because their " professional " attitude and methods of procedure and remuneration were too complicated for the huge programme needed, and were not changed in time. A proportion of the profession took part in the State-aided housing programme, by exchanging fees for a salary and made-to-measure designing for mass production design. But of the privately financed houses built from 1919–1939 architects designed about one in fifty—for the reasons which ST. M. H. states.

The question which architects should consider now, is what they are going to do about housing after *this* war. It may be that there will be no privately financed houses or private architects in the period of reconstruction. But it is much more probable that, despite disappearance of costly private houses and a great extension of State-aided housing, there will still be a huge demand for small " unaided " houses.

It is about these post-war speculative houses that architects must make up their minds. Architects, if they wish, can decide to have nothing to do with the ordinary man's house. But if—remembering that the standard of a county's housing sets the standard for the rest of its architecture—they decide otherwise, they must be prepared to take their coats off and fight extremely hard. The mixture of sorrow, patronage, superiority and good wishes with which they have regarded speculative housing since 1919 will have no greater effect after this war than it did before.

If the profession is to fight with any hope of success it must abandon at once the idea that an architect can dabble now and then in an activity where acute and able organizers, psychologists and salesmen have spent a lifetime, and pull off every time what is a winner to the ordinary man. He can't. He may, sometimes, build a good house. But its virtues will not be recognized and any faults will be magnified and broadcast a hundredfold : and at this rate one architect-designed house is more likely to stop ten others being built than to encourage their building. The only way the profession can fight with success—at any rate to begin with—is collectively.

At every housing or building exhibition, or by advertisement, three pamphlets could be made available to the public. *The Simpler the Better* could explain why elm boards and general whimsy cost money which could be better spent on other things. *What Every House Must Have* could explain the elements of sound construction and make clear that it is what is not seen in a tour of a Show House is what really matters.

Finally, *What An Architect Does* could call attention to a small permanent exhibition of models and photographs at the Building Centre or the R.I.B.A. This exhibition might contain a dozen examples of houses which a builder was prepared to build for a stated price within a given area. But it is even more important that the exhibition should be linked with a scheme by which the R.I.B.A., a building society, a firm of solicitors and the architect concerned can jointly offer a possible client the simplicity of procedure which he obtains from every speculative company.

This is the essence of the problem. Unless it is made *simple* to have a house designed by an architect, unless the advantages of such houses are continuously and adroitly put before the public, the situation which ST. M. H. describes will remain in full force after this war as well as before it.

The Architects' Journal

45 The Avenue, Cheam, Surrey

Telephone: Vigilant 0087-9.

NOTES & TOPICS

ARCHITECTS AND HOUSES

ON August 8, I described on this page how a client of mine abandoned a scheme for a house on the grounds that he could not get enough for his money, and thereafter commissioned a house from the local builder which contained less than I had offered. I have now received from an architect this letter on the subject :

*

Your story of the job that failed (he writes) touches on the knottiest problem which confronts all architects who build houses. Your house contained more than that of the builder : but what about those that contain an equal amount ?

*

We have all felt repeatedly the corroding despair of having to explain to clients why our proposals will cost £2,000, when the gorgeous plates in HOMELOVERS ESTATES' brochure display similarly sized houses for £1,500. Prettier too—with wonderful fireplace surrounds and sunset tiles in the bathroom. Sometimes we have succeeded in bringing conviction—far more often we have failed. What are dampcourses and roofing felt in the wife's eyes when weighed against the colour-plates of a kitchen ? What are specifications, tenders and contracts to a husband save smoke-screens for mysterious rake-offs ?

*

We *know* that we are right. We know that the architect's house is better than the speculative. Why then do we so often fail to convince clients ? At a time when all housing is at a standstill we ought to try to pin down the reasons for this failure.

*

First, the speculative house is cheaper. The standard of construction varies with the degree of speculation, but it is mass-production which really brings the price down.* Second, the speculative house can be seen before purchase. No plans, perspectives or models can quite compete with this ; few people can visualize size, shape and effect of rooms before they are furnished.

*

Third, the speculative house is prettier in a familiar way. The architect abhors tweetiness. The ordinary man knows it, loves it, and is encouraged to go on loving it by a huge, if not consciously organized, propaganda machine.

*

Fourth, the speculative house is certain to be liked by the next man if the owner ever wants to sell it.

*

What has an ordinary man to gain by going to an architect ? Precious little of which he can be convinced. He can't see the house before he buys it ; he is asked to appreciate something unfamiliar ; he can't obtain a firm price ; he has to deal with building society, solicitors, architect and builder instead of one person ; and he is faced with all sorts of complicated procedure and documents.

*

Unless architects tackle these difficulties, they can never expect to build the ordinary house for the ordinary man, however often Lord This or the Minister of That opens a Small Houses Exhibition at the R.I.B.A.

ST. M. H.

*

I agree. But the question is whether architects can get round the major difficulties which *St. M. H.* has listed.

*

In my view, they could do so by collective action to a very considerable extent. "Tweetiness" and poor construction can be dealt with in pamphlets, and both the snob and cash value of simplicity be continuously extolled.

*

Cost and complication of procedure are more difficult—but they should not prove insuperable difficulties if architects once gave their minds to them. Standard houses which could be built anywhere and be backed by a handsome certificate of structural soundness for an inclusive fee would solve part of the problem—particularly if inside-and-out models were on permanent exhibition. But for made-to-measure houses only simplification of procedure can be aimed at—together with an even simpler pamphlet explaining why that procedure is necessary.

*

The ideal would be for the potential client of a £1,000 house to be able to obtain sketch designs, a firm price and a statement of mortgage payments for about £10. And there would seem no reason why this should not be brought about if, in each Allied Society's area, a building society and a few building firms were encouraged to specialize in architects' work. The difficulty of tendering on sketch drawings could be overcome by each architect preparing very full drawings and specification of a "standard" house which would be sent to the tendering firms as a fuller explanation of what was wanted in the proposed house.

*

It is certain that, unless some such methods are evolved, the architect will never design "the ordinary house."

WAR DAMAGE AND LOCAL AUTHORITIES

A Ministry of Health Circular to Local Authorities and public utility undertakings reminds them that the Government's compensation scheme for War Damage does not cover their property.

*

Compensation for war damage to local authorities' and public utilities' property will be specially considered after the war—but, in the meantime, the Ministry of Health must be furnished with full details of damage directly it occurs. A schedule of the particulars required accompanies the Circular, but no barrier is placed in the way of the execution of immediate repairs. In this latter case, all that is required

* I do not forget that, in addition, a builder tendering for an architect has to cover "unknown" factors, while building for himself has no unknowns.

is a certificate by the appropriate technical officer that the work has been carried out soundly at a fair price.

★

Few of us can resist trying to pick holes in official definitions, but the Ministry of Health's definition of war damage seems to me to have a high quality of puncture-resistance. It runs :

War damage means physical damage to property caused by enemy action or in repelling an imagined attack by the enemy, or by measures taken to avoid the spreading of the consequences of such damage.

HEIL HITLER

Among advantages springing from the rubbish spilt over us by that man, a freshened affection for the potentially unstable fabric of our homes has already been noticed. One of my neighbours in a provincial terrace, so early Victorian as to be more justly described as delayed Regency, has normally to use her finest room as a bedroom. Although it is almost inaccessible from the afterthought of a kitchen, she has taken to having her meals there, with the pleasantly illogical excuse that she is making up for the time during which she has to abandon the room at nights to seek shelter.

★

I also record my own thanks to him for two delightful days spent recently on a high moor in the Bristol Channel region constructing some very Early British looking features. This is a fine practical training for architects. The work begins on the first page of the specification with the removal of the top spit, consisting chiefly of heather and bilberries, and goes on to an essay in Early Classic style with the building of the sods into a form of beehive tomb. General inspiration is provided by a view of several thousand square miles of hills and sea.

★

A more widespread advantage comes from the life in shelters which takes up so much of people's time in a few noisy regions. One town is organizing men and women shelter-marshals and other functionaries to deal with questions of children's bedding, lighting, old people, drunks and draughts. If the race get a new recognition of its kinship from these experiments in communal living, those modest structures will have had more than negative value.

★

The greatest number of the incidental advantages of war are perhaps the refreshing changes it brings to dull lives. That the War Office feels called upon to dispense such benefits may account for the experience of an architect with some knowledge of engineering who, seeing some months ago that engineers were demanded for the Officers' Emergency Reserve and being assured by the local recruiting centre that he would be snapped up, put in an application and has just been notified that he has been registered in the category Infantry.

R.A.F. AT THE BUILDING CENTRE

From the entrance doors of the Building Centre, where an Exhibition of R.A.F. War Photographs will be open for six weeks, I was made to realize what an instantaneous success is like at close quarters. A tide of visitors, five abreast and goggling at building products *en passant*, bore me to the show of the moment.

★

The exhibition is a joint work by Air Ministry Public Relations and M.O.I. Its layout does not rise above the straightforward, nor its display above the businesslike : but these things are very naturally dwarfed by the enormous topical interest of all the photographs and the technical brilliance of many of them. I particularly recommend a vertical photograph of German destroyers at high speed, taken (I write with a layman's ignorance) from 15,000 ft. or more. Architects with leanings towards the R.A.F. will also be interested in the reconnaissance photographs of towns and harbours.

★

In the smallest room I had a strange encounter. Being forced into the centre by the pressure of my fellows, I sustained a blow in the back from something sharp. Turning round, I found myself facing an extraordinary splodge of bronze, about 3 ft. square and mounted on a grey-green marble base, on to the ridge of which a bronze maiden (providentially equipped with wings) was about to come a terrifying belly-flopper. Shuffling round this splodge I came to the conclusion that it might be meant to be a wave : shuffling further, I came at length to a small plate in Italian on which I made out the words " Jacques Schneider." There was no other clue. I trust the pilots who roared over the Solent eight years ago did not forget to murmur, " 'Tis the battle, not the Prize."

★

As I moved away my foot knocked the grey-green marble plinth on which this world-famous thing was mounted. It gave out a wooden sound. It *was* wood.

★

On the way out, it was noticeable that an appreciable percentage of visitors, particularly women, became absorbed in the Building Centre's more usual attractions—bathroom fittings being special favourites. This may explain the apparent determination of London newspapers that, come what might, the words " Building Centre " should never deface their columns. The *Evening Standard* was ingenious —it said the Exhibition was at the Grafton Galleries. *The Times*, more prudishly accurate, located it at 158 New Bond Street.

★

90 PER CENT. BUSINESS, 10 PER CENT. ART

This is how engineer-architect Albert Kahn sums up architecture, to the great discomfort of his American colleagues. " When I began," says he, " the real architects would design only museums, cathedrals, capitols. The office boy was considered good enough to do factory buildings. I'm still that office boy."

★

Office Boy Albert Kahn is now estimated to design 10 per cent. of all United States private industrial construction. He has designed most of Ford's, Chrysler's and General Motors' factories.

★

The Kahn office, which normally supports 300 employees, is likely to hit its all time high before this year is out. A good part of the $92,000,000 Wright Aeronautical Corporation's new airplane engine factory near Cincinnati is to be taken care of by Kahn, who has just filed away the plans for $25,000,000 worth of recently completed American naval air bases at Honolulu, Alaska, Puerta Rico and other far-flung strategic points.

★

The office boy, who preaches that the client's analysis of the problem is the first step to its solution, expects to draw $2,000,000 in fees this year. Among clients who appreciate his approach is the Government of the U.S.S.R., for whom he planned many factories as consultant on the First Five Year Plan.

ASTRAGAL

NEWS

UNAUTHORIZED USE OF SYMBOLS

It has come to the notice of the Iron and Steel Control that a number of contractors have been using symbols without first obtaining the written authorization of the Department concerned. In some cases, failure to obtain the necessary authority has resulted in contractors using the wrong symbols.

The Iron and Steel Control points out that in every case sanction, in writing, should be obtained from the appropriate Department before applying a symbol to a job or jobs. Sub-contractors should obtain written confirmation from the main contractors.

A serious view will be taken, in future, by the Ministry of Supply of any failure to comply with these regulations.

THE MINERS' WELFARE FUND

The Miners' Welfare Commission's Annual Report for 1939 has just been published. The Commission reports a record year's progress in the provision of pithead baths. Over 50 new installations were brought into use providing bathing accommodation for 57,000 persons and at the end of the year there were 345 installations with accommodation for over 430,000 persons in use or under construction. Nearly £756,000 was granted for pithead baths in 1939, bringing the total granted from the Fund for this object to nearly £6,336,000.

Facilities for recreation and for cultural activities have been provided on a generous scale, nearly £5,764,000, including £150,000 granted in 1939, having been expended on them. They range from the large "institute" to the modest village hut and from the extensive recreation ground with a well-equipped pavilion to the village football field.

B.S.I.

Two new specifications have just been issued by the British Standards Institution. They are :

Testing Incombustible Material to Provide a Minimum Standard of Protection against Incendiary Bombs (B.S./A.R.P. 47).

The above specification has been prepared by the British Standards Institution in response to a demand for materials and treatments of comparatively low cost which would afford a useful degree of protection against incendiary bombs, though not necessarily as high as that required of materials conforming to B.S./A.R.P. 27, Testing Incombustible Material Resistant to Incendiary Bombs.

The specification fixed a standard of protection such that materials conforming therewith will :

(*a*) Markedly reduce the lateral spread of fire on protected surfaces.

(*b*) Markedly retard or even prevent entirely the outbreak of a destructive fire.

(*c*) Markedly reduce the damage to protected timber floors usually confining it to the slow-burning and charring of a square foot or so of boarding.

It is emphasized, however, that the adoption of protection to the standard fixed by this specification does not obviate the necessity for active defence against bombs by the stirrup hand pump or other fire fighting appliances. By retarding the effects of the bomb the time during which a bomb or resultant fire may be effectively dealt with is appreciably extended.

Further, when a bomb has ignited in a protective space, charring of the protected timber will have occurred and glowing timber may be present. It is essential therefore that, after the bomb has been extinguished, the protective material must be removed locally and access then made to the underside of the timber so that effective measures may be taken to extinguish any smouldering that may be present.

Copies of the standard (B.S./A.R.P. 47) may be obtained from the British Standards Institution, 28 Victoria Street, London, S.W.1, price 4d. post free.

Steel Conduits and Fittings B.S. No. 31

This revision of B.S. 31–1933 for steel conduits and fittings for electrical wiring was undertaken principally with the view to clarifying the position of the lugs relative to the spout outlets in small circular boxes, and the table giving the dimensions of the entry bushes has also been slightly amended.

Copies of this British Standard (No. 31–1940) may be had from the British Standards Institution, 28 Victoria Street, London, S.W.1, price 2s 3d. post free.

ARCHITECTURAL ASSOCIATION

Dates of Terms : Winter Term : Tuesday, October 15 to Friday, December 20, 1940.

Summer Visits : Saturday afternoon, September 28 : Visit to an emergency hospital (1,000 beds), designed by Mr. Arthur W. Kenyon, F.R.I.B.A. Travel will be by train or coach, approximate fare 5s. 6d. Members wishing to attend are requested to inform the Secretary immediately.

General Meetings : Tuesday, October 29 : Address by the President. Tuesday, December 10 : Mr. Robert Byron. "Persian Islamic Architecture." (Illustrated by lantern slides.)

COMPETITIONS

The Council of the National Eisteddfod offers prizes of £75 and £25 for competitive designs for a standardized pavilion to seat 12,000 with the necessary stage and other accommodation.

The intention is to encourage the planning and design of a modern type of building that can be taken down, transported and re-erected from year to year in various centres.

The Council of the National Eisteddfod has appointed as adjudicators Mr. Percy E. Thomas and Mr. T. Alwyn Lloyd. Conditions are obtainable from the Secretary, Eisteddfod Office, Colwyn Bay.

As we go to press we learn that approximately 150 designs have been submitted in the R.I.B.A. Industrial Housing Competition.

BODLEIAN LIBRARY EXTENSION

We greatly regret that by a printer's error in last week's issue the names of the consulting engineers to this building, Messrs. Dolby and Williamson, quoted on page viii, were incorrectly given in a limited number of copies.

We also regret an error in the list of sub-contractors. The heating, thermal storage, ventilation, hot water services, fire hydrant and sprinkler installations were carried out by Messrs. G. N. Haden and Sons, Ltd., in association with F. G. Alden, Ltd. Messrs. Haden were also responsible for the whole of the electrical contract.

HAMMERSMITH SCHOOL

Classes in the Evening School and in the Senior Day School of the L.C.C. Hammersmith School of Building and Arts and Crafts, will be resumed on Monday, September 9.

There is a full course leading to the Intermediate and Final Examinations of the R.I.B.A., for which a number of students are prepared every year.

In addition to the instruction given for architectural students, the Building Department provides training in all the building crafts, leading to the examinations of the City and Guilds of London Institute, and the School is recognized by the Board of Education for the Ordinary and Higher National Certificates.

Full particulars regarding the classes to be held next session may be obtained on application to the Principal, H. W. Mole, F.R.I.B.A., M.I.STRUCT.E., at the school, Lime Grove, W.12. Intending students should attend at the school for enrolment during the week commencing Monday, September 2.

R. I. B. A.

EXAMINATIONS

The R.I.B.A. Examination qualifying for candidature as Building Surveyor under Local Authorities will be held at the R.I.B.A. on October 9, 10 and 11, 1940. Applications for admission to the examination must be received not later than September 9, 1940.

Dates on which forthcoming R.I.B.A. Examinations will be held :

Intermediate Examination.
November 15, 16, 18, 19 and 21, 1940. (Last day for applications : October 8, 1940.) May 16, 17, 19, 20 and 22, 1941. (Last day for applications : April 2, 1941.) November 14, 15, 17, 18 and 20, 1941. (Last day for applications : October 1, 1941.)

Final Examination.
November 27, 28, 29, 30, December 2, 3 and 5, 1940. (Last day for applications : October 28, 1940.) July 2, 3, 4, 5, 7, 8 and 10, 1941. (Last day for applications : May 28, 1941.) December 10, 11, 12, 13, 15, 16 and 18, 1941. (Last day for applications : November 3, 1941.)

Special Final Examination.
November 27, 28, 29, 30, December 2, 3 and 4, 1940. (Last day for applications : October 28, 1940). July 2, 3, 4, 5, 7, 8 and 9, 1941. (Last day for applications, May 28, 1941). December 10, 11, 12, 13, 15, 16 and 17, 1941. (Last day for applications : November 3, 1941.)

Examination for Building Surveyors.
October 9, 10 and 11, 1940. (Last day for applications : September 9, 1940.) May 7, 8 and 9, 1941. (Last day for applications : April 1, 1941.) October 8, 9 and 10, 1941. (Last day for applications : September 1, 1941.

Letter

Protection of Empty Property

SIR,—Home-owners who for various reasons have closed their houses since the war began will face heavy losses if they do not arrange for routine supervision of their properties during the coming winter.

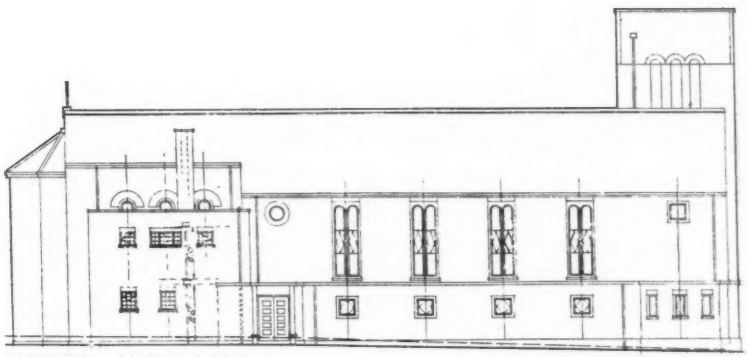
Deterioration in unoccupied houses, as in all empty property, is rapid and nothing escapes its effects. Roofs, walls, woodwork, plumbing and all metal parts suffer.

Competent supervision, which costs very little, protects the absent owner from such property damage as dry rot, fungoid growths, and the softening and staining of plaster in or near baths, basins, sinks and waste pipes.

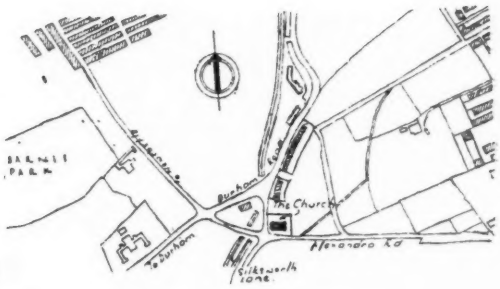
It is important that exposed woodwork does not go too far before being painted. Metal windows, gutters and downspouts simply must be painted—they are far too valuable to be allowed to rust, and are difficult to replace today.

"Leave it until after the war" is a dangerous attitude to adopt, for replacements of all kinds made necessary by neglect will not only be costly but may be practically impossible for some time to come.

T. SIMPSON PEDLER
General Secretary, National Federation of Property Owners



NORTH ELEVATION



SITE PLAN

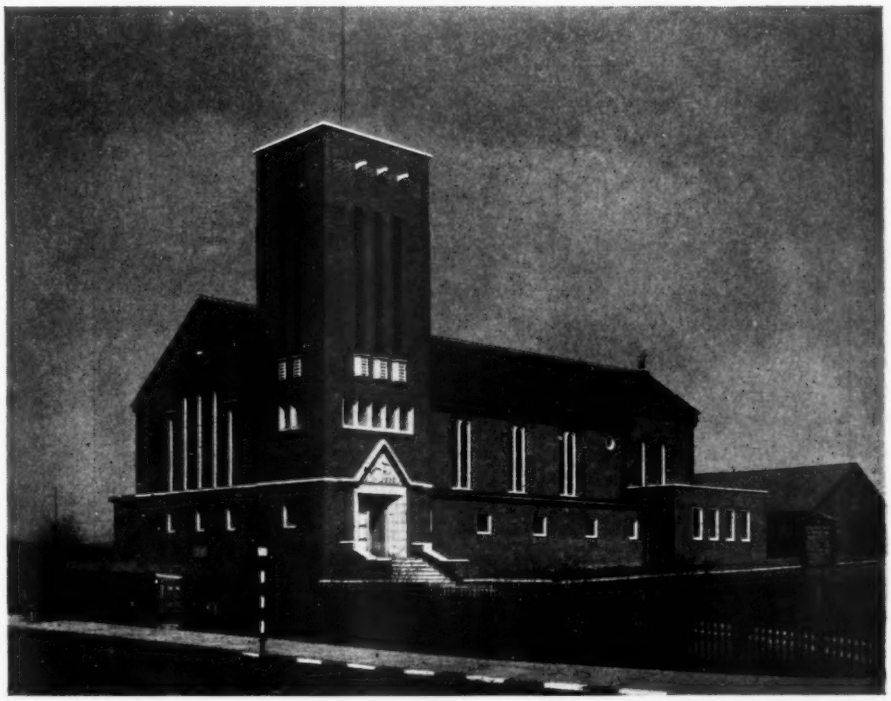
CHURCH

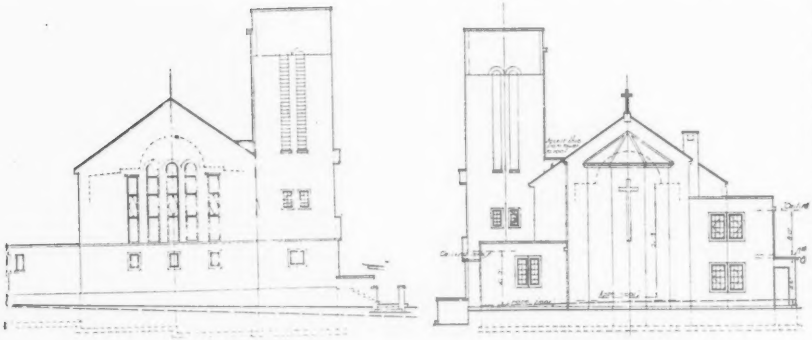
BISHOPWEARMOUTH, SUNDERLAND

BY CORDINGLEY AND McINTYRE

SITE—At the junction of two main roads, and is rectangular with two frontages, 220 ft. and 190 ft. long. The general site level is appreciably higher than that of the adjoining roads.

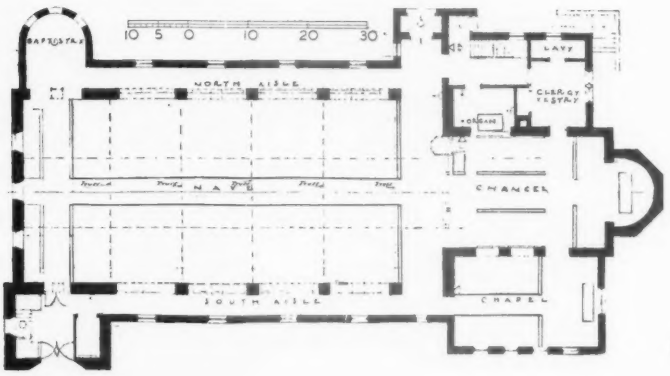
Below, view from south-west.





WEST ELEVATION

EAST ELEVATION

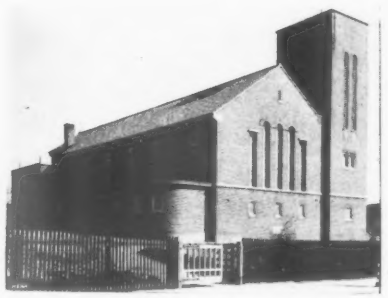


PLAN

PLAN—The general form of the church consists of a wide nave (31 ft.) with choir and chancel of equal height and 3 ft. 6 in. wide low passage aisles. Accommodation is for a total of 375 people. There is a Sunday-school room in the tower over the main entrance.

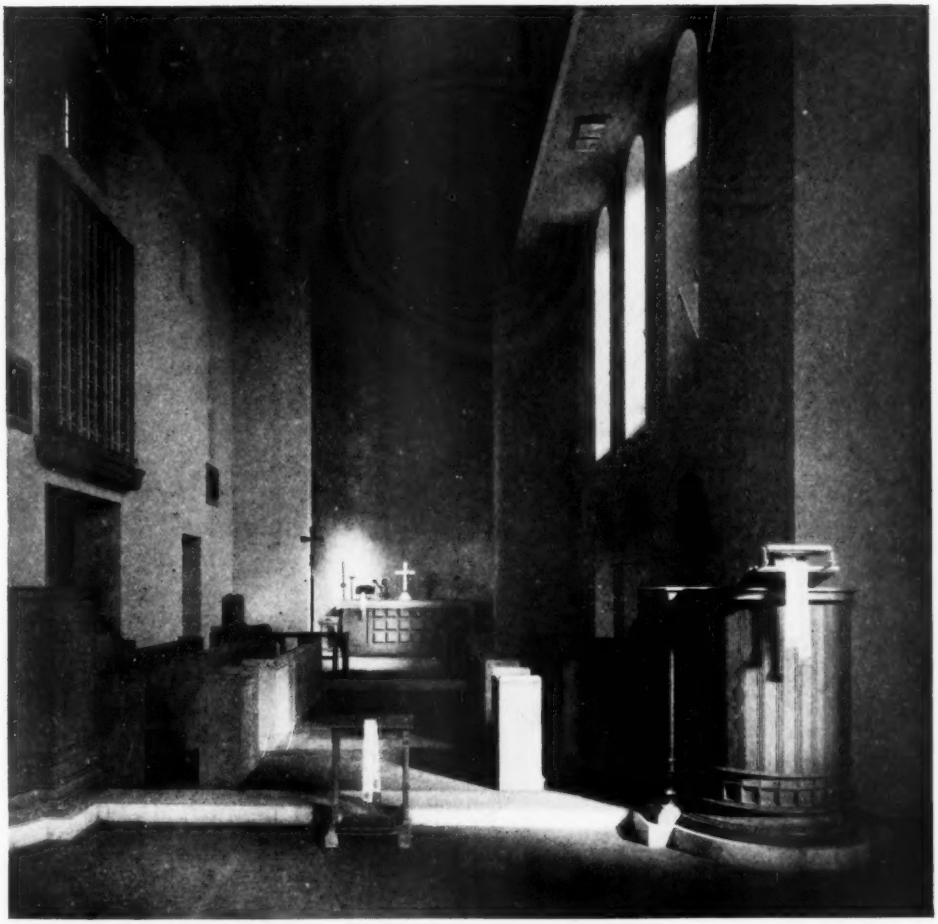
CONSTRUCTION—External walls are 14 in. thick minimum, solid, and were treated with damp-resisting composition and plaster bond before plastering. Nave and roof are steel framed. Flat roofs and suspended floors are hollow tiles. Vaulted ceiling is formed in expanded metal.

EXTERNAL FINISHES—Some attempt was made in the external treatment to feature the Saxon and Norman traditions in the district and also the seafaring character of Saint Nicholas, after whom the church is named. The sculpture in the tympanum of the south-west entrance is by Mr. C. N. Bertram and depicts the blessing of sailors by St. Nicholas. Exterior is faced with $2\frac{7}{8}$ in. hand-made sand-faced multi-coloured bricks of a fairly light tone pointed with a flush joint of rough texture. Artificial stone dressings were used throughout. The roof is tiled.

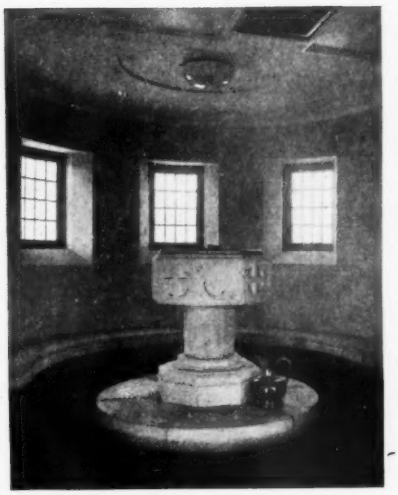


Left, main entrance. Above, views from the north-east and north-west.

CHURCH AT



Above, two views of the nave; right, the font.



INTERNAL FINISHES—Internally, the building is plastered. The whole of the ceiling and most of the west end wall are treated with acoustic plaster, other plaster being slightly stippled to avoid too great a contrast. The walls are of light stone colour, the flat portions of the ceiling light blue and the vault cloud-sprayed in gold and silver. The apse is graded from the same colour as the vault at the top to almost gold behind the altar. Flooring generally is of fibre blocks, with steps and margins in the choir and chancel of cast stone. The vestry floors are linoleum. The pulpit, lectern, choir stalls and altars are of bleached English oak and lightly wax polished. The organ grille is of oak in a painted frame and is picked out in colour. Doors are of similar finish. The metal windows in cast stone surrounds are leaded and glazed with plain white Cathedral glass. Artificial lighting of the nave and choir is by flush ceiling fittings with concealed architectural lamps to the apse. Polished anodized ceiling fittings have been used in the chapel.

SERVICES—Heating is by unit heaters in the nave, choir and chapel; elsewhere by radiators, all thermostatically controlled.

General contractors were Gordon Durham & Co., Ltd. For sub-contractors and suppliers see page xviii.

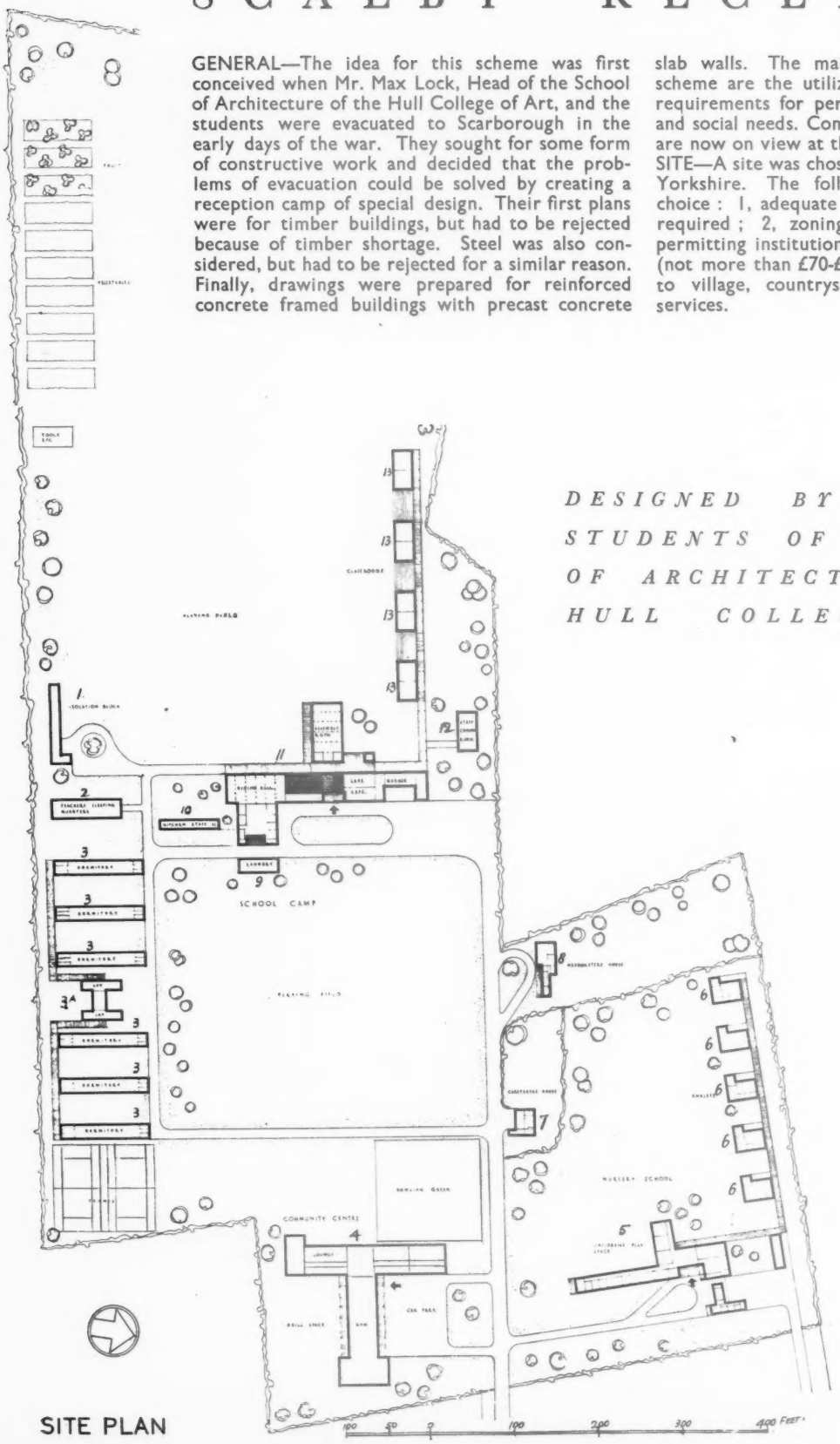
SUNDERLAND • BY CORDINGLEY AND McINTYRE

SCALBY RECEPTION C

GENERAL—The idea for this scheme was first conceived when Mr. Max Lock, Head of the School of Architecture of the Hull College of Art, and the students were evacuated to Scarborough in the early days of the war. They sought for some form of constructive work and decided that the problems of evacuation could be solved by creating a reception camp of special design. Their first plans were for timber buildings, but had to be rejected because of timber shortage. Steel was also considered, but had to be rejected for a similar reason. Finally, drawings were prepared for reinforced concrete framed buildings with precast concrete slab walls. The main principles underlying the scheme are the utilization of temporary wartime requirements for permanent peacetime communal and social needs. Complete drawings of the scheme are now on view at the Mortimer Gallery, Hull.

SITE—A site was chosen near the village of Scalby, Yorkshire. The following factors governed its choice : 1, adequate size to contain the buildings required ; 2, zoning regulations of the district permitting institutional buildings ; 3, cost of land (not more than £70-£100 per acre) ; 4, proximity to village, countryside, transport facilities and services.

DESIGNED BY STAFF AND STUDENTS OF THE SCHOOL OF ARCHITECTURE OF THE HULL COLLEGE OF ART

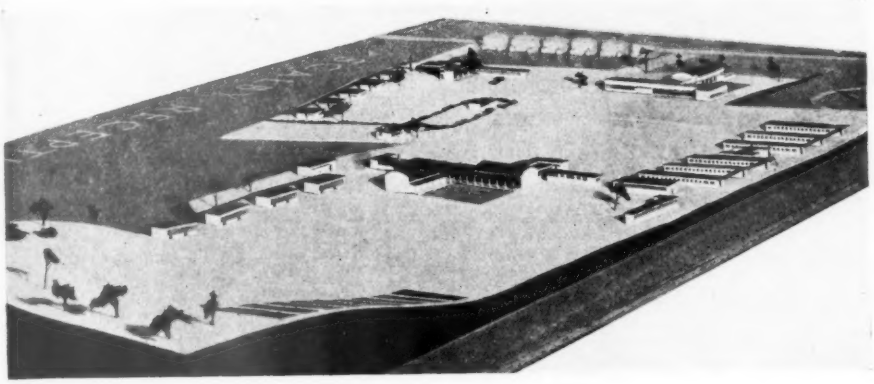


SITE PLAN

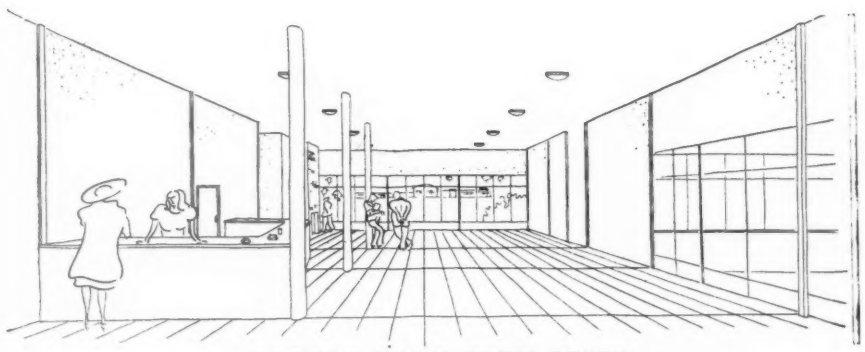
KEY TO SITE PLAN

1 : Isolation Block
2 : Teachers' Sleeping Quarters
3 : Dormitories
3a : Lavatory
4 : Community Centre
5 : Nursery School
6 : Chalets
7 : Caretaker's House
8 : Headmaster's House
9 : Laundry
10 : Kitchen Staff
11 : Administration Block
12 : Staff Common Room
13 : Classrooms

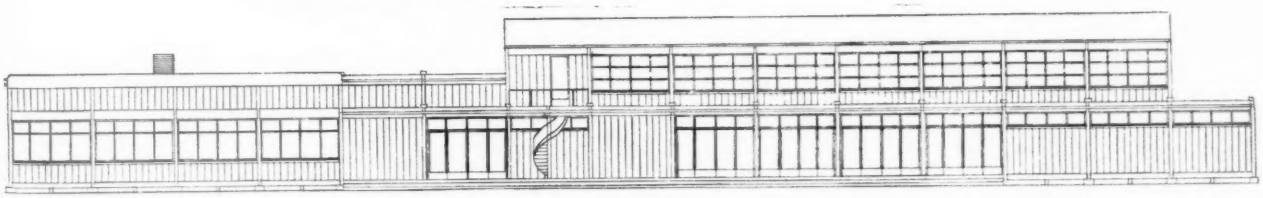
CENTRE, YORKSHIRE



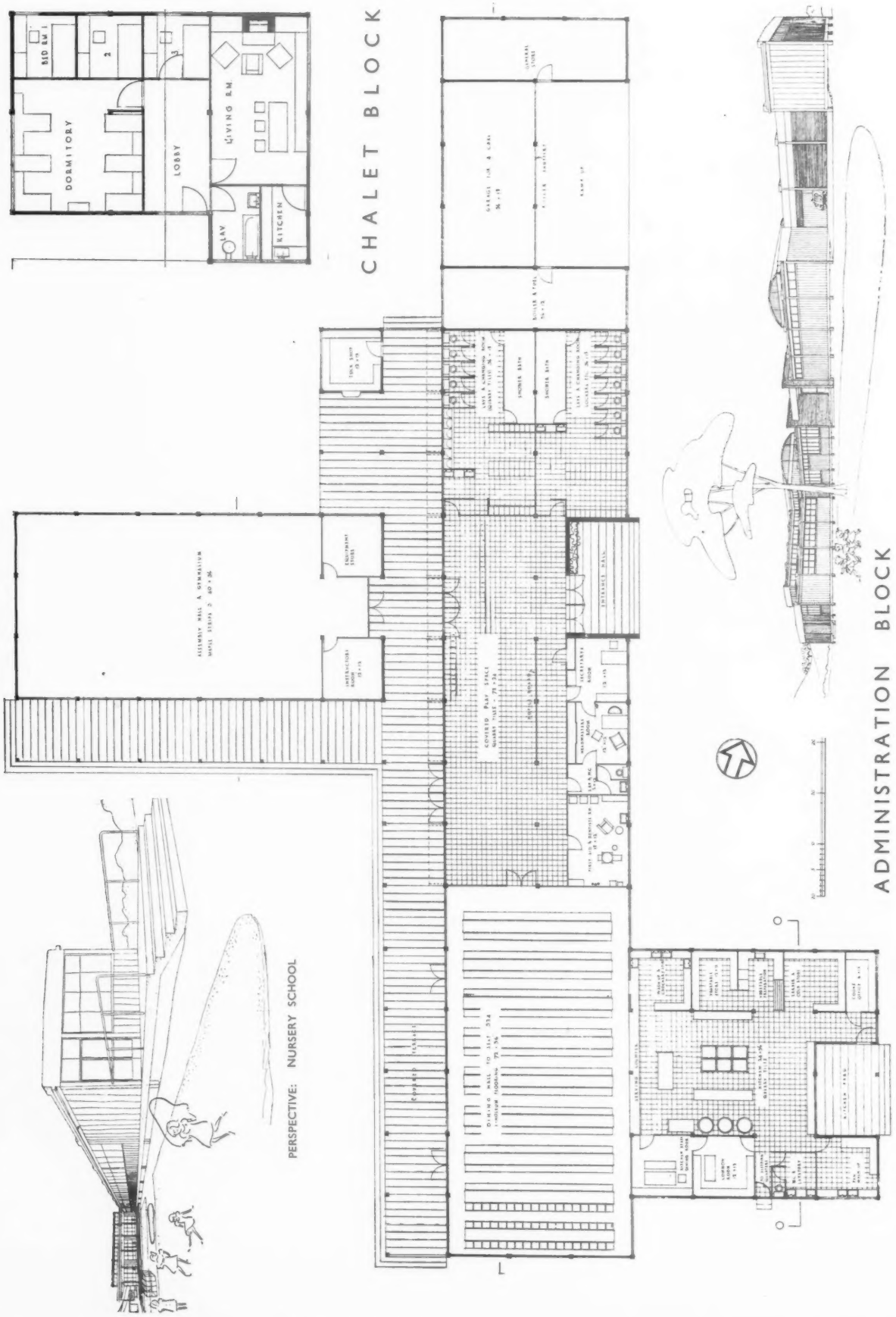
COMMUNITY CENTRE

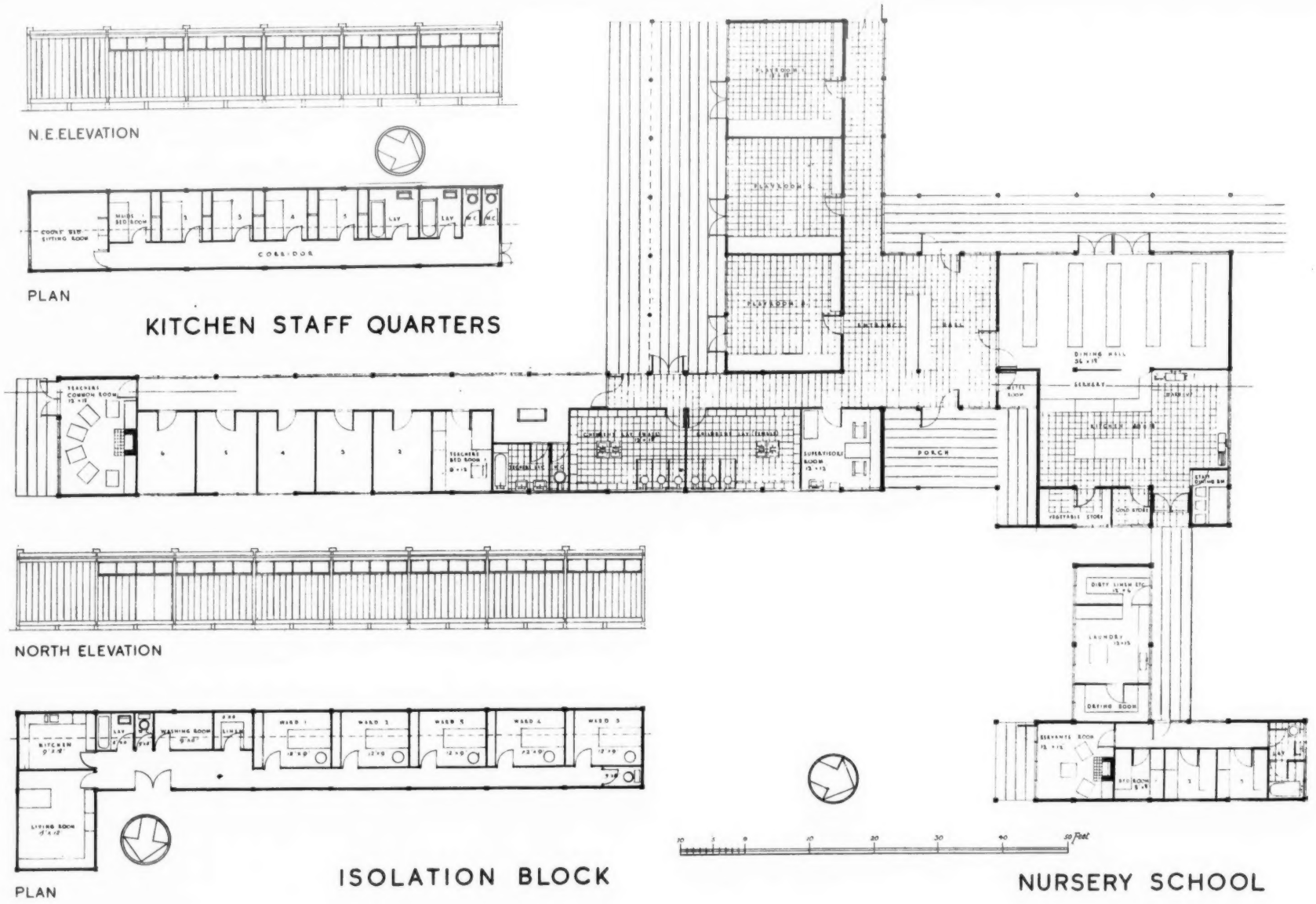


COMMON ROOM FROM FOYER

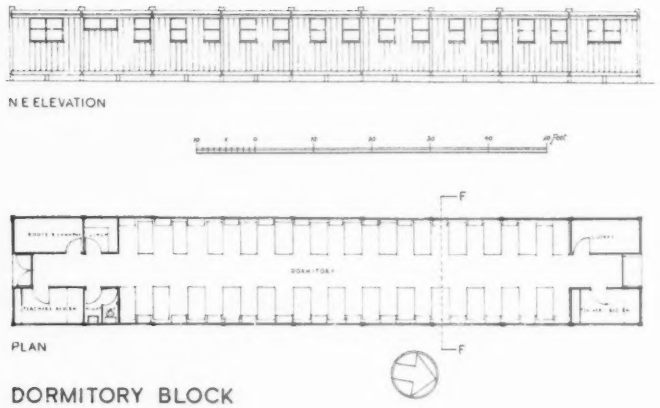


SOUTH ELEVATION

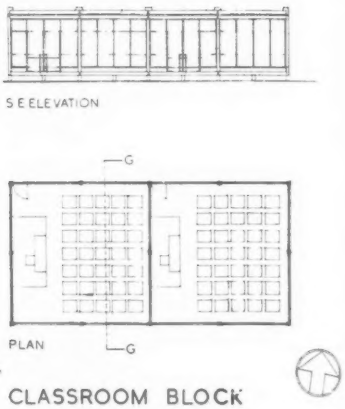

CHALET BLOCK
DORMITORY
LOBBY
LIVING RM
KITCHEN
ADMINISTRATION BLOCK
PERSPECTIVE: NURSERY SCHOOL



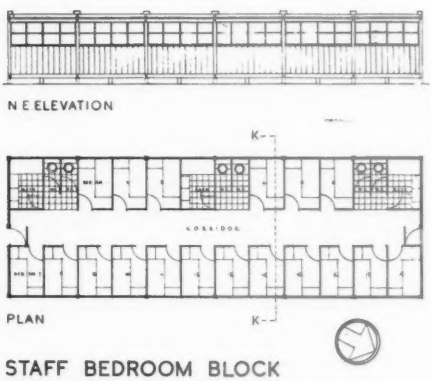
SCALBY RECEPTION CENTRE • BY STAFF AND STUDENTS, SCHOOL OF ARCHITECTURE, HULL



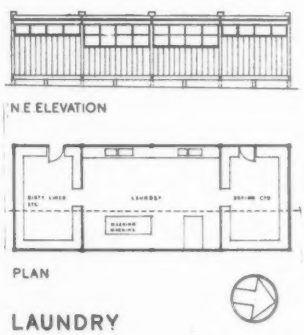
DORMITORY BLOCK



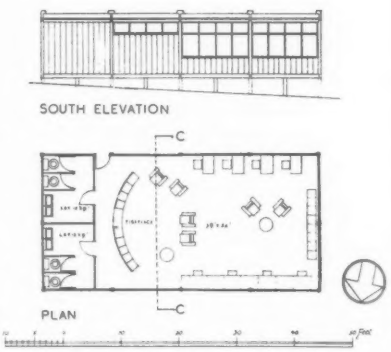
CLASSROOM BLOCK



STAFF BEDROOM BLOCK



LAUNDRY



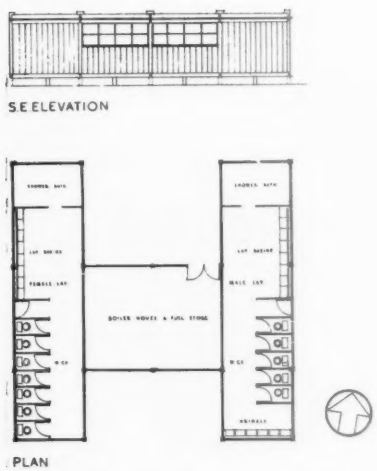
TEACHERS' COMMON ROOM

ACCOMMODATION—Provision has been made for the domestic, educational and social needs of the persons evacuated to the Scalby area under the Government's evacuation scheme of September last, as follows : children up to five years of age, 28 ; mothers, 16 ; children 5-11 years of age, 65; children 11-14 years of age, 197. Total, 306. Following accommodation was therefore provided : camp school, for children 5-15 years old ; nursery school, for children 2-5 years old ; and a community centre.

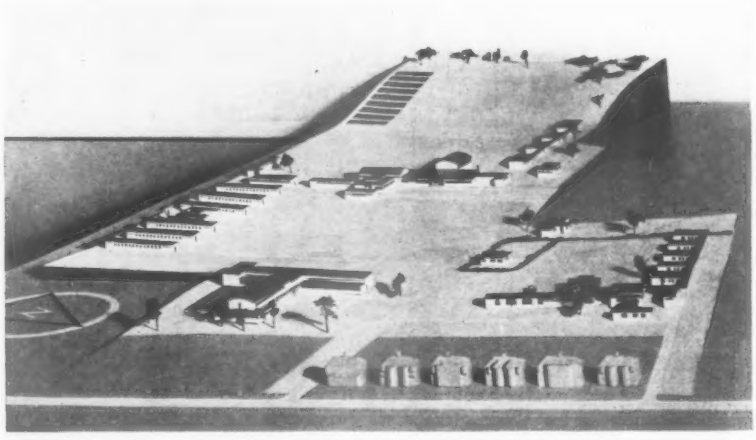
CONSTRUCTION—Mopin system : concrete, reinforced with steel, in the form of vertical concrete wall units and flat slabs inserted in a reinforced concrete frame, all joints being grouted.

HEATING—Central coke-fired low-pressure boilers in the administration block, dormitories and nursery school.

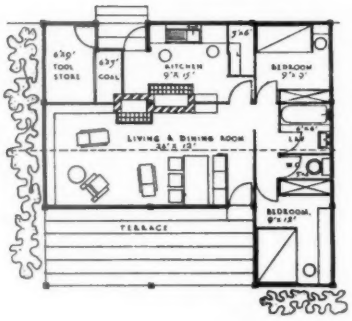
COST—Estimate of cost (report prepared by Messrs. John Watson and Carter, Chartered Surveyors, Hull) : School camp including covered ways, £31,250 ; community centre,

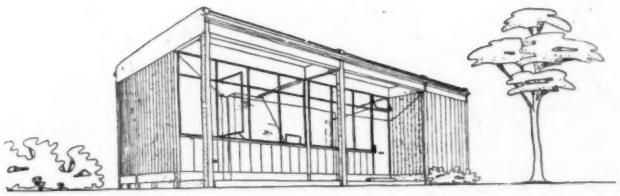


ABLUTION BLOCK

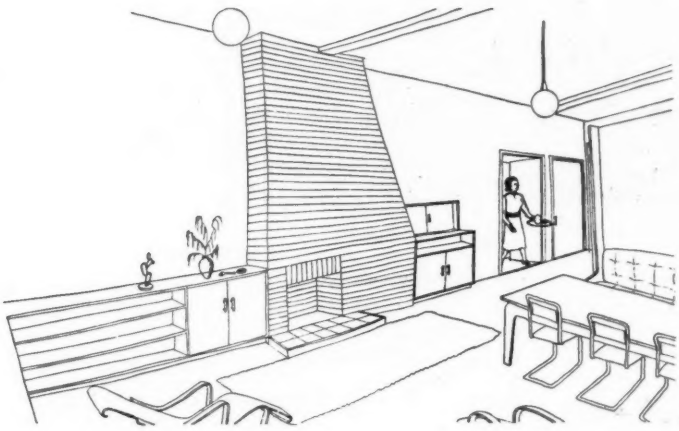


SCALBY RECEPTION CENTRE, YORKSHIRE • BY STAFF



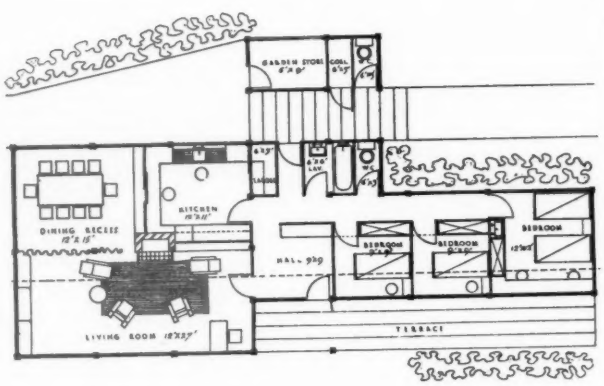


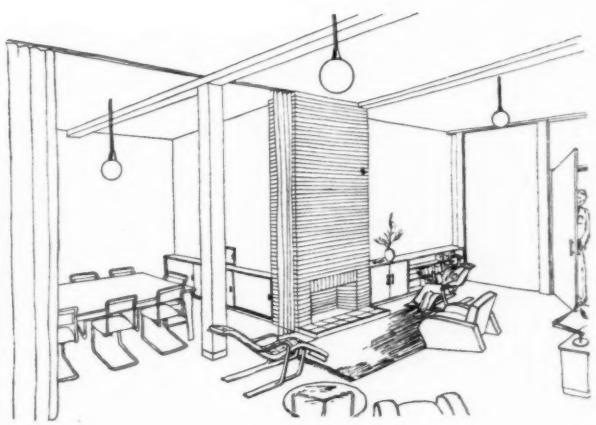
CARETAKER'S COTTAGE



'HEADMASTER'S HOUSE

including covered ways, £12,200; nursery school and chalets and covered ways, £9,300; headmaster's house and covered ways, £950 ; caretaker's lodge and covered way, £600; tool shed, £250; roads and paths, £4,300 ; playing fields, £2,000; bowling greens, £500 ; tennis courts, £500 ; drainage, £5,000 ; site works and levelling, £3,000 ; shrubs, trees, gardens, etc., £1,000 ; outside water services, £500 ; outside electrical services, £1,500 ; contingencies £4,000. Total, £76,850, plus land (24 acres at £70 per acre) £1,680.

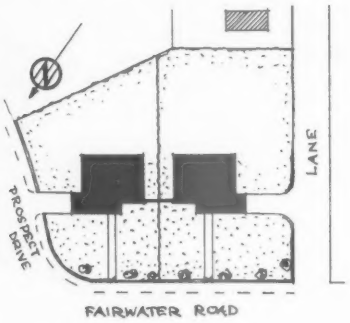


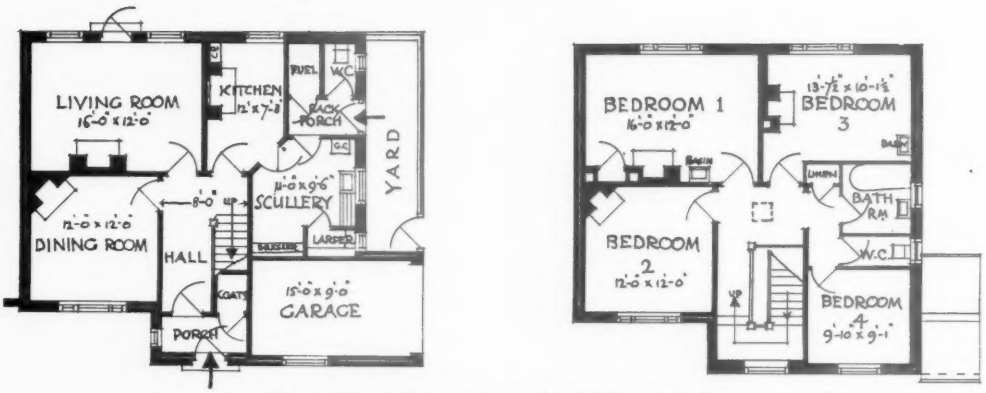


AND STUDENTS OF THE SCHOOL OF ARCHITECTURE, HULL

TWO HOUSES AT CARDIFF

DESIGNED BY T. ALWYN LLOYD





GROUND AND FIRST FLOOR PLANS

GENERAL—The houses were built for a private client for letting purposes.

SITE—At corner of Fairwater Road and Prospect Drive, with open view at rear. A group of pine trees along the road frontage was the only natural feature of the site, and the houses were planned to retain the trees. The garages and screened yards are at the side, approached from an existing lane and Prospect Drive respectively. There is a connecting wall between the houses, which provides arched gateways to back gardens.

PLAN—There are two living-rooms, kitchen and scullery on ground floor, with four bedrooms, bathroom and separate W.C. above.

CONSTRUCTION AND FINISHES—11-in. external walls, covered with cement rendering, and colour-washed cream. Chimneys, plinths and connecting wall are brindled rustic facings. Gables above garage doors, cream painted boarding. Roofs, North Wales green slates. Windows, double hung wood sashes. Front door surround and hood, painted concrete. Boundary walls, local Pennant stone. Internal doors, Columbia pine, stained grey. Ground floors, oak blocks.

COST—Including garages, boundary walls, paths and fencing, £1,226 each house.

WELSH SCHOOL OF ARCHITECTURE

The aim of the Welsh School of Architecture, the Technical College, Cardiff, is to encourage all-round development by means of a well-balanced curriculum. It is striving not only to reach a high standard in Architectural Design and Draughtsmanship, but is also paying increased attention to the study of modern architectural construction, the production of working drawings and the preparation of essays and written theses.

Owing to the comparatively modest size of the school (there were about 50 full-time students last session, averaging about ten per year), careful attention can be paid to the needs of each student.

The School of Architecture, which for the last twelve years has been granted the status of "Final Recognition" by the R.I.B.A., is accommodated in the new wing of the Technical College, Cathays Park, Cardiff.

The school has now been at work for rather more than twenty years under the charge of Mr. W. S. Purchon, M.A., F.R.I.B.A., the Lecturer in Architecture being Mr. Lewis John, M.A., B.A.CH., A.R.I.B.A., and the Assistant Lecturers Mr. C. L. Matthew, A.R.I.B.A., and Mr. G. C. Quilliam, B.ARCH., A.R.I.B.A.

The three years' full-time day course leads to the award of the Certificate, to the holders of which the R.I.B.A. grants exemption from its Intermediate Examination, while those students who successfully pass through the Diploma course are exempted from the R.I.B.A. Final Examination, a special course of lectures on professional practice and a special examination in this subject being held in the school. A course leading to the degree of B.Arch. has been arranged jointly by the University of Wales and the Welsh School of Architecture. This course is open to matriculated students only. There is also an evening atelier for architects' assistants who cannot attend the day courses.

The external examiners are Professor L. B. Budden of the University of Liverpool and Professor R. A. Cordingley of the University of Manchester.

The school year commences on Tuesday, October 1, but intending students are advised to apply at an early date for the particulars of the courses of instruction and of the entrance and scholarship examinations. Candidates for the latter should obtain application forms, which must be completed and submitted by September 12.

SOME QUESTIONS ANSWERED THIS WEEK:

★ *METHODS of using limes and lime mortars during the present shortage of cement: a general answer to many questions* - - - Q477

★ *WE have been given to believe that quite recently there has been evolved a form of concrete block which is admirably suited for the construction of small farm silos. Which firm is responsible for the manufacture of these blocks?* - - - - - Q479

★ *WE are to construct air locks in a number of public shelters and can obtain supplies of plaster board and asbestos-cement sheeting. Which of these forms of sheeting is the best for gas resistance?* - - - - Q480

THE ARCHITECTS' JOURNAL

INFORMATION CENTRE

THE Information Centre answers any question about architecture, building, or the professions and trades within the building industry. It does so free of charge, and its services are available to any member of the industry.

Questions may be sent in writing to THE ARCHITECTS' JOURNAL, 45 The Avenue, Cheam, Surrey, or telephoned direct to the Information Centre: Regent 6888.

Enquirers do not have to wait for an answer until their question is published in the JOURNAL. Answers are sent direct to enquirers by post or telephone as soon as they have been prepared.

The service is confidential; and in no case is the identity of an enquirer disclosed to a third party. Samples and descriptive literature sent to the Information Centre by manufacturers for the use of a particular enquirer are forwarded whenever the Director of the Centre considers them likely to be of use.

Finally, if an answer does not provide all the information needed, the Centre is always glad to amplify any point on which the enquirer wants fuller explanation.

Any questions about building or architecture may be sent to:

THE ARCHITECTS' JOURNAL
45 THE AVENUE, CHEAM, SURREY
Telephone: *VIGILANT 0087*

or ring the Architects' Journal Information Centre at

REGENT 6888

Q477 *A large number of enquiries have been received by the Information Centre concerning the best methods of using LIMES AND LIME MORTARS during the present shortage, or strict control, of cement.*

The best summary of this subject is that given in the Questions and Answers of the Building Research Station (4th Series, No. 8), published in March, 1939, from which we reprint the following excerpts by permission of the Comptroller, H.M. Stationery Office:

LIMES

The limes used in building work show a continuous gradation in properties between the pure, white (high calcium limes) and the eminently hydraulic ("Lias limes") but it is convenient to divide them into three main groups, viz.

(*a*) High calcium lime.
(*b*) Semi-hydraulic lime.
(*c*) Eminently hydraulic lime.

The limes may be sold either unslaked, or as dry-hydrates slaked to a dry powder at the works. In the latter case the manufacturers should be asked to give a guarantee of soundness.

A parallel series of limes exists which contain magnesia and are called magnesian limes, but there are few magnesian limes sold in this country which correspond with classes (*b*) and (*c*) above.

"*White Lime*" (more correctly defined as "high calcium lime").

This is available in two forms:—

(*a*) Lump lime, which is slaked to putty

TABLE I

CHARACTERISTICS OF LIME AND CEMENT AFFECTING THEIR USE IN MORTAR FOR BRICKWORK

	(1) High calcium (stone lime, white chalk lime).	(2) Semi-hydraulic (grey-stone lime).	(3) Eminently hydraulic ("Lias Lime").	(4) Portland cement (white or grey).
Plasticity	Very high.	Good.	Fair to poor.	Less than (1) or (2).
Hydraulic strength ..	Nil. Stiffens on abstraction of water, and then hardens very slowly and gradually by absorption of carbon dioxide from the air.	Setting takes up to 3 weeks. Low early strength. Moderate final strength.	Setting takes place in a few days. Moderate final strength.	Higher hydraulic strength than any lime. Strength is attained earlier and final strength is far higher.
Permeability (of mortar)	High.	High.	Moderate.	Very low.
Suitability for gauging with cement.	Highly suitable.	Suitable.	Usually unnecessary, often undesirable.	—
Method of slaking ..	Run to putty.	Run to putty or slake in pile if hydraulic strength required.	Slake in pile.	—
Period of storage ..	As long as possible.	Brief period 1–2 days if to be used alone. If slaked longer gauge with cement.	Varies according to type. Not more than 1–2 days or hydraulic strength will be impaired.	Must be used up within a few hours after mixing. Prepared mortar becomes more workable up to 4–6 hours storage, but strength will be "killed" if kept longer.

on the job. Slaking presents few special difficulties.

(*b*) Hydrated lime, i.e. in the form of a dry powder, prepared in the lime works. This needs no slaking on the job, but some builders prefer to make it up into mortar or putty and leave it for a few days before use.

These limes possess no hydraulic setting power. Any large mass of putty or mortar in a heap or pit will gradually improve in workability, but will not harden. The mortar immediately stiffens when it dries or when moisture is abstracted from it by contact with a brick. True hardening is very slow. A proportion of cement is commonly added when building with these limes today. This enables the work to be carried up more quickly. A high degree of workability is a general characteristic of the white limes when slaked to putty. The dry hydrates are also reasonably plastic. The combination of the plasticity of the lime with the hydraulicity of Portland cement yields a mortar of excellent characteristics.

"*Grey Lime*" (more correctly defined as semi-hydraulic limes).

These limes, of which grey-stone lime is an example, occupy a position intermediate between the high calcium and the eminently hydraulic limes. When slaked to putty they approach the high calcium limes in plasticity, though some interference with their hydraulic properties is almost certain. If a strong mortar is required, it is then advisable to gauge with cement.

When dry-hydrated in the lime works this difficulty of the destruction of hydraulic power in slaking is overcome. These dry hydrates can be used with confidence to yield a mortar of fair workability and moderate strength. In very cold weather or when increased strength is desired a gauging of cement should be used. A similar effect to dry hydration can be produced by slaking in a pile, covered with sand.

Eminently Hydraulic ("Lias") Lime

Eminently hydraulic limes resemble Portland cement in composition, but are burnt at a lower temperature. They contain free lime, but not enough to slake readily with evolution of heat. They differ from limes of the previous class in attaining their strength much sooner, and in not being usually so plastic or workable. These limes may be slaked on the job or purchased as dry hydrates. In the former case they are usually slaked with a minimum of water and in such a manner as to conserve heat, e.g. in a pile covered with sand. To facilitate slaking they are often sold in powder form, but should then be carefully distinguished from the dry-hydrated limes in this class. The latter only require to be *mixed* with sand and brought to a plastic condition with water. They are then immediately ready for use. Hydraulic lime, suitably slaked, is an ideal mortar for many classes of bricks, since it combines good workability with a moderate strength. (*See* under Sands.) Hydraulic lime should not be gauged with cement as a general rule.

Magnesian Lime

British magnesian limes in general resemble in their characteristics the white limes already discussed though there are one or two of them which contain hydraulic constituents. It is generally considered that the magnesium oxide they contain aids the hardening of the lime so that, after a period, a magnesian lime mortar will be harder than the corresponding high calcium lime mortar. Magnesium oxide does not hydrate as readily as calcium oxide, and for this reason precautions are taken in slaking to conserve heat, very like those applied with hydraulic limes. This is to obviate risk of unsoundness.

A summary of the characteristics of limes from the point of view of their use in mortar for brickwork is given in Table I.

Choice of Mortar Composition for Various Classes of Bricks

It has been pointed out that mortars should be compounded to suit the characteristics of the bricks used. This adjustment cannot be by any means precise and quite a wide range of compositions will be suitable in many instances. The following suggestions should be regarded as indicative merely and not as precise recommendations.

Bricks can be divided according to their strength into three classes which roughly conform with the grading according to absorption. The composition of suitable mortars is shown in Table II.

TABLE II

Crushing strength of brick in lb. per sq. in.	Composition of mortar (parts by volumes)	Maximum permissible pressure (uniformly distributed) in tons per sq. ft. of overall area of wall or pier according to Model Bylaws
1,500–3,000 (Examples: Flettons, gaults, ordinary stocks, Class A Sand Lime Bricks.)	1 cement 3 lime 12 sand or 1 hydraulic lime 2½ sand	5·5
3,000–5,000 (Examples: Some flettons, hard stocks, some red wire cuts, many "Special purposes" sand lime bricks.)	1 cement 1 lime 6 sand	10
over 5,000 (Examples: All clay engineering bricks.)	1 cement 3 sand	16

Stronger or weaker mortars can be used with each of the first two classes, and the corresponding approved loadings are given in the Model Bylaws.

Methods of Preparation

Mortars containing lime and cement may be made from the dry-hydrated limes simply by mixing in the required proportions and then adding water, but it is often convenient and more economical to base the mortar on limes and coarse stuff. The lime in this will usually have been wet-slaked and have developed its maximum plasticity. A (roughly) 1 : 3 : 12 mix will be obtained by merely adding 1 part of cement to 10 or 12 of coarse stuff. If a stronger mortar is desired, say 1 : 1 : 6, it will not be enough to add cement alone, for assuming the coarse stuff is 1 : 3 the addition

of 1 part of cement to 3 parts of coarse stuff will give a 1 : 1 : 3 mix which will be far too rich and very uneconomical. To correct the ratios 3 volumes of sand must be added also.

Effect of Mortar Composition on Strength of Brickwork

The strength of brickwork, built with bricks of intermediate strength, is not so much influenced by the strength of the mortar as is often supposed. A mortar containing quite a high proportion of lime may give results hardly inferior to those with cement. As strength is often not the prime consideration, and in view of the importance from the point of view of weatherproofness of having well-filled joints and good adhesion, the advantages of the " gauged " or " compo " mortars will be apparent.

Sands

The foregoing discussion has been confined to the cementitious constituents of mortar, but some reference must be made to the characteristics of sand. Fortunately, the requirements for sand for brickwork mortar are not stringent, the position being far different in the case of sand for concrete ; nevertheless there are several points deserving attention.

(1) Well-graded sand (by which is meant one containing proportions of all grain sizes) will yield a workable mortar with less lime and cement than sand which consists of grains which are all of one size. Fine sands of uniform grain size should be avoided if possible.

(2) Sands must be chosen with care when using hydraulic lime. Very fine sands will yield a joint which can be rubbed away, unless a rich mix is used. Loam interferes with the set of hydraulic lime and cement, and this may be serious in the case of the lime owing to its relatively feeble hardening properties. Sand for hydraulic lime should be clean and well-graded. A mix of 1 : 2½ or 1 : 3 will be suitable.

(3) The presence of a *small* proportion of loam (2–5 per cent.) need not be objected to in cement or compo mortars. The loam or clayey material will act rather like lime, making the mortar more workable. An excess of loam or clay may be objectionable as it will increase the liability to shrinkage. If the sand is heavily loaded with clay and silt, it will be advisable to reduce the lime in the mix to compensate for it. The reason is as follows. Suppose that a 1 : 1 : 6 mix is required. If a sand is used containing 10 per cent. of the loam the true proportions are

1 part cement.
1 „ lime.
6/10 „ loam or clay.
5 4/10 parts sand.

Assuming the clay to be in some respects equivalent to the lime, the mix is roughly 1 : 2, which is rather too rich in fine material. Also the ratio of lime and clay to cement is 1·6 to 1, not 1 to 1 as was desired, and the mortar will, therefore, be much weaker than was intended. Experienced craftsmen instinctively make adjustments to meet difficulties of this sort, and this doubtless accounts for the many examples of good work performed with most unpromising materials. Where the element of skill is lacking, the most rigid specification cannot prevent trouble.

INFORMATION CENTRE

The Information Centre must make clear that, while it gives general opinions on problems involving legal matters, such advice must in no case be taken as a legal opinion on the facts of a particular case. It must also be made clear that the Centre, in helping to solve inquirers' problems, can accept no responsibility for any action taken as a result of its advice.

Q478 ARCHITECTS, HERTFORDSHIRE.—*Some two months ago a client instructed us to provide SHELTER ACCOMMODATION in a block of flats and in an office building. The work has been completed and the final account has been passed by us to the client. He now enquires what steps are to be taken so that he can obtain a GRANT TOWARDS THE COST of this work. We shall be glad if you will advise us.*

It is not stated whether certain necessary preliminaries were carried out before providing the shelters. With the block of flats did a request for the shelter come from the tenants and from tenants occupying more than 50 per cent. of the flats ? If so, then the plans and costs entailed should have been agreed with the tenants and also the proportion of cost payable by each tenant. If this was not done, it might be difficult now to press a claim against the tenants.

As regards the office building, if 50 persons or over are employed on the premises, the owner no doubt received an order to provide shelter. Thereafter, a form had to be completed and returned, together with plans and costs, to the local Borough Engineer who approved the scheme, inspected and passed the work as done and forwarded the completed form to the Ministry concerned for payment of grant. This is the normal method of procedure, but it applies only to where 50 persons or more are employed about the premises. No grant is available where a less number of persons are employed.

Q479 FERTILIZER MANUFACTURERS, DURHAM. —*We have been given to believe that quite recently there has been evolved a form of concrete block which is admirably suited for the construction of small farm silos. Which firm is responsible for the manufacture of these blocks?*

This would seem to refer to one of the many uses which can be made of the centerless arch blocks designed and patented by H.M. Building Research Station. These blocks were designed primarily for the construction of shelters and hutments, but additional uses have been found for this particular design of block and included in these other uses are silos. This centerless arch block and its uses is the subject of Wartime Building Bulletin No. 6, published by H.M. Stationery Office, York House, Kingsway, London, W.C.2, price 1s. net. The block is of patented design, but responsible manufacturing firms, by applying to the Secretary, Department of Scientific and Industrial Research, Teddington, Middlesex, may obtain, free, a licence to manufacture. All members of the British Concrete Federation have undertaken to produce the blocks, and a list of such firms and giving their geographical distribution may be obtained free on application to the Secretary of the Federation, A. S. Windsor, Esq., 17 Amherst Road, Ealing, London, W.13. In addition to members of this Federation, certain additional firms have applied for and have been granted a licence to manufacture. The names of these additional firms are given below.*

Q480 LOCAL AUTHORITY, LONDON. — *We are to construct air locks in a number of public shelters and can obtain supplies of plaster board and asbestos-cement sheeting. Which of these forms of SHEETING is the best FOR GAS RESISTANCE?*

As a general guide it can be taken that the nearer a surface approaches the nature and impermeability of a fired glaze on a tile or brick, the more resistant to gas is that surface. Plaster board has a thick paper surface. Asbestos-cement sheeting, too, will have a fair absorption. But this absorption may be reduced and the material given a more glossy and less absorptive nature by surface applications of waterglass or sodium silicate solution. Such a treatment would be advisable. Sodium silicate in solid form or in solutions of

* *Marley Tile Holding Co., Ltd., London Road, Riverhead, near Sevenoaks, Kent ; Rapid Floor Co., Ltd., Whitton Road, Twickenham ; Metropolitan Concrete Works, Ltd., Imber Court, East Molesey, Surrey ; G. R. Speaker & Co., Ltd., Eternit House, Stevenage Road, London, S.W.6 ; Property Development and Construction Co., Ltd., Lady Margaret Road, Southall, Middlesex ; R. W. Hands, North Wembley, Middlesex ; Mono Concrete Co., Ltd., Horton Road, Yiewsley, West Drayton ; Girlings Ferro-Concrete Co., Ltd., Great West Road, Feltham, Middlesex ; Yeoman and Partners, Ltd., 41 Upper Berkeley Street, London, W.2 ; Walter Lawrence and Son, Ltd., 31 Sun Street, London, E.C.2 ; Carlton (Contractors), Ltd., Station Road, Crayford ; Diespeker & Co., Ltd., Clifton House, Euston Road, London, N.W.1 ; Buckton Quarry Co., Ltd., Buckton Vale, Mossley, Manchester ; Northern Cast Stone Co., Ltd., South Street, Newcastle, 1 ; Premier Artificial Stone Co., Chapel End, Nuneaton ; Blokcrete Co., Ltd., Mount Pleasant Wharf, Southampton ; Empire Stone Co., Ltd., Narborough, Leicester.*

varying concentrations can be purchased from any firm of industrial chemists, or from Messrs. Sealocrete Products, Ltd., Atlantic Works, Macbeth Street, Hammersmith, W.6. Messrs. Joseph Freeman, Sons & Co., Ltd., Cementone Works, Wandsworth, S.W.18, have proprietary solutions suitable for the purpose. Another alternative would be to use a glazed asbestos-cement sheeting. A wide range of effects and finishes in glazed asbestos-cement sheets is available from Turners Asbestos Cement Co., Ltd., Trafford Park, Manchester, and of Erith, Kent.

Q481 CIVIL ENGINEERING CONTRACTORS, LONDON.—*There is a process existing for the APPLICATION OF ASPHALT BY means of a FLAME-GUN. No other details are known to us, or for that matter whether the process is British, but for work we are engaged upon at the moment such a process would have interesting possibilities. Are any details of this process known to you? If so, we should be grateful for any information, also for the name of the operating company.*

The process is British and is used by the Limmer and Trinidad Lake Asphalt Co., Ltd., Berry Hill House, Taplow, Bucks. After research and development extending over several years the firm has just recently introduced this Gunned Asphalt in its present commercial form. The method is designed to be used *in situ*, and cold powdered asphalt is projected through a flame-gun on to the surface to be treated. The thickness of the coating can be regulated by the speed of the operation, and can be varied from $\frac{1}{8}$ in. to $\frac{3}{8}$ in. and forms in a dense, jointless and impermeable layer. Gunned Asphalt can be applied over concrete, steel, brickwork and wallboards, and in horizontal, vertical and overhead positions, and with equal ease in both straight and curved work. The economical use of the process is not limited to large areas; small areas can be handled easily, and the portable equipment involved is not extensive. The accompanying photograph shows the actual gunning operation, and with the captions explains the technique of application.

A demonstration of the process will be given on Wednesday, September 4, at 3 p.m., at Trinidad Wharf, Carmouth Road, London, S.W.6, and those interested and wishing to attend the demonstration should communicate with Mr. Hope, of the Limmer and Trinidad Lake Asphalt Co., Ltd. The telephone number is Renown 4653.

NFORMATION CENTRE

The application of "gunned" asphalt:—1. The Flame-gun in the hands of the operator. 2 & 3. The Compressed Oxygen and Propane Supplies for feeding the flame to the gun. 4. A normal type of portable compressor for supplying compressed air to the gun, by means of which the powder is sucked through a supply pipe-line in partial vacuum from the feed hopper (5). 6. Shows the asphalt coating already applied in a continuous layer.

TRADE NOTES

Concrete Roofs

Since it was approved by the War Office three months ago, Bison roofing, because of the speed with which it can be erected, is being widely used in the building of huts for the Army. It is made of hollow pre-cast concrete units, with cavities formed by the pneumatic core method controlled by Concrete, Ltd., of Leeds and London.

In the erection of the Bison roof no rafters or purlins are required. The pre-cast hollow slabs are merely laid in position between the gutter beams and the apex of the hut, and are trussed by tie and sag bars. Hence the speeding up of the laying of the roofs. The firm states that, in one new camp, huts, each 19 ft. by 60 ft., were roofed at the rate of one a day.

Bison roofs are made by mass production methods and are designed for spans of 19 ft., 24 ft. and 28 ft., as well as for composite roofs of these spans with valley gutters.

In order to cope with the demand for the new roofing and their other pre-cast products, Concrete, Ltd., have recently opened additional factories and have greatly extended their existing works in Leeds and London.—(*Concrete, Ltd., Grand Buildings, Trafalgar Square, London, W.C.2*).

Glass Substitute

In view of the increased tempo of aerial activity and the consequent possibility of finding our window frames devoid of glass, most of us will be interested to have a few

New Army hut, showing the Bison (pre-cast concrete) roof in position.

Owing to the paper shortage, the JOURNAL, *in common with all other papers, is now only supplied to newsagents on a "firm order" basis. This means that newsagents are now unable to supply the* JOURNAL *except to a client's definite order.*

To obtain your copy of the JOURNAL *you must therefore either place a definite order with your newsagent or send a subscription order to the Publishers.*

details of "Steadoglass," an oiled fabric for glass replacement.

The sample I have seen shows a high degree of translucency, and though it is not, of course, transparent, it leaves a room habitable and cheerful, which is more than can be said if cardboard, tarpaulin or wood is hastily put up for weather protection.

"Steadoglass" is available in rolls of 30 yds., with a choice of widths of 37 in.–38 in. and 50 in.–52 in. at 3s. 3d. and 4s. 6d. a yard, respectively. It is easily fixed to wooden frames by large headed tacks or clout nails, preferably with a half-inch turn-in all the way round. Joins are easily made with an ordinary sewing machine to make up larger sizes as required.

The manufacturers do not recommend it for use for metal windows, as they have not been able to devise so far a suitable method of fixing. For temporary emergency use, however, I believe surgical tape might do the trick. It has astounding adhesive properties on almost any kind of a surface and has solved a number of awkward black-out problems for me. However, I would not attempt it in exposed south-west positions, of course.

A super quality of "Steadoglass" is available for factory skylights and other heavy-duty purposes.—*(Storeys of Lancaster, White Cross Mills, Lancaster.)*

H. M.

Glass Protection

Better than repairing the glass is to protect it so that it has a good chance of surviving the explosion. This seems, therefore, an appropriate place to mention the new technique recommended by Cellon, Ltd., for applying their shatter-resisting varnish.

Transparent adhesive tape is first applied vertically, horizontally or diagonally with an inch space between the bands, or cross-ways giving spaces of 2–3 sq. in. Two coats minimum of "Cerrux" varnish is then sprayed or brushed over the whole window. The tape is available in 1 in., 1½ in., and 2 in. widths.—*(Cellon, Ltd., Kingston-on-Thames.)*

H. M.

B.S.I.

A new specification for pressure creosoting of timber (No. 913) has just been published.

The specification covers the methods of pressure creosoting usually employed in this country and gives minimum absorption figures for effective treatment over a wide range of timbers.

Copies of this new specification may be obtained from the British Standards Institution, 28 Victoria Street, London, S.W.1, price 2s. 3d. post free.

THE BUILDINGS ILLUSTRATED

CHURCH OF ST. NICHOLAS, BISHOPWEARMOUTH, SUNDERLAND (pages 169-171). Architects: Cordingley and McIntyre. General contractors were Gordon, Durham & Co., Ltd. Sub-contractors and suppliers included: Ruberoid Co., Ltd., dampcourses; Chemical Building Products, Ltd., Prolapin waterproofer; Matthews and Mumby, Ltd., reinforcements; Crossley and Sons, Ltd., Eaglescliffe H.M. sand-faced bricks; Northern Cast Stone Co., Ltd., artificial stone; Richardson and Greenwell, structural steel; Colthurst, Symonds & Co., Ltd., sand-faced Bambino interlocking tiles; Digby, Nelson and Sons, Ltd., tiles; D. Anderson and Son, Ltd., Macasfelt bitumen roofing, copper flashings and eaves fillets; Pilkington Bros., Ltd., white plain cathedral glass; Elders, Walker & Co., Ltd., glazier work; Terradura Flooring Co., Ltd., patent flooring; R.I.W. Protective Products, Ltd., waterproofing materials; A. R. Poole and Sons, Ltd., low-pressure h.w. and unit heaters; Ideal Boilers and Radiators, Ltd., boilers; Falconar Cross & Co., Ltd., electric wiring; Messrs. Sunco, electric light fixtures; Watson and Coates, plumbing; N. F. Ramsay & Co., Ltd., door furniture; Doodson and Bain, Ltd., casements; British Plaster Board Co., Ltd., plaster; Webster Davidson & Co., Ltd., plasterers; C. N. Bertram, sculpture to S.W. entrance; James D. Bennett, Ltd., furniture (seating); E. Bowman and Sons, altars, altar rails, pulpit, lectern, choir seating, organ grille; J. W. Alder and Sons, decoration.

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

The Incorporated Association of Architects and Surveyors maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. Address **75 Eaton Place, London, S.W.1. Tel.: Sloane 5615** 991

Architectural Appointments Wanted

CLERK OF WORKS. Fully qualified; last 10 years with Railway Company; just completed one million contract; work carried out under civil engineers and architects; salary to mutual arrangement. Box 89.

ARCHITECTURAL ASSISTANT (age 22), A.R.I.B.A., exempt from military service, seeks situation anywhere in England or Wales in architect's or town planner's office; R.I.B.A. Soane Medallion Finalist 1939–40; six months' experience with factory designers; two years' experience in schools and clinics with well-known London architect; studying for T.P.I. Associate membership examination; at present disengaged; salary by arrangement. Reply A.R.I.B.A., 210 Torbay Road, Harrow, Middx. Tel. Pinner 4387. 108

ARCHITECT (CHARTERED), 18½ years' experience, offers **part time** services, say two or three days a week, London or Surrey preferred. E. J. Wood, Little Elmore, Clive Road, Esher. Tel. Esher 1284. 106

JUNIOR ARCHITECT'S ASSISTANT, 18½ years of age; 2½ years' experience in garages and factories (W.D.s, ¼-in. and F.S. details, quantities and final accounts); A.R.P. experience with local authority (public, domestic and basement shelters). Apply Box 110.

ARCHITECTURAL ASSISTANT (age 43), considerable experience, including modern interior decoration, furniture, shops, shop-windows, able to plan for all trades, alteration of existing buildings, requires position in architectural drawing office, cabinet making, etc.; salary by arrangement. O. Skolaude, 46 Gopsall Street, Leicester. 111

ARCHITECTURAL ASSISTANT (20) classed grade 3 at medical examination; intermediate standard; five years' experience in architects' and surveyors' office, including four years articles, general office work, preparation of ¼ scale drawings, from sketch plans to full size details; surveying and levelling; setting out on site and general supervision; general domestic work for houses, £650-£1,500 and specifications for same; road surveys, alteration work to public houses, etc.; experience with showrooms, offices and hotels. Box 113.

CLERK-OF-WORKS AND BUILDING SURVEYOR seeks re-engagement; disengaged owing to the War; over 25 years' extensive, varied experience of all classes of Buildings, in first class work; recently completed £212,500 contract; testimonials from architects and surveyors, municipal engineers and surveyors, etc.; over military age; rendered War Service during 1914-18 Great War; salary to mutual arrangement. Box 114.

ARCHITECTURAL ASSISTANT (young lady), B.A., Hons. Arch., A.R.I.B.A., desires situation in any part of the country. Previous office experience, schools, farms, domestic, A.R.P.; references; salary by arrangement. Margaret J. Wilson, 16 Canute Road, Stretford, Lancashire. 116

ARCHITECT AND SURVEYOR offers services as required in London, Surrey, or own office, one to three days. Specifications, quantities, dilapidations, A.R.P., factories, layouts, surveys, details, etc. Box 118.

YOUNG MAN, 22 years of age, expecting to be called up for service at Christmas, seeks temporary position as draughtsman at a salary of £2 10s. per week; educated up to school certificate standard; training in architecture; experience with private architects, H.M.O.W.; excellent references. Box 117.

Other Appointments Wanted

Four lines or under, 2s. 6d.; each additional line, 6d.

ADVERTISEMENT MANAGER, 18 years with well known firm of lighting engineers, 11 years as sales representative and 7 years in charge of advertising and publicity, now owing to the war seeks new position. Thorough knowledge of sales promotion and some experience of journalism both for trade and general press. Box 78.

LADY SECRETARY, 12 years' experience building trade and estate market, seeks situation. Fluent French and German, knowledge of company law, book-keeping, etc. All secretarial duties, high speeds shorthand, typewriting. Part or whole time. Preferably London. Box 981.

YOUNG LADY (17) good education and with a little experience in domestic architecture desires position in architect's or engineer's office as tracer at moderate salary. Write Joyce Heaviside, 3 Bolingbroke Mansions, Bolingbroke Grove, S.W.11. 115

The Proprietors of **The Architects' Journal** have placed this space at the disposal of the **British Legion Officers' Association Employment Bureau, 20 Grosvenor Gardens, London, S.W.1** (Tel.: Sloane 2315), to whom all replies should be addressed, quoting number of advertisement, date of insertion, and the name of this paper.

V.C., EX-OFFICER (48), energetic, requires employment, clerical or otherwise, preferably London district; good references; gladly attend any interview. 10416

EX-OFFICER seeks position as assistant or sales manager, home or abroad; used to technical correspondence, office routine and organisation; mechanical engineering trained and sales experience. 19073

EX-OFFICER, live, energetic, seeks post demanding initiative, organising ability, knowledge light engineering and manufacture small parts; many years executive similar capacity, inventive, methodical, good disciplinarian; excellent references. 19014

EX-OFFICER (42), exceptional experience all branches brewery, wines and spirits; travelling, etc.; sound credentials, courteous; anything considered inside or outside; would reside anywhere. 14460

EX-OFFICER urgently seeks position with prospects; held important administrative positions commerce and government; good organiser; highest recommendations; available immediately, go anywhere; moderate salary pending proof ability. 19112

EX-OFFICER, wounded last war, requires indoor employment, any capacity; architect and surveyor by profession, F.R.I.B.A., F.S.I., but with good knowledge of book-keeping, office correspondence, etc.; highest references. Dis. 502

REPRESENTATION offered by gentleman with life-long experience clay goods; salary, commission and expenses basis; exceptionally good connection London and district; highest credentials. 8034

MASTER BUILDER (M.Inst.R.A.); assistant architect and surveyor; general foreman or clerk of works; age 60; married. 3249/A/AEN

EX-OFFICER, 1914-18, aged 43; general building knowledge; 10 years' contact with councils, architects, builders; reinforced concrete and scale model specialist; controlled own and other works; desires progressive post of responsibility. Dis. 456

In addition to the above-mentioned, the Officers' Association Employment Bureau has on the Register a large number of ex-officers of various qualifications and the Secretary would be very grateful if Employers would kindly notify to him at 20 Grosvenor Gardens, London, S.W.1, particulars of any vacancy they may have available. Telephone: **Sloane 2315.**

To Let

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

QUEEN ANNE'S GATE. Two adjoining houses in Queen Anne's Gate to be let. Opening between the houses has been made at all floor levels, so that the two houses form one office. Accommodation comprises about 24 rooms. Full particulars from Box 43.

Classified Advertisements continued on page xxii.