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SOUTH AFRICAN ARCHITECTURAL RECORD

THE JOURNAL OF THE CAPE, NATAL, ORANGE FREE STATE AND TRANSVAAL PROVINCIAL INSTITUTES OF SOUTH AFRICAN ARCHITECTS AND THE CHAPTER OF SOUTH AFRICAN QUANTITY SURVEYORS.
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The Editors will be glad to consider any MSS., photographs or sketches submitted to them, but they should be accompanied by stamped addressed envelopes for return if unsuitable. In case of loss or injury they cannot hold themselves responsible for MSS., photographs or sketches, and publication in the Journal can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all pictures and MSS. The Institute does not hold itself responsible for the opinions expressed by contributors. Annual subscription £1 10s. direct from the Secretary.



Stewart Bale, Ltd.

Part of the Amusement Park at the famous seaside resort of Blackpool in north-west England

BRITAIN PLANS FOR RECREATION

By Gilbert McAllister

As the working hours in industry are reduced, increased facilities for recreation will be required. In Britain, the community centre movement is expanding rapidly, while it is hoped that the provision of National Parks and coastal reservations will supply even wider opportunities for recreation in the open air.

★ ★ ★

Four out of every five people in the British Isles live in towns. That is the extent of urbanisation in this crowded Island, in which the working hours of so many people are so largely devoted to manufacturing articles from raw materials imported from overseas.

It is a fact that has given rise to much concern in Britain itself, for many reasons. It means, for example, that while there has been a great advance in living conditions generally, the townsman and townswoman and the children of the town are cut off from one of the best ways of maintaining health, efficiency and happiness; namely, recreation in the open air. It does not matter greatly what form that recreation takes; whether it be leisurely walks through pleasant country, strenuous hikes over moorland, stiff climbing of mountains, or participation in sports such as football, cricket, tennis, swimming, or golf.

The sad fact has to be admitted, however, that in the towns and cities of Britain to-day there is just not sufficient open space to make participation in games possible for more than a third of those who wish to take part in them. In London, for example, the London County Council has to limit each cricket club to the use of any given pitch for six games a season, while every football club is restricted to the use of a pitch for seven games in the season.

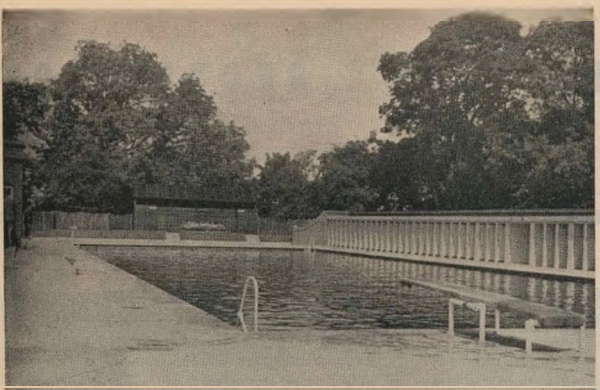
That was a serious problem before the 1939-1945 war. It will become much more serious now if, as is believed, increased production per man per hour in the factories leads to the possibility of an even shorter working week than the forty-seven-hours-week commonly enjoyed before the war. The recreation problem will become more acute as the industrial workers obtain more and more leisure.

Fortunately, considerable attention has been given to the matter, particularly by an influential organisation known as the National Playing Fields Association. In the United States of America, town planning experts recommend a minimum provision of public open space of 5 acres per thousand of the population. The National Playing Fields Association recommends a minimum of 6 acres per thousand in Britain. Ideally 8 acres should, they say, be provided: five acres, to be made up of 4 acres devoted to team and other games, and one acre for gardens and amenity purposes generally, in addition to a further three acres of playing fields per thousand of the population for colleges, schools, private sports clubs, and the recreation grounds of industrial firms.

To-day, in eight of the largest cities of Britain the total open space provided is rather less than two acres per thousand of the population, but in the new plans, steps are being taken to correct this. In Professor Sir Patrick Abercrombie's Plan for the County of London, for example, provision is made for 7 acres of open space for every two thousand of the population. Of these, four acres will be located in the County of London itself, the remaining three acres will be located in the Green Belt which is to set a limit to the expansion of London and which will be permanently reserved for agriculture, recreation and the quiet enjoyment of the countryside.

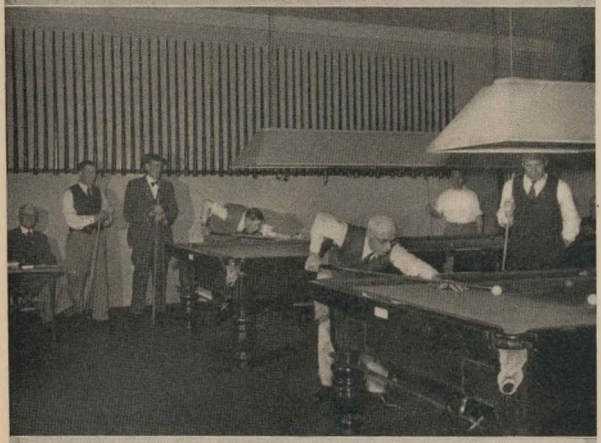
This is a bold plan but is not unrealisable. It will be integrated, too, with other proposals now under consideration for the provision of National Parks, coastal reservations, and the preservation of places of special beauty.

Within the town itself, the new playing field spaces will make provision for every section of the community. For small children there will be a number of small playgrounds equipped with simple gymnastic apparatus, where they may play safely away from traffic. For children of ten years and over it is expected that suitable playing space will be provided by the education authorities in playing fields attached to the schools themselves. That would be in line with traditional British methods. For adolescents and others who require larger areas for team games, pitches and other facilities will be provided, clubs using the facilities being expected to pay modest fees which will meet the maintenance charges, although not the capital cost.



Sidney Newberry

The Urban District Council swimming pool at Eastleigh, in Hampshire.



British Council

A well-equipped billiard room in the Village College at Impington, Cambridgeshire, which is a school by day and a community centre in the evenings. This village college serves the educational, social and recreational needs of the populations of ten surrounding villages.



Times

The football pitches in a public park at Hackney Marsh, in the East End of London. London, which is already well off for open spaces for a city of its size, nevertheless plans for more.



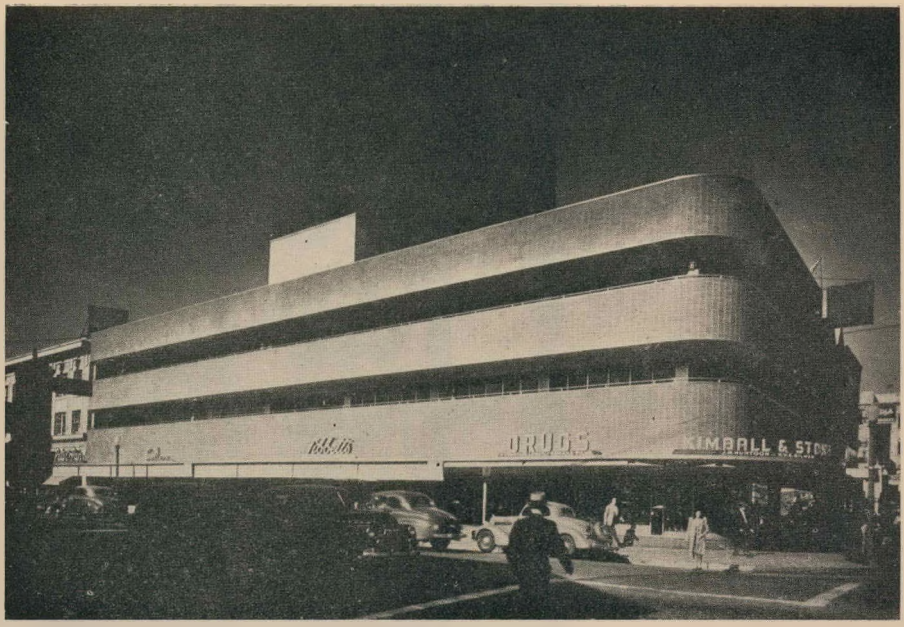
Fox

Children dancing round a maypole in a public recreation ground attached to a school in Surrey.

Side by side with this development, a great expansion of the Community Centre movement is also contemplated. Many Community Centres were erected in Britain between 1918 and 1939, and now the provision of community centres has, by decision of the British Government, been made a responsibility of the education authorities, the object being "to promote the social and physical training and recreation of the community."

In providing suitable buildings the emphasis is laid first on "social" activities—dances, whist-drives, concerts, etc.—but room is also made for the holding of classes in subjects such as economics, international relations, or psychology. Between these extremes lies a vast variety of interest for which, says the Ministry of Education, the community centre can and should cater. Music, drama and choral societies can rehearse and produce there: the allotments association, the rabbit club, the savings group, the film society can hold business meetings and social functions. There, too, will be the common room, the games room, and the canteen to which members can resort to read, play games, or chat over a meal.

The Council for the Encouragement of Music and the Arts (now the Arts Council of Great Britain) have, in co-operation with the Ministry of Education, recently prepared plans and models of suggested arts centres. There has been an enormous increase of interest in exhibitions of paintings, in ballet, in performances of classical plays and classical music. These performances have not always been easy to present, especially in the small towns, owing to lack of proper halls and accommodation. The Arts Council proposes for small towns where separate buildings for concerts and plays are not practicable, the incorporation of a well-equipped hall, with a stage, in a general community centre containing restaurant, meeting, reading and exhibition rooms.

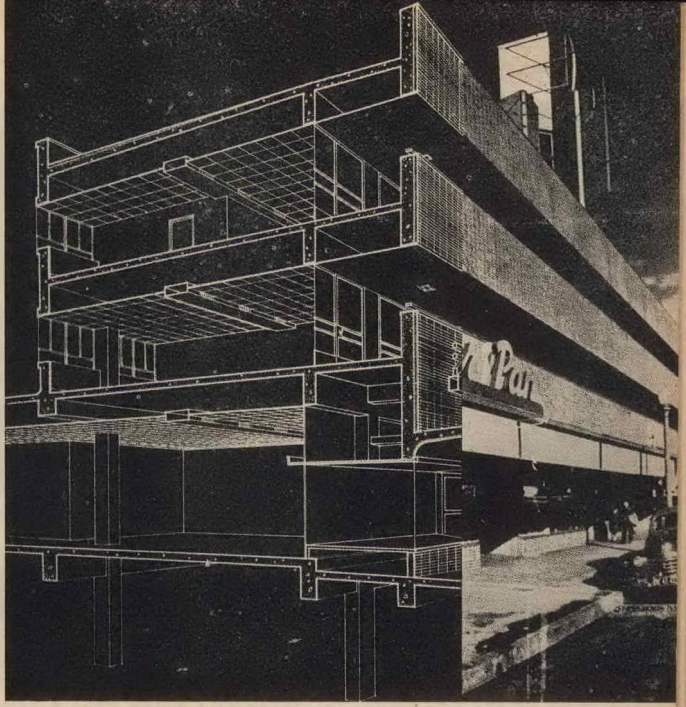


Office Building, Bakersfield, California

Franklin and Kump and Associates, Architects

The Sill Building, designed to provide the utmost flexibility in the placement of interior partitioning and to gain for all tenants an abundance of light and air, is located at a main intersection of a small Californian city. It is as remarkable for its simplicity as it is for its efficiency. Unnecessary construction cost and the problem of "interior" rooms were both avoided by the device of sidewalks at every floor level in the place of inside hallways; both stairs and an elevator serve these outdoor corridors. Walls of the office floors bordering the walks are glazed from floor to ceiling —diffused glass is used where privacy and light, but not sight, are desired. The depth of the sidewalk projection is designed to eliminate an excess of sunlight.

ABOVE: General view of the Sill Building, Bakersfield. Upper level sidewalks take the place of corridors and provide the building with an abundance of light. Three more floors are to be added to complete the structure.



PURPOSE:

To provide rental office space on upper floors

To provide store space on ground floor

To provide off-street parking for tenants' cars

CLIMATE

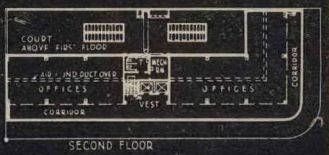
Unusually hot in summer, with glaring sun

Quite cool in winter

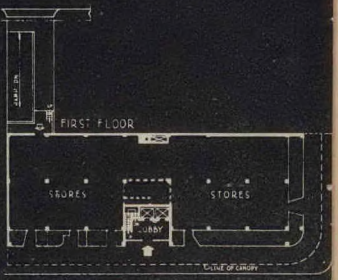
DESIGN CONSIDERATIONS:

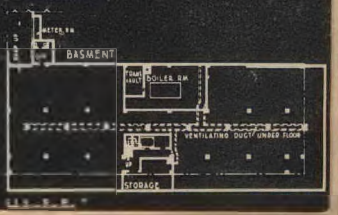
Ample controlled daylighting for office space

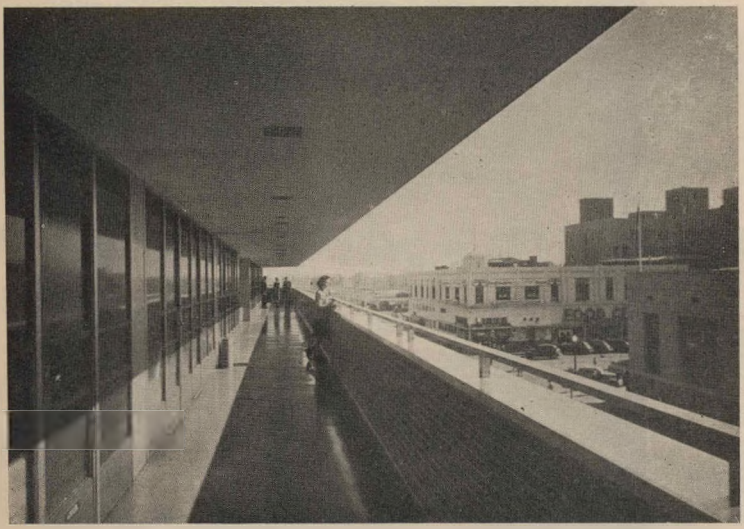
Flexibility, to make office alterations easy



SECOND FLOOR







ABOVE: One of the upper-level sidewalks which are concrete cantilevered extensions of the floor slabs. Adjacent walls of the offices are of glazed panels and doors. BELOW: Typical office space. Partitions may be placed at any point; access to utilities, installed between furred ceilings and floor-slab construction, is by means of removable squares of acoustic material with which the ceiling is surfaced.





Street level view of the shops, protected by the reinforced concrete cantilevered canopy.

Construction is a simple, reinforced concrete frame with flat-slab floor decks—a skeleton within which exterior walls and interior partitions can be variously arranged to suit any tenant's needs. The cantilevered sidewalks, which are extensions of the floor slabs, permit the use of a flexible exterior wall: both ceiling and floor finishes are continuous throughout each floor, and special prefabricated partitioning is designed to fit tightly between these two surfaces. Street fronts of the building are surfaced with a locally produced hard-burnt soap brick and metal trim, handles, etc., are in aluminium.

Office space is such that it cannot be more than two rooms in depth, each room having external light, as the upper floors do not extend the full depth of the building. All finished ceilings are furred down from the construction, providing space for all ductwork, wiring, etc. Access to these utilities for improvement or repair is a simple matter, as the furred ceiling is made up and surfaced with squares of acoustic materials, any one of which may readily be removed by screws which attach it to the framing. The whole building is air-conditioned for year-round comfort. A garage in the basement is provided for the storage of tenants' cars.

With acknowledgements to "Pencil Points" March, 1945

HYPERBOLIC COOLING TOWERS AT THE VAAL GENERATING STATION

By J. F. Lambert, M.I.A.

At the Vaal Generating Station, situated on the Free State side of the Vaal River, about eight miles from Vereeniging, two hyperbolic ferro-concrete cooling towers have been constructed for cooling the condenser water from the five turbo-generators, each of 33,000 k.w. and one house set of 7,000 k.w. (Two main generators are now in service, and the remaining sets will shortly be put into commission.)

1. The enormous size of the Cooling Tower may be gauged from this composite illustration with the 235 feet of Escom House, Johannesburg, dwarfed by the 320-foot mass of the tower. Both structures are shown to the same scale.



Each tower is capable of cooling 4,000,000 gallons of water per hour, bringing the temperature of the water down approximately 10°C., with a loss of approximately 1.2 gallons of water per electrical unit sent out, through evaporation and blowing down the ponds to prevent excessive concentration of salts in the circulating water.

This loss is made up by means of a pumping station, situated at the Vaal River about 3½ miles from the generating station, where two pumps have been installed, each with a capacity of 180,000 gallons of water per hour.

The cooling towers, having a total height of 320 feet above pond level, a diameter of 226 feet at the bottom of the tower, and a diameter of 120 feet at the top, are visible over a distance of some 30 miles radius, and, to the best of the author's knowledge, are at present the largest of their kind in the world. The enormous size may be judged from Illustration 1, which is a photograph of Escom House, in Johannesburg, superimposed on a photograph of one of the towers, both being to the same scale.

On the upper rim of one of the towers is constructed a 5-foot high concrete post, serving as a trigonometrical survey station.

The tower is constructed as a hyperbolic shell, supported on diagonal legs, standing over a circular pond, and it has an annular culvert around the outside of the shell, 42 ft. 6 in. above pond level, 9 ft. 3 in. high and 9 ft. wide, from which the circulating water passes to the interior of the tower.

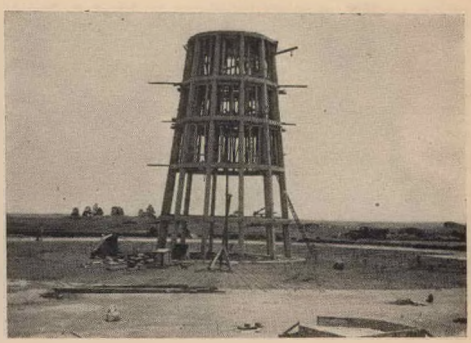
The idea of a hyperbolic shell for cooling towers is said to have been first introduced in Belgium, and later adopted by a well-known consulting civil engineering firm in England, as being the most economical form for cooling large quantities of water.

The basic principles of operation of one of these cooling towers may be expressed as follows :—

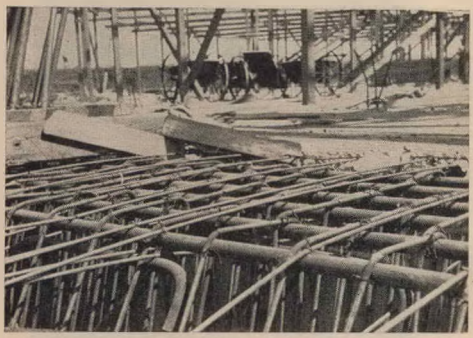
The warm water from the turbine condensers is pumped via the external annular culvert to 96 radial asbestos cement pipes, laid horizontally and fitted with spray nozzles at intervals along their length, to distribute the water in the form of a fine spray over the full sectional area of the tower at this level. There are 3,720 asbestos cement spray nozzles in each tower.



1. The enormous size of the Cooling Tower may be gauged from this the circular foundation for the central structure and the main ring beam.



4. The central structure in reinforced concrete, which carries the redwood stacks and spray piping, with the reinforcement for the pond bottom.



3. Preliminary stage of the fixing of the reinforcement of the ring beam.



5. Detail of the steel reinforcement of the great ring beam.

The whole of the tower, below the distribution piping, is occupied by an intricate system of wooden louvres supported on a timber framework, the purpose of which is to break up the water into fine drops to increase the surface area of water and the time during which each drop is exposed to the cooling action of the upward current of air.

The remainder of the tower, above the water distribution system, performs the function of a chimney, to induce the flow of air through the tower.

The shape of the tower is favourable to the flow of the moisture laden air, without forming eddies, but its most important property is that, as a structure, it provides great strength with a minimum of reinforcing steel. The reinforcing bars in the tower shell form an inner and outer diamond mesh pattern, and each bar is perfectly straight as it passes diagonally through the hyperbolic curve of the tower.

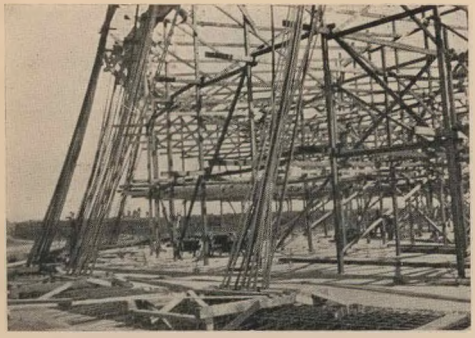
The construction of the complete cooling tower was carried out in seven different stages, as follows :—

First Stage : The excavation for the building mat and ring beam totalling approximately 5,000 cubic yards.

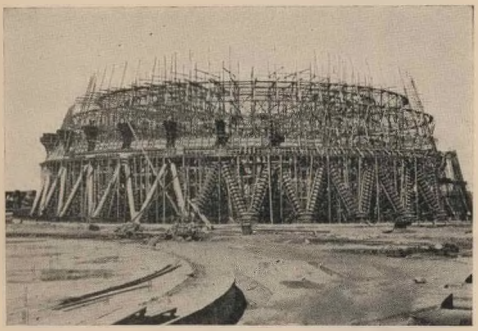
Second Stage : The laying of a mass concrete blinding mat over the whole area of the pond bottom and sides of ring beam, which at the same time provided the form for the ring beam supporting the diagonal columns, totalling approximately 5,100 cubic yards of 5-2½-1 mix concrete. 2.

Third Stage : The laying of the reinforced concrete pond bottom and pond walls with a diameter of 230 feet, requiring approximately 1,000 cubic yards of 3-1½-1 mix concrete and 65 tons of reinforcing steel. 3.

Fourth Stage : The building of a 51-feet high reinforced concrete centre structure, complete with reinforced concrete



6. Initial stages in the erection of the main shell scaffolding, showing the reinforcement for the diagonal legs rising out of the ring beam.

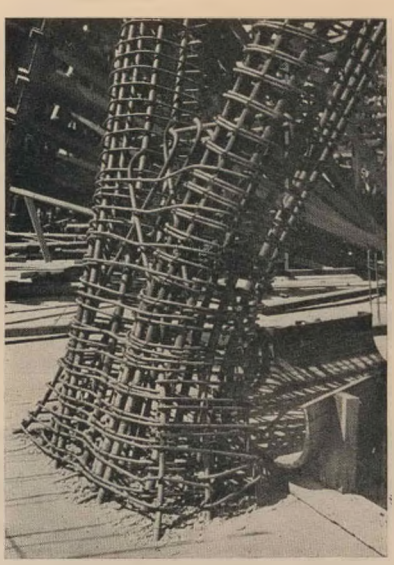


7. General view showing scaffolding and shuttering, with some legs concreted.

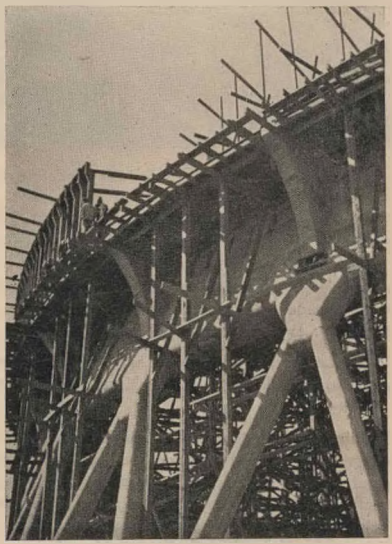
grillage beams, to carry the redwood stacks and the spray piping, requiring approximately 300 cubic yards of 3-1½-1 mix concrete and 52 tons of reinforcing steel. 4.

Fifth Stage : The reinforced concrete circular ring beam, 226 feet in diameter, with diagonal reinforced concrete columns 28 feet long and 2 feet thick, at 22-foot centres on a 113 feet radius, sloping inwards to 20-foot centres of a 104-foot radius, requiring approximately 1,000 cubic yards of 3-1½-1 mix concrete and 158 tons of reinforcing steel as shown in Illustrations 5, 6, 7, 8 and 9.

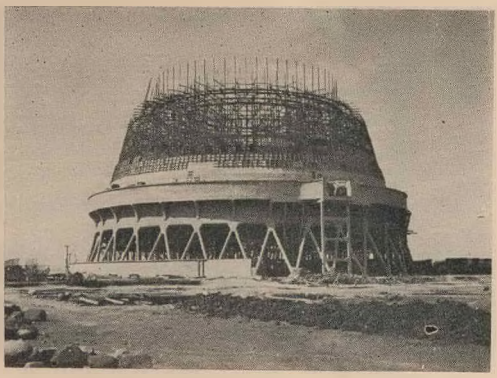
Sixth Stage : The tower shell, including the annular culvert, starting 28 feet above pond level and having a diameter of 208 feet, gradually diminishing to a diameter of 112 feet at a height of 262 feet above pond level and opening out again to a final diameter of 120 feet at the height of 320 feet above pond level.



8. Detail of reinforcement at the foot of the diagonal legs.



9. Detail showing the tops of legs, the brackets and shuttering for the annular duct.



10. Initial stage in the casting of the shell, showing the completed annular supply duct and the complicated falsework of the shell.

The thickness of the reinforced concrete shell at the bottom is 24 inches, gradually diminishing to a thickness of 5 inches at 118 feet above pond level and continuing at the same thickness over the remaining 174 feet of height.

The concreting of the shell was done in complete rings, 4 feet high, each ring concreted in one day, six rings per week.

The total amount of concrete, 3-1½-1 mix, used in the shell only, was approximately 3,500 cubic yards, with 250 tons of reinforcing steel, and the concrete in the annular culvert was approximately 600 cubic yards, with 45 tons of reinforcing steel.

All scaffolding was erected from the inside of the tower shell, as shown in Illustration 13.

The total amount of concrete used in the construction of one complete cooling tower was therefore approximately 11,500 cubic yards, with 570 tons of reinforcing steel.

For the different stages of construction of the shell, see Illustrations 10, 11 and 12.

The interior surface of the tower shell was finally given one primer and two coats of bitumastic paint covering a total surface of approximately 15,000 super yards.

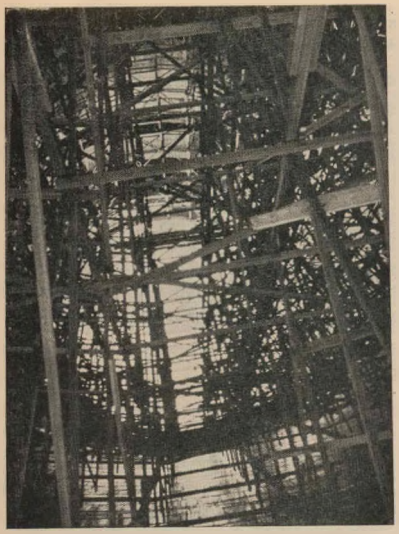
Seventh Stage : The bottom portion of the interior of the tower shell up to the annular culvert is completely taken up by a timber stack of posts, beams, bearers, etc., of Californian



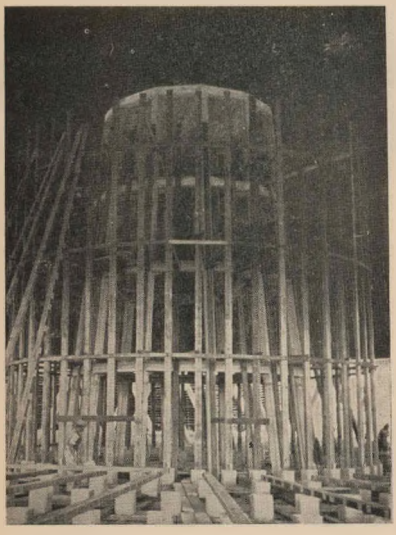
11. General view showing the shell nearing completion.



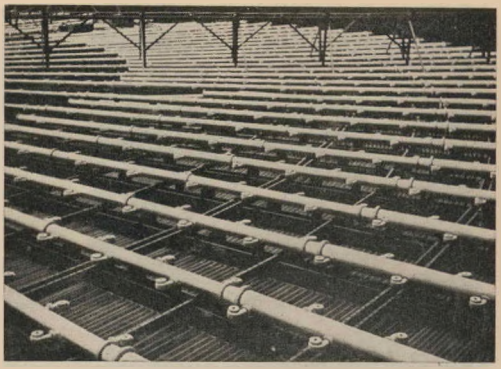
12. The completed shell. The striations on the surface mark the progressive stages of concreting in consecutive rings 4 feet high.



13. Looking up at the interior of the tower the falsework appears as a veritable maze.



14. A view looking at the central structure showing the commencement of the timber stacks.



15. Detail showing the asbestos-cement distributing pipes laid over the timber louvre system. Some 3,700 nozzles distribute the hot water in the form of a fine spray, which, dropping through a series of louvred stages in the timber stacks, is kept in a divided state, thereby effecting its cooling, until it is collected in the pond at the base of the tower, whence it is recirculated to the condensers.

redwood (Sequoia), rising up to a height of 42 feet above the pond floor, carrying the water distribution and cooling system.

This water distribution system consists of over 6,000 linear feet of asbestos-cement piping, ranging from 8 inches to 4 inches in diameter, arranged like the spokes of a wheel, with 3,720 asbestos-cement spray nozzles. 14, 15.

The amount of Californian redwood used for this cooling system in one tower only was as follows :—

Posts and bearers	18,200 cub. ft.
1,902,000 ft. of 3¼ in. x ½ in. in upper louvres	19,800 cub. ft.
224,000 ft. of 3 in. x 1½ in. in lower louvres	3,500 cub. ft.
411,000 ft. of 3 in. x 1¼ in. in lower louvres	5,400 cub. ft.
Total	46,900 cub. ft.

That is approximately 106 miles board measure, or 284 standards.

The two towers were constructed by the Victoria Falls and Transvaal Power Co., Ltd., for the Electricity Supply Commission.

The author wishes to acknowledge his thanks to the Management of the Electricity Supply Commission and The Victoria Falls and Transvaal Power Co., Ltd., for their permission to use the information and photographs in this article.

TRANSVAAL PROVINCIAL INSTITUTE OF ARCHITECTS

COMMITTEE'S ANNUAL REPORT, 1945-1946

To the Members of the Transvaal Provincial Institute:

Your Committee has pleasure in submitting this, the Nineteenth Annual Report, together with the Annual Balance Sheets and Accounts for the year ended 31st December, 1945.

MEMBERSHIP:

The membership at the close of the year consisted of 202 Practising Members; 148 Salaried Members; 30 Retired Members; 4 Absentee Practising and 5 Absentee Salaried Members—a total of 389 Members.

During the year under review, 23 new members were registered; 7 members died; 7 were transferred to other Provincial Institutes and 7 members written off the Register. The total membership showed an increase of 14 as compared with last year. 96 members of the Institute were known to be on Active Service during 1945.

The new members registered during 1945 were: D. R. V. Edwards; F. A. van Teefelen; C. R. Kallenbach; A. J. C. Voorvelt; P. Grinker; R. K. L. Moore; J. A. Joel; Mrs. C. Wilson; N. H. P. Dellow; F. J. Wepener; A. Orsmond; J. G. O. Watson; H. W. E. Stauch; P. A. Franklin; Mrs. D. Berghaus; A. S. Jenks; D. E. Pilcher; R. S. Parker; A. W. Parker; Miss P. M. Fitt; J. van der Werke; and G. M. Hussey and Dr. J. Ingber have transferred from the Cape Provincial Institute.

OBITUARY:

It is with deep regret that your Committee has to record the following deaths: H. Kallenbach; L. F. Whitton; F. Williamson; J. E. Fitt; J. E. Harrison; J. M. J. Geers and Sir Herbert Baker.

COMMITTEES AND MEETINGS:

Following the election of the Committee at the Annual General Meeting in May, 1945, Mr. W. A. Macdonald was elected President, Mr. J. Fassler—Senior Vice-President, and Mr. A. V. Nunn—Junior Vice President for the ensuing year.

During the year (ending February, 1946), 10 Ordinary and 6 Special Meetings of the Committee have been held and the following is a record of the attendances thereat:—

W. A. Macdonald (President)	15
J. Fassler (Senr. Vice-President)	15
A. V. Nunn (Junr. Vice-President)	13
B. J. Clinch	14
D. M. Cowin	15
A. C. Fair	15
D. S. Haddon	4
N. L. Hanson	11
C. S. Lodge	11
W. G. McIntosh	13
D. L. Nurcombe	8
H. G. Tomkyns	1

LEAVE OF ABSENCE:

The following members were granted leave of absence for various periods during the year: D. S. Haddon; C. S. Lodge; A. V. Nunn; N. L. Hanson; D. L. Nurcombe; W. G. McIntosh.

Your Committee has been assisted, throughout the year, by Sub-Committees on Finance, Practice, S.A. Academy, Small House Bureau, Building By-laws, and the thanks of the Institute are tendered to members of these Committees for the valuable services rendered by them.

GENERAL MEETINGS:

In addition to the Annual General Meeting, two Special General Meetings were called to deal with National Housing, the Secretarial Management of the Institute and Salaried Class of Members.

PROVINCIAL WORK:

The Committee's representatives, Messrs. D. M. Cowin and W. G. McIntosh, attended a number of Liaison Committee meetings throughout the year under review to discuss various matters arising out of the distribution of Provincial Work. It is regretted that it has not yet been possible to bring to finality the discussions regarding Structural Consultants.

The following communication has been received from the Provincial Secretary:—

" For the information of your Institute, I have the honour to inform you that during the year 1944, forty-nine private

practising Architects were commissioned by this Administration for fifty-six building schemes at a total estimated cost of £1,144,650."

BUILDING CONTROL :

The Institute's representative, Mr. M. D. Ringrose, has been attending meetings of the Advisory Committee to the Controller of Man-Power throughout the year, and has reported each month to the Provincial Committee. These reports have been sent to all members by means of the monthly "NEWS LETTER" inaugurated by the Committee. Mr. Ringrose has been aided by Mr. A. Philpot as alternate.

CENTRAL COUNCIL :

The 1944/45 Central Council met at Johannesburg on the 22nd and 23rd May, 1945.

At this meeting, Mr. B. St. Clair Lightfoot, of Cape Town was, by acclamation, unanimously elected President-in-Chief, and Mr. D. M. Cowin Vice-President-in-Chief.

The choice of Mr. Douglass Cowin for this high office and Chairman of the Executive Committee was approved most heartily by his colleagues on the Provincial Committee. Under his guidance, the Executive Committee of the Central Council has dealt with a variety of matters, the following being the most important:—

The period under review, which has seen a transition from wartime to peace has been an exceptionally busy one for the Executive Committee of the Central Council. A full report will be submitted at the Council's Annual General Meeting in April. Some of the more important matters dealt with during the year include: negotiations with the City Councils of Johannesburg and Pretoria in regard to the advisability of creating the post of "City Architect"; a deputation and memorandum submitted to the Price Controller on professional fees in relation to high building costs; a memorandum submitted to the Public Service Commission regarding the wages of salaried and practising members in Government employment; a deputation to the Minister of Education, and the subsequent promulgation of War Measures to afford relief in respect of practical experience to ex-volunteers; negotiations with the Minister and National Housing and Planning Commission in regard to contributions which the profession could make; preliminary steps for the preparation of a National Building Code; negotiations with the Historic Monuments Commission to assist in the preparation of a survey; preparation of a new sub-division of the existing scale of fees; amendments to the Regulations of the Act; and a sporting fixture in which the Master Builders of the Reef and Pretoria were entertained as guests of the Central Council, Transvaal Provincial Institute and Chapter of Quantity Surveyors.

Your Institute's representatives on the Council during the past year were: D. M. Cowin; J. Fassler; D. S. Haddon; N. L. Hanson and W. A. Macdonald.

FINANCE :

Institute Account : Owing to the increased activities undertaken by the Institute, it has been necessary to re-organise the Secretarial staff of the Institute. To meet this additional expenditure the annual subscriptions have been increased, in the case of Practising members, from £5 5s. 0d. to £10 10s. 0d. with effect from 1st January, 1946.

The total amount of subscriptions waived during the year amounted to £445 14s. 6d., almost the whole of this sum being in respect of members on Active Service.

The combined accounts of the Transvaal Provincial Institute and the S.A. Architectural Record showed a small surplus of £71 2s. 1d. It will be noted that the Provincial Institute itself showed a deficit of £209 10s. 11d.

"S.A. Achitectural Record": A great proportion of the work of the Institute is devoted to the administration of the Record—an arrangement which is not reflected adequately in the accounts. The excess of income over expenditure for the past year amounted to £280 13s. 0d.

Benevolent Fund Account: It is felt that this Fund has not received sufficient support from the members; an amount of £17 2s. 0d. only having been received in donations during the year. The Committee wishes to express its appreciation and thanks to the people concerned in this connection. Comparatively heavy calls are being made on this Fund, and in order to fulfil the obligations of the Institute it will be necessary for members to support the Fund to a greater extent than heretofore. The expenditure exceeded revenue for the year to the extent of £21 11s. 0d.

Revenue and Expenditure Accounts and Balance Sheets as at 31st December, 1945: These three accounts were circularised to all members.

PRACTICE :

Six cases of alleged unprofessional conduct have been investigated, and in three cases further action was taken under Regulation 87(o)(i). In two cases no further action was taken, and the sixth case is still under investigation.

SOUTH AFRICAN ACADEMY :

The Twenty-sixth Annual Exhibition was held for the second time in the Municipal Art Gallery, Joubert Park, in October, 1945, and was eminently successful. It was decided to appoint an Organising Secretary to deal with all matters concerning the Academy and the thanks of the Committee are expressed to Mrs. Lorimer, who acted in this capacity, Professor Pearse, the Chairman, and to all those who helped to make the Exhibition a success. The Committee also desires to thank the Transvaal Art Society, the Judges, the Hanging Committee and the Acting Secretary, Miss McDonagh, who controlled all the finances throughout.

ARCHITECTURAL EDUCATION :

At the commencement of 1945 Student entry was limited to the Faculty of Architecture at the University of the Witwatersrand—35 First Year degree and diploma students being admitted. This policy was found to be necessary to maintain the standard of architectural education in view of the large numbers applying for admission, which in terms of the accommodation and the staff available could not be satisfactorily handled.

Suitably qualified ex-servicemen applying for admission to the Faculty during the year were automatically accepted and special arrangements made for their education. Courses for ex-Volunteers thus continued in all years of study throughout the December/March vacation.

The total number of students studying architecture during 1945 at the University of the Witwatersrand was 151. Unrestricted entry into the Department of Architecture at the University of Pretoria prevailed during 1945, the total number of students of all years being 38.

The Post-graduate course of Town Planning at the University of the Witwatersrand entered upon its second year and there were sufficient applications at the beginning of 1945 to commence another First Year group.

During the year, your Committee donated the following amounts for Prizes to the two Schools of Architecture:—

University of the Witwatersrand	£15 15s. 0d.
University of Pretoria	£10 10s. 0d.

SMALL HOUSE BUREAU :

During the war years, work under the Small House Bureau came to a standstill owing to the absence of many members on Active Service, and mainly, to limitations in building activities. Early in 1945 the Johannesburg Branch of the S.A. Legion of the B.E.S.L. entered into discussion with the Transvaal Provincial Institute with a view to starting work on a housing scheme at Sandringham, and the Provincial Committee decided to use the Small House Bureau as a basis for the supply of plans for the Township. The B.E.S.L. were warned that the size of house they contemplated would cost more than they anticipated, and this proved to be the case in practice. This has resulted in a request that new plans be provided for houses approximately 1,400 sq. ft. in area, and certain plans prepared by members have had to be discarded for this reason. The B.E.S.L. have agreed to meet its indebtedness to the authors concerned in this respect through the Small House Bureau.

The cost of the houses erected at Sandringham has come out somewhat lower than those on the open market, and now an agreement has been reached with certain builders that they shall each erect a minimum of 20 houses at a rate of 25/6d. per sq. foot for the main building, and 17/- per sq. foot for the outbuildings, plus a contractor's profit of 6%.

It was found impossible for the limited staff of the Institute to organise and provide the necessary services for the Sandringham scheme, and Messrs. Alan Fair and Partners were asked to undertake this side of the work on behalf of the Bureau.

The Central Council is at present negotiating with the Directorate of Housing to extend the scope of the Small House Bureau to cater for the needs of ex-servicemen participating in the Government's 90% loan scheme. Two other organisations have also approached the Institute and negotiations are still proceeding. It is clear that the Small House Bureau will fulfil a National need, and in view of the opportunity offered to the younger members of the profession it is hoped that they will give it their fullest support.

MUNICIPAL BYE-LAWS :

As a result of discussions between members of the Johannesburg City Council and individual members, the Transvaal Provincial Institute was asked to submit a memorandum on suggestions for amendments to the existing bye-laws. A Sub-Committee in Pretoria has met the City Enginer on the same subject. The Association of Reef Engineers, to whom this memorandum was submitted, indicated that the Institute should offer its suggestions for their criticism. The Institute, however, feels that the amendment of two or three bye-laws will not meet the situation, and has proposed that a National Building Code be prepared to cover all building legislation at present effected by Government Acts, Provincial Ordinances and local bye-laws. Negotiations along these lines are being conducted between the Central Council and the newly constructed National Building Research Institute. Here again, the co-operation and assistance of members is earnestly sought.

The Commission's power to override bye-laws has led to strong opposition in certain respects to National Housing Schemes on the part of some Local Authorities. In order to achieve the smooth operation of building schemes, the Housing Commission has set up a Committee consisting of four members of the Association of Reef Engineers, technical officials of the Directorate of Housing and the Institute's representative on the National Housing and Planning Commission to consider the plans of all houses where a departure from the existing bye-laws is contemplated.

MILITARY AWARDS :

Your Committee has pleasure in announcing the award of the O.B.E. to Mr. C. E. Todd, M.C., of Pretoria.

SCRETARIAL MANAGEMENT :

Arising out of the resolution taken at the Annual General Meeting, a Sub-Committee was appointed to go into the

Secretarial management of the Institute. This Committee recommended that the time was opportune for the Institute to appoint a full-time Secretariat. Towards the end of the year Miss R. Paiker was appointed Secretary and Mrs. M. Nothard as Shorthand Typiste. Miss Carpano's services were retained as a Junior on the Secretariat.

The Committee desires to record its thanks to Miss McDonagh, the Acting Secretary, for her services during the last two years. Miss McDonagh resigned from the post at the end of 1945.

NATIONAL HOUSING :

The latest figures supplied by the Director of Housing show that on the Reef and Pretoria, under the first two schemes, 525 houses are now under construction, for which some 30 firms or groups of architects have been commissioned. Plans were prepared for a further 233 houses, but tenders have not yet been accepted due to site and service difficulties, and in some instances, high costs. The costs of the houses for which tenders have been accepted, exclusive of builders' profit and professional fees, vary from 21/9 to 33/6 per sq. foot. It is noteworthy that the costs of the houses erected on the Witwatersrand are the highest in the Union, those at East London being the lowest.

All members participating in this scheme have been advised of the scale of fees agreed upon with the Commission. The amount of the levy on these fees has been determined at £1 per house, and it is of interest to note that of the 246 members who replied to the Institute's circular, 225 agreed to the principle of the levy, 2 were not in favour, 9 gave no answer, and 10 returned a qualified " yes." While the members of the Transvaal have agreed that any surplus available out of this fund, after paying administrative expenses, should be devoted to furthering the cause of the architectural profession in general, some opposition has been forthcoming from other centres. The Central Council has debated this point and agreed :—

(i) that it is not possible at present to indicate the exact nature or total of the expenditure to which the Central Council and constituent bodies will be committed;

(ii) that for the time being the levies collected be put into a separate fund;

(iii) that the Institute's commitments be defrayed from time to time from such Fund;

(iv) that the precise way in which the balance of the fund should be ultimately utilised be referred forward.

A further approach has been made by the Commission to the Central Council for the Institute's assistance in providing house plans for ex-volunteers who propose to avail themselves of the Government's 90% loan plan. The Central Council is negotiating with the Commission on this question, and it is proposed that the Small House Bureau should be expanded to meet the Commission's requirements.

A great deal of criticism of the National houses erected so far has appeared in the Press from both the public and members of the profession. A detailed reply to these criticisms has been made on behalf of the Central Council, and it is felt that when the first scheme has been finally completed much of the opposition will fall away. It should be remembered that the original programme was drawn up in a matter of days at the urgent request of the Government, and those responsible are well aware that further improvements can be effected. Constructive suggestions in this respect will be welcomed from all members.

PUBLICATIONS :

The Committee desires to draw the attention of members to the following publications which are obtainable at the Institute's offices:—

" Conditions of Contract " Documents	1/6d. each
Scale of Professional Fees	3d. ,,
Certificate Books (containing 25 certificates)	1/3d. ,,
Variation Order Books	3/–d. ,,

By Order of the Committee:

R. PAIKER,
Secretary.

ADDRESS OF THE PRESIDENT, MR. W. A. McDONALD

At the outset, it is becoming that I should express to you my gratitude for the honour conferred upon me by my election to the office of President of this Institute.

As you are aware, certain difficulties arose last year which prevented the Annual General Meeting being held in March, and it was not until the 1st of May that the outgoing Committee was elected. After perusing the Annual Report, I think you will all agree that, while its period of office was shorter than usual, the variety and amount of business disposed of compares favourably with that of former Committees. Within a week of its election an event of great importance took place. I refer to VE day, and later on in the year all of us celebrated VJ day. These two events are historic, and their effect upon international affairs is by no means finalised, but each one of us was more than pleased that they meant that the War had been brought to a success-

ful conclusion for this country and its allies. For the Institute it meant also the return of a number of our members to their civil walk of life. It is with the greatest of pleasure that I welcome them here this afternoon, and again reiterate that my colleagues on the Committee made it their duty to render all possible aid to these members. This condition must continue in the future, and I would like to pass on to the incoming Committee the suggestion that, later in the year, some form of an official welcome should be arranged for our ex-Service-members.

My thoughts now turn to those members who have made the supreme sacrifice—those who will not return. With feelings of sorrow for their next of kin and of pride as a colleague, I name them:

Lieut. C. F. Drake; Lieut. A. M. Medalie; Lieut. T. van Niekerk.

I ask you, Ladies and Gentlemen, to rise and stand in silence for a few moments in respect of their honoured memory.

PUBLIC BODIES:

Our relations with the Provincial Administration and the Central Government still continue to be maintained in a friendly manner. As you can see by the Committee's report, the Administration has distributed over one million pounds worth of commissions during 1944 to practising members of this Institute. The continuance of such a distribution of work is one that should be fostered by all Committees. In this respect, I feel that our thanks are due to Messrs. Cowin and McIntosh for their services on the Liaison Committee and also to the Provincial Secretary and his Architectural staff for their continued aid.

Whilst the Central Government has been dealt with, quite correctly, through the Central Council, I feel that this Institute can claim a great deal of credit for the very good relations that exist in this quarter through the hard work of some of our members. We were the first to proceed with plans on behalf of the National Housing and Planning Commission. You will recollect that your Committee called a Special General Meeting in July of members interested in this work and promised the Director of Housing full co-operation. When the commissions were given out, the members selected by the Director set to work with a will and in spite of the very short time given and all the difficulties they had to overcome they adhered to the programme set for them. This was an excellent opportunity to prove ourselves, and I feel that this has been done.

Unfortunately, any Government Department is likely "to be shot at" by persons who feel that their province has been invaded by such a Department, and the National Housing and Planning Commission has been no exception to this rule. Interested parties have criticised the designs of the houses to try and divert the Commission's work to themselves. As you are aware, Central Council put up on your behalf a very reasoned defence.

My own comment is a very simple one when I state that the only person who can design a home is the man equipped for that purpose—the trained Architect—the members of this Institute who were asked to carry out this work.

In view of the foregoing, you will understand my feelings and those of my colleagues when some members of this Institute decided to give vent to their criticisms in the Public Press. What an incredible situation? Architects criticising their own work or, at any rate, the work of their fellow members. I cannot permit this episode being allowed to pass without comment. On the credit side, I must express my gratitude to Mr. Norman Hanson for the enormous amount of time he has spent, not only as a member of the Housing Commission, but also as a member of this Institute, on behalf of its well-being. It is impossible to assess correctly the various ways his influence has been used to the benefit of the profession, while remaining singularly detached from the remunerative side of the work. It is also my duty to thank another of our members, Mr. Irvine Smith, for his helpful contribution as Architectural Adviser to the Director of Housing.

B.E.S.L. HOUSING SCHEME:

The Housing Scheme at Sandringham, developed on behalf of the B.E.S.L., has, on the other hand, produced a great deal of Praise in the Press with regard to design, layout and progress of the work. This scheme has been handled by the Small House Bureau, and it is worth recording that we have been requested to design two further groups of houses. Paradoxically, it may be stated that the Architects responsible for this successful Housing Scheme have contributed in no small measure to the much criticised National Housing. Further comment on this point does not seem to be necessary. May I thank the members responsible for the designs and also Mr. Alan Fair for his continued interest in the work on behalf of the Institute.

BUILDING CONTROL:

Building Control came into being as an emergency measure during the War, and is still with us. Those of us who have the interests of the Building Industry at heart must realise that emergency conditions still exist in the Union as far as materials and manpower are concerned. It would be disastrous to attempt, at this stage, to remove this necessary evil. Without control, conditions in the Building Industry would become chaotic and would result in the complete eclipse of the small client and the country's greatest need—housing—in favour of luxury buildings.

Members of this Institute, along with sister professions and the building trades, must exercise patience and await the day when materials and labour are sufficient to meet the demands to be made on them.

SOUTH AFRICAN ACADEMY :

The South African Academy, which is held under the auspices of this Institute and in co-operation with the Transvaal Art Society, proved eminently successful from the point of view of attendance, numbers of exhibits and financial return. I would like to feel that it was successful also from the "national" angle, in order to live up to its title. Future Academy Committees should investigate very carefully this question and try to find out why some of our best known Artists and Architects have failed to exhibit their works in the last few years. This aspect should not be overlooked. I would like to thank Professor Pearse for his active assistance as Chairman of this Committee.

SALARIED MEMBERS :

In labouring on behalf of the Practising Members, your Committee has not failed to remember the suggestions put forward by the Salaried Architects at the Special General Meeting in November last. This large section of the Institute has felt for many years that its members have suffered from a number of disabilities, which could easily be removed. It is true that most Salaried Members have tended to take a passive rather than an active part in the affairs of the Institute since its inception in 1927. To try and remedy this unfortunate position, a Sub-Committee, under the chairmanship of Mr. Lodge, was set up to inquire into and report upon the position. This Sub-Committee put forward its Report to the Provincial Committee and made certain recommendations which would, I am sure, satisfy the demands of the Salaried Architects, should they be accepted. Unfortunately, this report was not considered by the outgoing Committee, but it is to be hoped that the new Committee will take up the problem at the stage where we left off and thus create a more unified Institute.

SECRETARIAL MANAGEMENT :

During the years of the war the Institute carried on with an Acting Secretary, but with the mounting volume of business to be transacted it became apparent that the Secretarial management had to be made more effective in order to deal with the work. With this end in view, your Committee set to work by re-organising the management, but I need not recount that of which you are already aware. It is too early yet to state whether the new Secretariat will function to the satisfaction of all the members, but I do feel that certain of the unfortunate incidents of the past will not be repeated, such as the dilatory manner in which the correspondence of the Institute was dealt with and, in some cases, where no replies were forthcoming.

In spite of the Secretarial position during 1945, your Committee was responsible for an innovation, which at once proved popular and of practical value. I refer to the "Monthly News Letter" whereby all members were informed of various items discussed by the Committee. This individual contact with members is one that should be continued.

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In conclusion, I must thank the members of the Committee for their help and guidance during their period of office. The work of the Institute has increased in tempo to such an extent that it is almost a full time job for the Chairmen of the various Committees, and to them particularly I express my deep-felt thanks. Knowing the conditions as I do, I must appeal to all members to help the incoming Committee in the work with which it will have to deal and thus place our profession in a position of real trust in the structure of this wonderful country.

Again I thank you for the honour conferred upon me by electing me President of this Institute.



Sidney Newberry

THE CHISLEHURST AND SIDCUP COUNTY SCHOOL FOR BOYS

The Chislehurst and Sidcup County School for Boys was published in the " Record " for January, 1945. It was the subject of an article entitled " An English Secondary School for Boys, at Chislehurst, Kent," by S. H. Loweth, F.S.A., F.R.I.B.A., the present County Architect for Kent. Owing to a misunderstanding, no mention of those responsible for the design of the school was made at the time; and having had the omission pointed out, the Editors take this opportunity of making due acknowledgements, and of apologising for any inconvenience this omission may have caused.

The school was the product of the office of the Kent County Council's architect, then Mr. W. H. Robinson, F.R.I.B.A., and the designer in this case was Mr. J. W. Poltock, A.R.I.B.A.

CONTEMPORARY JOURNALS

"THE ARCHITECTURAL FORUM" December, 1945

This issue ranges widely and contains a number of works of interest, some for their skilful planning, some for the extremely successful combination of basic structures, as instanced by the Chapel which, with other buildings at Camp Parks, California, were designed, built, decorated and landscaped by the Seabees. Among the houses illustrated is one in Washington which deserves mention. It is a remodelling by Grosvenor Chapman of an old row house on a 90 by 15-foot lot, which includes an attractively planned garden and swimming bath.

Other buildings include a gallery for the display and sale of art, a women's apparel shop, a restaurant and further commercial architecture including the remodelling of a sales-room and of offices. Four "previews" of a shopping centre, a vocational school, a sewerage disposal plant and a press building are also published. Finally, of general interest, is Dorothy Rosenman's report on Britain's post-war building problems, which includes a summary of the approach to rehousing and replanning.

"THE ARCHITECTURAL REVIEW" December, 1945

Symptomatic of a re-evaluation of the Gothic Revival, the "Review" presents in this number "a play in three acts and six scenes." As the "Review" has it, the established aesthetic of the modern movement "has given us the necessary distance from, and — by contrast — the necessary sympathy with the naïveté, richness, fantasy, 'ugliness,' stateliness of eighteenth- and nineteenth-century Gothic."

The scenes range from the Rococo Gothic of 1748, through Romantic to the Christian Gothic of the early nineteenth-century. The work is fully documented and well supported by illustrations.

"THE ARCHITECTURAL RECORD" December, 1945

New York State's billion dollar building programme is reviewed and some of the many building proposals are illustrated, which for the most part are in traditional guise, with the notable exception of an Agricultural and Industrial School by Kahn and Jacobs.

"Designing with Fluorescent Lights," by Dr. Mathew Luckiesh, is an illustrated analysis of lighting in Industrial Buildings, integrated with and related to both the structural elements and the particular industrial operations.

Building Types Study 108 is on houses, and the examples are many and varied both in location and character. In conclusion Robert K. Thulman, technical expert for F.H.A., discusses many new ideas in residence heating.

"PENCIL POINTS" December, 1945

The design of church buildings is a feature of this issue. The editorial defines a concept of a truly contemporary

Paul Gigante



THE ARCHITECTURAL FORUM, December, 1945

The Seabee Chapel which combines "Quonset" huts, painted olive green, with salmon brick and natural redwood.

church, and a series of well chosen examples illustrate his approach. The absence of "applied archaeology" is as refreshing as the designs are unconventional.

"Materials and Methods" includes an article on the "Selection and Use of Concrete Block," and Isadore Rosenfield in "Daylighting for Hospitals—Part I" discusses the importance of and necessity for the provision of ample daylight in ward planning. The argument for adequate daylight is well supported by the references quoted, and means are suggested by accompanying diagrams.

BOOK REVIEW

"THE HOUSES OF PARLIAMENT," by Hans Wild and James Pope-Hennessy. B. T. Balsford, Ltd., London, 15/-.

This is an extremely interesting book and is probably the first monograph published on the Palace of Westminster and its impressive ceremonial, through the medium of photography.

Hans Wild was originally commissioned to inform the American public of the business of British representative government, and he has bult up the picture with resource and ability. He has ranged from sweeping general views through the wealth of interior detail to the portraits and conversation pieces inseparable from the Parliamentary tradition. Lastly topicalities of wartime Parliament are shown, the bombed Commons, firewatchers, and American soldiers in the Central Hall.

In conjunction with the pictures, Pope-Hennessy, in a light but scholarly manner sketches the history of the Palace. With the a'd of contemporary engravings he tells of the development and functioning of Parliament till the destruction by fire of the old Palace one autumn night in 1834. He proceeds to narrate the story of the building of the present labyrinthine structure. By way of a "conducted tour" through the buildings the author helps one to appreciate the "lush imagination" of Barry and the "heavy industry and antiquarian zeal of his assistant," Pugin.

"PREFABRICATED HOMES," by Bernard H. Cox, F.S.I., L.R.I.B.A. Paul Elek (Publishers) Ltd., London, 2/-.

Prepared and presented by the author for the Association of Building Technicians and with a foreword by Professor Sir Charles Reilly, this is a timely and valuable little book, for not only does the author define clearly the oft misused and maligned term "prefabrication," but he proceeds to discuss the benefits of its adoption, particularly in the field of housing, which would accrue to potential home owners, factory hands, building trade operatives and technicians.

This is not a dogmatic statement, but rather a sympathetic and reasoned analysis of the cause and potentialities of house prefabrication. The Author reviews existing methods in Britain, America, Sweden and briefly notes the work of other European countries, with well merited praise for the Coventry house, that of the B.I.S.F., and the Swedish houses. A chapter is devoted to the effect of prefabrication on the existing Building Trades, in which the author makes out a good case for its adoption. The text is supported by some sectional drawings and photographs of many of the better known systems.

W. D. H.

PROFESSIONAL NOTES AND NEWS

TRANSVAAL PROVINCIAL INSTITUTE

All members who return from Active Service are asked to notify the Secretary, stating the date of their discharge and giving a postal or forwarding address.

As it is intended to open a roster in the office of the Institute, of professional appointments wanted and offered, members and students are asked to furnish the Secretary with details of their requirements as soon as possible.

Members are earnestly requested to notify any change of address to the Secretary.

RETURN FROM ACTIVE SERVICE

We are pleased to announce that Mr. Bernard Cooke, A.R.I.B.A., has returned from Active Service and has entered into partnership with Messrs. Fleming and Partners, F. & A.R.I.B.A., at Balgownie House, Commissioner Street, Johannesburg; that Mr. A. R. Harris has returned from Active Service and has entered into partnership with Mr. F. Fels as Harris & Fels, at 21, Hepworth's Buildings, Pritchard Street, Johannesburg; that Dr. J. Ingber has returned from Active Service and has commenced practice at 23, Delvers Street, Johannesburg; and that Mr. M. F. Stern has returned from Active Service and having commenced practice at Boston House, Strand Street, Cape Town, P.O. Box 3654, is anxious to receive manufacturers' catalogues, etc.

PROVINCIAL WORK

We have been informed by the Provincial Secretary that during 1944, forty-nine private practising Architects were commissioned by the Transvaal Provincial Administration for fifty-six building schemes at a total estimated cost of £1,144,650.

MILITARY AWARD

We have pleasure in recording that Mr. C. E. Todd, M.C., of Pretoria, late of the South African Engineer Corps, has been awarded the O.B.E.

Journal of the SA Architectural Institute

PUBLISHER:

University of the Witwatersrand, Johannesburg

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