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This picture shows a well-designed poster, one of many commissioned by Frank Pick, encouraging people to visit museums, art galleries or concerts in the leisure hours.

ART AND GOOD DESIGN IN BRITISH PUBLIC UTILITY SERVICES

FRANK PICK AND THE LONDON PASSENGER TRANSPORT BOARD

By Noel Carrington

The story of the life work of Frank Pick, a Yorkshireman born in 1878, is the story of the ordered harmony of London's transport system. As Publicity Manager of the London Underground group of companies, and later as General Manager of the London Passenger Transport Board, Frank Pick established beauty and utility in design down to the smallest detail throughout the system. His death in 1941 is a great loss to post-war reconstruction in Britain.

★ ★ ★

In England one of the sights which every boy hopes to see when he goes to London is the Underground Railway. The speed with which the trains follow each other, the neatness and precision of the whole service, the moving staircases, these and many other features have made it one of the wonders of the modern world.

Even New Yorkers must admit that their own Underground is second best to London's; and Moscow's, though more palatial, is nothing like so complex. No less familiar in the London scene are the double-decker scarlet omnibuses without which it is impossible to picture the London street scene. Behind the ordered harmony of London's transport system is a fascinating story, the life-work of one man whose passion was for design.

★ ★ ★

Frank Pick was a Yorkshireman who already had railway experience when he came to London as publicity manager for the London Underground. In those days it was a private company, combining most of the underground railways and some of the many bus companies. Pick made his mark by choosing the best artists he could find to do posters, and the stations soon became the most exciting picture galleries delighting the eyes of the passing travellers. These posters were so sought after that Pick had to start a shop for selling spare copies, which were used as decoration in homes and schools. But their primary purpose was to encourage people to travel, at times when the trains were not full—to the countryside on Sundays, to the Zoo or the museums at mid-day and so on. Pick then went on to clean up the stations so that the poster sites were isolated and the platforms tidy. Pamphlets, maps, time tables, everything printed, in fact, was beautifully designed, and he commissioned Edward Johnston, a great penman and the father of modern type design, to draw him a new type face, Johnston Sans-serif, which was reserved exclusively for the Underground.

Later Pick became, in effect, General Manager of the whole system, and in his time the various transport systems of London

FRANK PICK

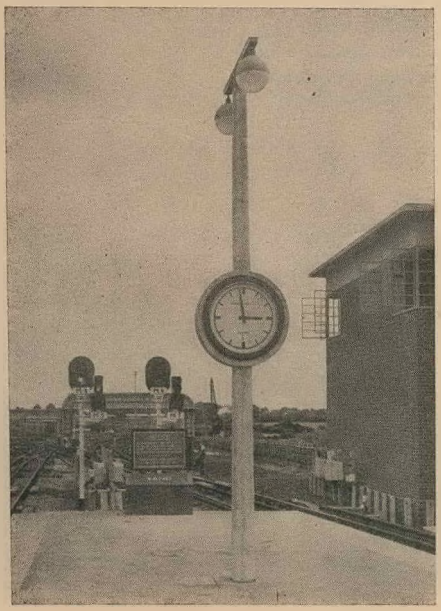
The bus shelter at Acton Vale, one of London's suburbs. Here the combination of steel and glass provides beauty in the austerity of its design, as well as a maximum of shelter.

were all combined into a public utility, a semi-public corporation, including the tramways, trains and buses. Pick turned his attention now to the design of railway coaches and omnibuses. Every detail was carefully planned so that each new model was a notable improvement on its predecessor. He was a great enemy of the afterthought. Speed, safety and comfort, all these qualities were embodied in every part of the system, and by form, colour or pattern, Pick aimed at rendering it as beautiful as it was efficient.

His last great enterprise was the building or rebuilding of most of the stations, from the giant headquarters over St. James' Park to the little suburban stations on the new extensions that felt their way into the hitherto green fields surrounding the metropolis. Charles Holden was his principal architect, and the simplicity and order of these buildings has been a pregnant contribution to architecture in England.

How, one may wonder, did this man, who was a great administrator and served on many Government Commissions, find time to engage in studying the design of so many details? The fact was that Pick was not only a man of great energy, but was insatiably curious and passionately devoted to all the arts. He believed that this devotion should not only mean intelligent appreciation of art and music (he was an inveterate concert-goer), but should mean something more. He expressed his love of beauty through his life's work, convinced that in a civilisation which is healthy, each part of it should be harmonious. He was very fond of visiting museums, both at home and abroad, and from such visits he constantly found inspiration for improvements in the services he controlled. His holidays abroad were generally taken in company with some architect or engineer, and the best of what they saw he did not hesitate to introduce for London's benefit. He was an early member of the Design and Industries Association, formed in 1915 to

The station at Cockfosters in North London, terminus of the Piccadilly Line. This station, where the line is above ground, is a good instance of the combination of beauty and utility in design. Built of steel and concrete, a maximum of shelter is combined with excellent light from the large windows. The notice "TRAINS" is an example of Edward Johnston's Sans-serif type-face.



The simplicity of design in a clock situated at the end of a platform of one of London's suburban stations makes for easy reading of the time, and also harmonises with the design of the signal box on the right. Good design, even in the smallest detail, was Frank Pick's constant aim.

raise the standard of design in everyday life, and he always admitted his debt to this association, and continued to serve it all his life.

To my own way of thinking, Frank Pick was one of the greatest architects of modern civilisation in England. Already his influence has spread far beyond London and far beyond the transport industry. He might well be compared with Sir Christopher Wren, granted the difference between Wren's and our mechanical age. Wren's great masterpiece, St. Paul's Cathedral, set the note for seventeenth century London. So Pick's sense of unity and design, running right through the products of industry, have set a new standard in our own day. He was an artist in the way that a great conductor is an artist, though he may not be a composer, a pianist, or a violinist. He inspired a team of designers, architects, engineers, printers, letterers, painters and others to express themselves to the height of their talents. With Pick art was not just a hobby or escape : it was part and parcel of his daily life.

Frank Pick died in the middle of the present war, his mind already active on the job of rebuilding. To many Englishmen, it is a tragedy that he was not spared for the work of national reconstruction that confronts Great Britain, for few were better fitted by experience and ability, and his creed—fitness for purpose, and beauty to enjoy in our everyday life—was one which should inspire the younger generation.

The old and new Underground stations at Chiswick Park, one of London's suburbs. The new station has a much wider entrance and much better windows, and both the name of the stations and the now familiar Underground sign, with the red circle on a white ground, stand out clearly.

SHUTTERLESS CONCRETE FLOORS

By S. S. Morris, B.Sc.Eng. A.M.Inst.C.E., A.M.T.P.I.

Building Surveyor, City of Cape Town

Among the author's duties in the Cape Town City Engineer's Department has been the examination of alternative building methods with a view to reducing building costs in sub-economic housing schemes.

At the end of 1942 the increasing shortage of certain building commodities, particularly timber and steel, rendered it imperative to find a method of construction which would reduce the use of these two vital materials to a minimum. Aggravating the position still further was the lack of capable carpenters brought about by the Defence Department's urgent need of skilled building artisans. Unless a method could be found which would reduce both the number of skilled artisans, as well as the amount of timber employed in building, the complete curtailment of essential building work appeared imminent.

These were the thoughts uppermost in mind when the attention of the author was drawn to a system of floor construction being employed in the reconstruction of a fruit store at Orchards, Cape Province, by Consulting Engineer Mr. R. Stubbs.

The possibility of applying this system to the Council's housing schemes was thereupon investigated.

★ ★ ★

The system of floor construction used by Mr. Stubbs was not entirely new, but rather an improvement on methods already attempted overseas. It involved the use of thin pre-cast units over which a slab was cast in situ. Details of these units are shown in Fig. 1.

These pre-cast units consist of a 1½ in. to 2 in. layer of concrete whose upper surface is toothed so as to resist the horizontal shear between the pre-cast and cast-in-situ concrete and thus ensure that the two separate components act as a single homogeneous slab. The finished thickness of the slab varies in accordance with the span from 4½ in. to 6 in., and the units are so reinforced that, taking into account the total effective depth, i.e., of pre-cast unit plus cast-in-situ concrete, the stresses in the steel will not exceed normal permissible limits. In other words, the same amount of steel is used as would be employed in an ordinary solid slab of the same overall depth spanning in one direction, including any reductions due to continuity. As weight is an important factor, the units are restricted to lengths and widths which enable them to be easily handled.

The matured units are laid side by side, their toothed surface upwards, and the "in-situ" slab poured directly over them. Slab shuttering is thereby eliminated. In order that the pre-cast units may resist safely the weight of the overlaying concrete, they are supported during pouring by a temporary runner placed on props along their centre line (as shown in Fig. 2). Continuity and distribution steel are placed in position on top of the pre-cast units before pouring.

The pre-cast units can be prepared either on the site or at any selected place of manufacture. Manufacturing on the site, however, is not difficult, and reduces transport costs.

APPEARANCE.

By bevelling the edges of the pre-cast units and placing them so that they run parallel to the line of light, a pleasing surface is obtained which renders unnecessary the provision of a special ceiling or any surface plastering. The floor system provides a fireproof construction with almost the same degree of sound insulation as a solid slab of the same depth and is applicable to framed as well as unframed structures. When supporting beams are employed, these should be designed as tee-beams, with the in-situ concrete forming the tee.

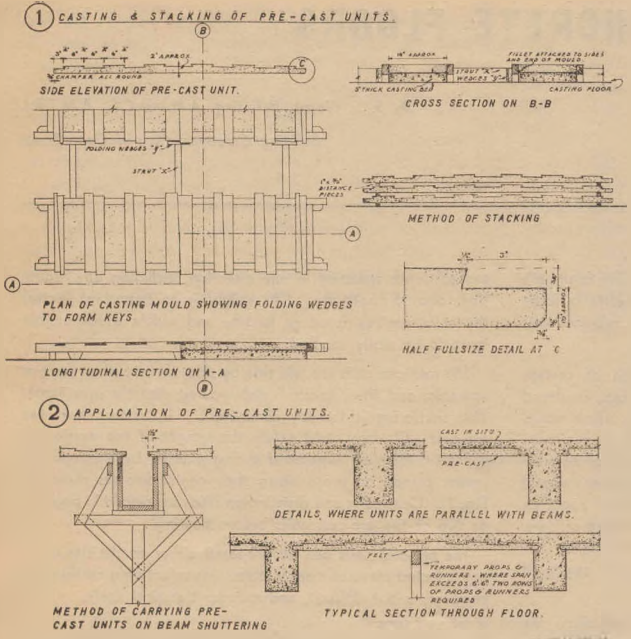
TESTS :

Before applying this system to the Council's housing schemes, full scale tests were carried out to confirm the theoretical hypothesis that the two slabs would act under load in the same manner as a solid slab of the same depth.

Four units, each 18 in. wide, were cast in the usual way. Three weeks later the "in-situ" concrete was placed on the top of these and the tests carried out fourteen days later.

The first two tests consisted of the application of an equidistant point load to two slabs, the first freely supported and the second fixed at both ends. The third test was made by applying a similar load to the two remaining slabs cast as continuous one with the other.

The results of these tests are shown in Table 1.



PRE-CAST CUM CAST-IN-SITU PATENT FLOOR.

TABLE I.

RESULTS OF FULL-SCALE TESTS ON PRE-CAST CUM IN-SITU SLABS.

Test No.	B.M. at Failure inch-lbs.	Failing Stresses (lbs. per sq inch) fc	fs	Equiv. Distrib. load at Failure lbs./sq. ft.	Design load lbs./ sq. ft.	Factor of Safety
1. (Freely supported)	42,150	1,430	80,500	480	110	4.4
2. (Fixed Ends)	40,600	1,380	78,000	706	165	4.3
3. (Continuous)	65,200	1,520	86,000	680	150	4.5

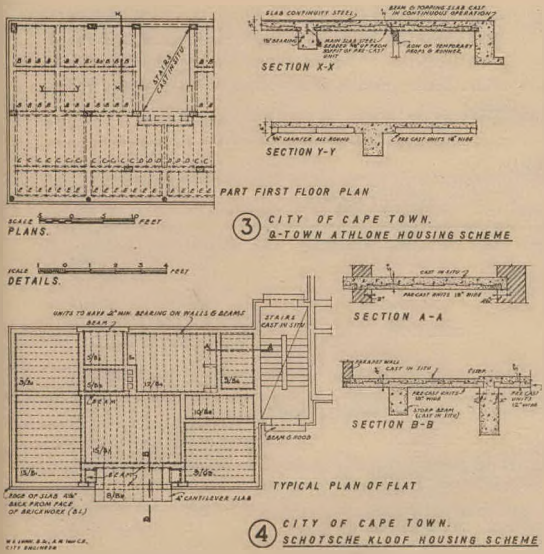
These indicated clearly that failure occurred not by horizontal shear but as a result of normal bending and at a limit which theoretical analysis would indicate as probable in a homogeneous slab of the same depth.

FINANCIAL IMPLICATIONS.

An investigation was also made into the comparative costs of utilising the pre-cast cum in-situ floor as against a normal floor of the same depth. This was done by considering a typical floor in one of the blocks comprising the "Q" Town Sub-Economic Housing Scheme and comparing the cost of all the items involved in the construction of a normal floor on the one hand and the pre-cest cum in-situ floor on the other. The results of this investigation are shown in Addendum No. 1. The prices accepted were those ruling in January, 1943.

With the prices laid down the shutterless floor showed an estimated seving of approximately £47 10s. 0d. per floor, i.e., 20% of the total cost of steel, concrete and shuttering.

The deciding factor determining whether this type of floor construction is cheaper than normal methods is the cost of shuttering and propping. As long as the cost of shuttering and propping does not exceed 75/- to 80/- per square, there appears to be no financial advantage in the use of the pre-cast system.



3 CITY OF CAPE TOWN.
Q-TOWN ATHLONE HOUSING SCHEME

4 CITY OF CAPE TOWN.
SCHOTSCHE KLOOF HOUSING SCHEME

APPLICATION.

The shutterless floor was used in four blocks of the "Q" Town Housing Scheme with considerable success.

Fig. 3 indicates the general layout of the units used in this work. The units were cast on the site, using wooden frames made of Limba. These wooden frames were first placed on a specially prepared casting floor alongside the proposed structure; and the top surface obtained by movable blocks cut on the diagonal. With constant use, however, the wooden frames began to warp. To maintain perfect edges on the units, raised beds were thereupon prepared on the casting floor and the frames shod with special fixing pieces. The frames were then wedged into position, one against the other, and the concrete then poured (see Fig. 1). In a very short period one semi-skiled artisan was capable of turning out pre-cast units of surprising excellence.

PROVISION FOR ELECTRICAL EQUIPMENT.

Provision was made in casting the units for the electrical fittings, pipes, etc., which would later have to pass through the slab. Wooden blocks were cast in the units wherever these points occurred and left in position until their removal was rendered essential. All electrical tubing was laid over the pre-cast units and then embedded in the "in situ" slab.

LAYING OF PRE-CAST FLOOR.

The blocks of flats in which these units were used were four storeys in height. The units for the first and second floors were carried up a ramp by hand and laid in position, starting from a point at the end of the ramp. Four labourers were used to carry each unit on slings. By this means the pre-cast units for an entire floor were laid in approximately one day without strain or difficulty. For the upper floors an ordinary hoist was used, and an entire floor was laid in less than five hours.

The size of the pre-cast units utilised in these blocks was approximately 6 ft. 6 in. long x 1 ft. 6 in. wide and 2½ in. average thickness. The weight of one unit was approximately 260 lbs.

The following schedule shows the actual time taken in laying and casting the units and the progressive improvement with experience.

The total time spent in laying the pre-cast units for all floors in each block was approximately 25 hours. Before commencing the pouring of the "in-situ" slabs, however, all joints between units were filled with cement grout.

TABLE 2.

SCHEDULE SHOWING TIME TAKEN TO CAST AND PLACE PRE-CAST UNITS.

A. CASTING :

At commencement of job	36 units	(39 sq. yds.) per day
At end of job	60 ,,	(65 sq. yds.) per day

Labour involved : 1 Artisan and 4 Labourers.

B. PLACING :

1st Block :	1st Floor	12 hours	up ramp
	2nd Floor	11 ,,	up ramp
	3rd Floor	10 ,,	up ramp (using hoist)
4th Block :	7½ hours per floor		

Labour involved : 1 Supervising Artisan and 12 Labourers.

(Carrying from casting yard to site, hoisting and taking up ramp, and placing in position on prepared runners.)

RESULTS.

The final results amply justified the adoption of the scheme, and established beyond all doubt the suitability of the floor system in structures where slab spans were not excessive.

The possibility of utilising this system in other Council housing schemes has now also been investigated. Addendum No. 2 shows the comparative costs of the pre-cast cum in-situ floor as opposed to a monolithic slab in the third contract of the Schotsche Kloof Housing Scheme. Fig. 4 shows the general layout of the units for a typical floor in this scheme.

The successful results obtained in the application of this system in the "Q" Town Housing Scheme render it extremely feasible that this floor system will prove advantageous even at times when timber is no longer in such acute shortage.

The floor system has now been patented.

ACKNOWLEDGEMENT.

All the works described herein were carried out under the direction of Mr. W. S. Lunn, M.C., B.Sc., A.M.Inst.C.E., M.Inst.M. & Cy.E., City Engineer, Cape Town, to whom the author is indebted for permission to write and present this paper.

[This paper was presented at the Second Annual Conference of the Institution of Municipal and County Engineers, South African Branch, held in Bloemfontein in November, 1944.—Editor.]

ADDENDUM 1.

PRE-CAST AND CAST-IN-SITU PATENT FLOOR.
APPLICATION TO BLOCK 12 OF "Q" TOWN HOUSING SCHEME.
Comparison of costs between "Pre-cast and Cast-in-situ floor" and monolithic slab of the same depth.

Quantities	Description	Rate	Cost
1. MONOLITHIC SLAB :			
25 Sqs.	Shuttering to slab, include propping	120/-	£150 0 0
40 c. yds	1:2:4 Concrete (¾ in. Stone) to 5 in. slab at second floor level	42/-	84 0 0
9 cwts.	Extra Steel reinforcement in position	42/-	18 18 0
	TOTAL COST		£252 18 0
2. PRE-CAST AND CAST-IN-SITU FLOOR :			
3.7 Sqs.	Centering to beams	125/-	£23 2 6
200 ft. run	Labour only for careful levelling of sides of beams to take pre-cast units	6d.	5 0 0
400 ft. run	Runners and Props between wall and beam to take pre-cast unit. Include careful levelling in relation to beams and walls	1/6d.	30 0 0
3.5 c. yds.	Concrete (1:2:4 ¼ in. Stone) in-situ beams and pads	44/-	7 14 0
19 c. yds.	Concrete (1:2:4) in-situ on pre-cast units : average thickness—2⅜ in.	46/-	43 14 0
14 c. yds.	1:2:4 (½ in. Stone) concrete in pre-cast units. Include hoisting (second floor) of units and placing of units in position and including moulds. Size of 1 unit : 6 ft. 9 in. x 1 ft. 6 in. x 2⅛ in. average. Weight of 1 unit—260 lbs.	60/-	42 0 0
1.8 c. yds.	Ditto Ditto but units average 1 ft. 0 in. wide and weight 170 lbs.	62/-	5 11 7
300 ft. run	Carefully level top of brick in 1-5 cement mortar to receive units. Include material	6d.	7 10 0
760 sup. ft.	Extra in labour and material for 9 in. brick in lieu of 4½ in.	10d.	31 13 4
27 sq. yds.	Plastering to beams	3/-	4 1 0
320 ft. run	Extra labour only to forming external arrises to beams	1d.	1 6 8
320 ft. run	Extra labour only to forming internal arrises to beams	1d.	1 6 8
20 cwts.	Extra only for small sizes of steel	2/6	2 10 0
	TOTAL COST		£205 9 9
	NETT SAVING PER FLOOR		£47 8 3

ADDENDUM 2.

PRE-CAST AND CAST IN-SITU PATENT FLOOR.
APPLICATION TO THIRD CONTRACT OF SCHOTSCHE KLOOF HOUSING SCHEME.
Comparison of costs for a typical flat between "Pre-cast cum in-situ" floor and monolithic slab of the same depth.

Quantities	Description	Rate	Cost
1. MONOLITHIC SLAB :			
8.8 sqs.	Shuttering to slab, include propping	120/-	52 16 0
15.25 c. yds.	1:2:4 Concrete (¾ in. Stone) to 5 in. slab at second floor level	42/-	32 0 6
	TOTAL COST		£84 16 6
2. PRE-CAST AND CAST IN-SITU FLOOR :			
76 ft. run	Runners and Props between walls to take pre-cast unit. Include careful levelling in relation to walls	1/6d.	£5 14 0
.33 c. yds.	Pre-cast concrete beams size 9 in. x 9 in., including casing and hoisting and placing in position	90/-	1 10 0
.33 c. yds.	Pre-cast concrete beams size 12 in. x 9 in., including casing and hoisting and placing in position	100/-	1 16 8
7.6 c. yds.	Concrete (1:2:4) in situ on pre-cast units : average thickness—2½ in.	46/-	17 10 0
7.6 c. yds.	1:2:4 (½ in. stone) concrete in pre-cast units. Include hoisting (second floor) of units and placing of units in position and including moulds. Size of 1 unit : 10 ft. 0 in. x 10 ft. x 2½ in. average. Weight of 1 unit : 260 lbs.	80/-	30 8 0
150 ft. run	Carefully level top of brick in 1-5 cement mortar to receive units. Include material	6d.	3 15 0
60 sup. ft.	Extra in labour and material for 9 in. brick in lieu of 4½ in.	10d.	2 10 0
1½ cwts.	Extra steel	42/-	3 3 0
110 sq. ft.	Slurry	3d.	1 7 6
	TOTAL COST		£65 17 6
	NETT SAVING PER FLAT		£18 19 0

TOWN AND COUNTRY PLANNING ASSOCIATION

SYMPOSIUM ON THE REPORT No. 5 OF THE SOCIAL AND ECONOMIC PLANNING COUNCIL HELD AT THE UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG, ON 5TH DECEMBER, 1945

REGIONAL ASPECTS OF REPORT NO. 5 OF THE SOCIAL AND ECONOMIC PLANNING COUNCIL

By Norman Hanson, A.R.I.B.A., Practising Architect

A. INTRODUCTION.

The Fifth Report of the Social and Economic Planning Council, which, as you know, deals with regional and town planning, is, for planners at least, an event of significance in South Africa. Though by no means of equal quality, it has to be compared, on the same level and in the same sphere, with the reports of the Scott, Uthwatt and Barlow Committees in Great Britain, and with those of the National Resources Planning Board in the United States.

The scope alone of the Report shows, for the first time in South Africa, a grasp of the fundamental issues involved in physical planning. The approach is broad and informed, and the argument (within limits) well put and logically developed.

I do not wish, however, to imply that unequivocal support can or should be given to all that the Report contains. In many ways it is a highly controversial report and, it must be said, its roots in national problems and in the public knowledge of and response to those problems, are not as deep as one could have wished. In that respect, the reports of the British Committees and the U.S. Planning Board, to which I have referred, reach much further into current realities and possibilities. The reviews of prevailing political and economic trends, with their social repercussions, are both more profound and more positively helpful. In consequence, the tactical approach for gaining a wider acceptance of national planning is more subtle and more certain of results.

For various reasons, the Planning Council is in no position to conduct researches and enquiries on a comparable scale, and the defects mentioned are, in all probability, inevitable. The effect is seen, nevertheless, in many important sections of the Report.

In the limited time at my disposal, it is not possible to embark on a detailed critique. Perhaps it would be of greater advantage to review briefly the regional aspect of the Report, to emphasise some of its merits, and to conclude by dealing gently with some of its defects.

B. BRIEF SURVEY OF REPORT (in its regional aspect).

1. The Subject of the Report is given as an examination of the question of public control of the use of land through regional and town planning, of which there is little or none in South Africa.

2. In the Economic Sphere, the private enterprise system is taken for granted, but its operation is to be controlled, modified and directed to achieve given social objectives, stated as :

i. Equality of opportunity and greater equality of income.
ii. Minimum standards of life guaranteed to all sections of the population.
iii. Conservation of resources.
iv. Full employment.
v. A pre-determined pattern of population, distribution and economic activity to correspond to the above.

The last objective is named as the main concern of the Report, and is brought about, with due regard to conflicting interests, by

3. Public Control of the Use of Land. Present conditions, the Report points out, engender unregulated development, particularly on the periphery of towns. It is in the public benefit to override private benefit, in the sphere of economic decisions. Precedents are then quoted for the control of land use, namely, the findings of the Scott (Land Utilisation in Rural Areas), the Uthwatt (Compensation and Betterment), and the Barlow (Distribution of Industrial Population) Committees in Great Britain; and, in the U.S.A., Federal planning as exemplified by the Tennessee Valley Authority. (Mention might well have been made of other Federal enterprises in New England and the Pacific North-West, and, of particular interest to South Africa, State planning within the Federal Constitution.)

4. The Situation in the Union. South Africa's special type of economy, based on primary products of fixed location in

manufacturing, is examined. The view is expressed that public policy in the use of land is based, mistakenly, on a conception of the inviolability of economic laws. The Council opposes to that acceptance the principle that the State may determine the areas within which private enterprise may operate.

5. Need for action is revealed when the growth of the urban population is examined. In 1941 the urban population was 3½ million, while the Council gives the estimate for 1955 of 5½ million. The shift of population follows economic development, and will inevitably occur. The governing factor is economic development, and it is in relation to that development that the Report postulates that for the full employment of a greatly increased population, expansion of base mineral, manufacturing and tertiary industries is fundamental.

If this normal development takes place, a great expansion of towns will follow, and consequently the planning of the urban environment takes on a new urgency. The doubling of the urban structure in 15 years may be envisaged.

This national development should be guided by regional considerations and economic prospects, in order to gain maximum benefit to the Union and its people as a whole.

6. The Present Distribution of Population reflects an unbalanced economy, though historically and economically well founded in the first instance. The urban concentration is to be found in six main centres, which held one-fifth of the population in 1936 and one-half of the European section in 1941.

The growth (1921 to 1936) is recorded as follows :—

In metropolitan areas	74%	increase
In other urban areas	52%	"
In rural areas	28%	"

(The total increase was 38%.)

The lack of balance is demonstrated not only in figures, but even more forcibly in the social and economic consequences in the overall pattern of population distribution. For example, while metropolitan areas swell, rural areas are denuded of the most effective and productive section of their population. Again, the drift of Natives to the towns, while reflecting a necessary economic change, also demonstrates poverty and backwardness and unproductiveness in the Reserves and other rural areas. Perhaps the sharpest expression of this latter phenomenon is to be found in the migratory labour system, which has grown, not diminished, in scale in recent years.

The great concentration of people (one-third of the population on 8% of the land) is justified only if it reflects the distribution of resources. The Report sets out to demonstrate that the present distribution of population does not reflect that of undeveloped resources, which are, in the main, coal, iron and water. (Neglected areas include the Eastern Transvaal, North and East Free State, Natal and the Transkei.)

The Council holds that there is no physical reason for further concentration in three or four metropolitan centres, though it does not under-estimate the social and cultural advantages of great cities. Emphasis on town planning, the Report continues, is not enough, and the multiplicity of problems demand a regional base for successful attack.

7. Favourable and Facilitating Factors are next outlined. Unused mineral and power and water resources encourage the regional approach. The extension of transport facilities and the creation of a national electric power grid will allow accelerated balance and diversified development of resources and the planned allocation of "mobile industries."

In advocating an active programme of controlling land use, the Council sets objectives on lines already indicated, finally expressing their sum total as the best functional allocation of land amongst all competing uses.

The Council here repeats its faith in the private enterprise system, but hopes to modify the pattern of the economy in accordance with governing social factors through public control of land use.

8. Regional Planning is now brought directly into the picture. Present Government activities, organisation and administration are shown to be functionally based and therefore narrow in conception. To supplement and widen the functional basis, the regional approach is strongly advocated.

There are at present regional divisions for restricted purposes, but these are accidental and sporadic in operation. (Examples are tariff protection, agricultural price assistance and public works.) They invariably follow and seldom set the pattern of development.

Physical planning on a regional basis is needed to supplement and not supersede that of functional agencies. Only planning co-ordinated at the national level and formulated, supported and carried out at the local level, will give effective direction and balance to the country's economic and social programmes. The Report touches on a weak spot in its regional approach when it emphasises that legislative authority and administration proceed from political entities, historical and racial in origin and not regional.

9. Town Planning. The Report then establishes the relationship of town to regional planning—showing the one to be an integral part of the other. If regional planning entails full control of land use, clearly the development of land for urban uses is but a phase, thought an important one, of the larger issue. As it is, existing machinery for town planning takes no account of regional factors, nor does actual planning reflect a national policy for land use and population distribution. In order to adapt urban development to regional potentialities, the Council makes its central proposal, namely, in the

administrative and, possibly the executive sphere, the creation of a

10. Department of Physical Planning and Regional Development to prepare regional development plans, to implement national control of land use, and to supervise town planning. This would entail withdrawal of the town planning powers of the Provinces and the regional planning advisory functions of the National Housing and Planning Commission. The question is put that if the Provinces are unable to decide matters of national policy, expressed in regional terms, could they not yet function as regional divisions of the national authority ? The political and administrative advantages are clear, but the fact remains that provincial boundaries do not coincide with the principle economic or natural regions. Nevertheless, the Council holds that a delegation of authority to the Provinces could work, provided supra-provincial planning could be centrally organised and directed.

The functions of the proposed Department include :—

a. Regional Research.
b. Formulation of Regional Plans, linked with
c. Preparation and Issue of National Zoning Regulations.
d. Supervision of Detailed Town Planning Schemes.
e. Administration of Land Ownership, Expropriation and Betterment.
f. Correlation of Public Works Programmes.

Co-ordination in outline, in detail and in timing of all physical development plans, is to be achieved by consultation between authorities at all lower levels and the Central Government Department. The execution of plans will not fall to the Department, but will remain in the hands of numerous specialised agencies. Nevertheless, existing agencies do not cover the whole field, and gaps are apparent. These must be filled, it is felt, either by extending the powers of these agencies, or by the creation of new development agencies on the lines of the Tennessee Valley Authority in the United States. The regional aspects of the Report are concluded by some random suggestions for measures to promote regional development and diversification. An Annexure, in two parts, dealing with Aspects of Town and Country Planning and Regional Planning and Development follows. This gives the background for the condensed account embodied in the main report, and contains valuable material to support the central theme. The Annexure is particularly strong on resource distribution and population trends.

C. CONCLUSION.

Obviously, from the short review that I have given, it will be seen that the Report is a competent work. Its field is extensive, and its background, amplified in detail as it is in the important Annexure, comprehensive in broad outline. The cause of physical planning in South Africa is well served, and one must express one's admiration for the vision and study of which the whole document is eloquent.

At the same time, the validity or even effectiveness of the general approach to the problems of planning may be questioned. The Report takes the line, of which some planners are enamoured, of starting with the major physical evil, isolating that evil from immediate context, and then proceeding energetically to the attack. In other words, it is, from the planner's point of view, putting first things first. But the planner's point of view is but one way of looking at the total environment of man, and a deliberately and consciously adjusted way at that.

So that, when the Council lays down a wholly admirable set of social objectives for the State to follow, but proceeds to concentrate on the last of them, namely, the achievement of a pattern of economic activity and distribution of population that is consonant with the five previous and basic ones, then it is attacking the extremities and not the heart of the problem. The Council's method of securing the desired pattern of the economy is by State " control over the use of land—the physical base of most human activities." Planners are not the people to contest the point (it certainly is not in their interest to do so), but without the interplay of the other basic forces in the economy, the efficacy, or even the possibility of carrying through, this one measure must be seriously doubted.

Now the new State policies which the Council elaborates spring from this one major assumption, and all subsequent recommendations are coloured by it. This does not necessarily weaken the case made out for land control in general, but it may lead to the making of tactically inept recommendations. The whole matter may be put another way. In my view, social and economic issues complicate the picture of physical development, and strictly limit the possibilities of physical planning. The Report endeavours to reverse the process, and, by treating development as a problem of physical planning, hopes to achieve the desired social ends. But physical planning is, in itself, only possible in so far as social and economic conditions allow, and the tactics of advance should be conceived within the given social framework. This view, if correct, is not all pessimism. The Union's general economic and social as well as physical condition gives considerable scope for active planning, and this the Report makes clear. That planning will, in turn, mobilise and stimulate public support for the wider application of the sound planning principles embodied in the Report.

Blithe assumptions, however, which are not infrequent in the Report, and a lack of concentration on the specific problems of the South African scene, will not yield the very tangible results which planners, in spite of their reputation, look for. To be more specific, there are certain areas and certain problems in South Africa which literally demand regional treatment.

They could be so treated without any radical departure from entrenched historical or political or even administrative tradition. To jeopardise that opportunity by an unyeilding insistence that State control of land use is the essential and only possible first step, would, in my opinion, be foolhardy and unrealistic and, in the final analysis, against the best interests of planning.

The Council's attitude on this subject is reflected not only in the general presentation of the argument, but also in the detailed recommendations made. The wide powers with which the proposed Department of Physical Planning and Regional Development is to be vested, would be more embracing than those enjoyed by any Government Department, with the possible exception of the Treasury. I do not wish to indicate any opposition to that desirable move, but something less could still be highly effective—and have a better chance of acceptance.

And that brings me to my last point. Acceptance is dependent not only on the agreement of the Government and its Cabinet; it depends also on the general public's support for and understanding of the issues at stake. On a subject as close and popular as Health, the strong recommendations of the Commission did not in the event succeed in by-passing Provincial authority. Have we, then, a better chance for the acceptance of an equally strong recommendation for the superimposition of Central over Provincial authority, before even public support has been sought, still less gained? If we wish to see South Africa resolve its problems along the regional route, as I do, we, the planners, have an immense task in putting the case before the public; we must arouse and maintain the required enthusiasm for regional planning and its implementation in practice.

TOWN PLANNING AND PUBLIC OPINION

By D.M. Cowin, A.R.I.B.A., Practising Arccitect

To discourse on this subject adequately one should be fully qualified in both psychology and town planning. I am neither, but contact with officials of Government and Local Authorities, combined with experience in meeting the demands of the public in architectural practice, have led me to certain definite conclusions.

As a Town Planning Association, we accept the fact that the subject affects not only professional planners and civic authorities, but every dweller in the community.

Unfortunately, we must also face the fact that at present, on all matters relative to physical planning, public opinion is both apathetic and astonishingly complacent in regard to the conditions of our towns. Democracy is founded on public opinion, and my purpose is to analyse the circumstances which have given rise to this attitude, with the hope that it may assist in implementing the recommendations of the Fifth Report of the Social and Economic Planning Council.

The main reason for this attitude of indifference appears to be an abysmal ignorance of the necessity for town planning to improve not only the aesthetic qualities of our environment, but our social and economic standards as well. The former is due to our low cultural standard, a condition which, with one or two notable exceptions, South Africa shares with the rest of the civilised western world. This can be attributed to the decline of an educated aristocracy, and to the Industrial Revolution, which culminated in the complete decline of Art in the period of the "Gay Nineties."

The rare examples of fine civic planning existing in our country to-day are a legacy of early Dutch and British settlers of the aristocratic class. Since their time the decline here has been more rapid than overseas, due to the Voortrekkers' lack of contact with the outside world, and the discovery of diamonds and gold, which introduced a commercial and speculative element not so evident in more mature countries. This latter condition is largely responsible for the fact that (in the words of the Report) "Public policy is even now largely based on the view that the pattern of the economy, and the ensuing population spread, are the results of inviolable economic laws."

How has public opinion developed against this background, and what form does it take to-day?

The average citizen is disinterested, because he cannot see the necessity for planning either town or country when our population is small and the amount of land available for expansion is apparently unlimited. If his environment displeases him, he finds an easy escape in his motor car.

He has been the subject of bureaucratic control during two wars. He does not understand planning, except as a weapon of dictators, having heard much of Mussolini's reclamation of the Pontine Marshes and Hitler's autobahnen. Knowing little of the democratic countries' achievements in planning, such as the Tennessee Valley in U.S.A., and several garden cities in Britain, he sees town planning only as the substitution of bureaucracy by a body of technocrats who might deprive him

of his existing rights. He knows vaguely that planning has been advocated for years, and that certain legislation exists for the control thereof, but while he plans the future of his child from the day it is born, in the absence of any visual achievement in the realm of town planning, he disbelieves that what he proposes for his child can largely be effected in his civic environment.

And finally, because of the distance which separates South Africa from the rest of the world, he is unaware that the existing pattern of urban life needs overhauling, and that, to quote but one example, in the majority of overseas towns, electric services are underground, thereby eliminating the mutilation of the street trees, a common practice in our towns.

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If, then, this is the outlook of our community dweller, it would appear necessary that he should be enlightened before we can expect any active support for the cause of planning. This enlightenment can be furnished through numerous channels of educational propaganda. It is, however, a slow method, stretching through generations, and our problems are urgent. There appears to be a chance of more rapid advancement through the enlightenment of our national and civic authorities responsible for policy, and with this in mind a brief review of present circumstances is necessary.

Starting with the supreme authority, we find that although parliamentary members are afforded the most able technical advice by the Social and Economic Planning Council, there is little evidence that if they understand the national and regional problems, any energetic effort is being made to solve them in a rational manner.

Next in order are the Provincial Administrations, who, although operating under purely permissive and negative legislation, exert the greatest influence through their Township Boards. In the words of the Fifth Report, however, "the Townships Boards have not been constituted with sufficient regard to the professional nature of their task." Until a higher standard of township planning is demanded by these Boards (and our Association should have sought this), the land speculators will continue to fool and exploit the public.

Recently appointed Peri-urban Areas Health Boards are hampered in the same way.

Turning to Local Authorities, we find that in some of our towns at least there is evidence of an awakening to the realities of civic planning problems by the people's elected representatives, but, with rare exceptions, competent guidance is lacking.

In the sphere of private enterprise the influence on public opinion of the building societies and estate agents must not be under-rated. Their anxiety to maintain the status quo is evident, and we must first educate them and the speculators to understand that in the end planned civic order will pay large dividends.

Finally we have to consider those groups or individuals responsible for our town designs. The citizen is generally unaware of the policy or conditions which determine the layout of a town; he does not have the designer's opportunity to appreciate the whole as a unit. He sees but a portion of his environment at a time, and forms his judgment on visual observation and personal convenience. The trained designer should combine logic and beauty, but, in the words of Geoffrey Scott, "Nature, unfortunately, would seem to unite these qualities with extreme reluctance."

In the past, our town planning has consisted of the mere subdivision of land by those permitted under Statute. More recently it has been entrusted to consultants carrying affixes to their names sufficient to qualify them in the eyes of the public. With rare exceptions, however, do these people combine the qualities essential to the architect of town building. The word "architect" is here used, not in its narrow professional sense, but in the Churchillian manner, to signify those who can conceive architecture in a broad scope, who can visualise the gradual development of an extensive layout, organically, rhythmically, and expressively.

Such individuals, though rare, do exist, and they must be given the opportunity of translating their visions into reality for the benefit of the nation.

The subject of town planning and public opinion cannot be dismissed without some reference to our proportionately large African population. Whether we favour it or otherwise, the urbanised Native gives no indication of a desire to retain his tribal traditions, but seeks advancement in the adoption of European standards and ideals. What inducements to a better understanding and appreciation of town planning are offered to-day? One of Johannesburg's attempts, at Orlando, is well known, where a fairly well-conceived layout of streets has been ruined by an architecture completely divorced from visual beauty. Less well known is a newly-approved township known as Albertynvlei, which adjoins Klip town on the outskirts of Johannesburg. A narrow strip of land not more than half a mile wide and some six miles long has had a chequer-board pattern imposed on it with complete disregard of the physical conditions of the site, or its relationship with the contiguous areas. The anxiety of the land-starved Coloureds to acquire land in this township is pathetic, but its existence is a disgracing indictment on the sponsors, the authorities who approved of it, and on our so-called civilisation.

The final conclusion to be drawn, then, is that public opinion can in time be influenced in the right direction by education

and propaganda, but a more direct route is through the enlightenment of those responsible for the employment of town designers. Public confidence in town planning will grow with the production of concrete examples of efficient, livable and beautiful towns, and reciprocally, the stronger this confidence is, the more influence will town planners gain.

TOWN PLANNING AND THE LAW

By Julius Lewin, B.A., L.L.B., Lecturer, Native Law and Administration University of the Witwatersrand, Johannesburg

The legal aspects of town planning have been neglected in the past. They are touched on here and there in the Fifth Report of the Planning Council, but unless the reader is alert to their significance, he may easily miss them altogether.

It is necessary in the first place to remember that all planning must be based on statutes. The old common law gives no public authority anything like the powers over private property that planners regard as essential to their purpose. Consequently no one can take the first elementary steps in planning until he is armed with sufficient legal powers. Here the Union Parliament made its first mistake. Twenty years ago, in the Financial Relations Act of 1925, Parliament delegated the power to legislate on the subject of town-planning to the four Provinces. Now as the Planning Council discreetly mentions in its Report, "the rational unit for physical planning is the functional region. It can therefore not be denied that the Province is by no means the ideal planning unit in the Union since each Province contains several clearly defined regions, while certain other logical regions overlap Provincial boundaries" (paragraph 139). This is putting the matter very mildly, no doubt because there is by now almost a constitutional convention that one should not say nasty things about the Provinces, at least publicly. Elsewhere in the Report, you may detect the same important observation, also made in passing in a politely subdued tone. "The Province is a purely historical and political division. It bears no relation whatever to regional areas, which are defined by national considerations" (paragraph 57).

Apart from the obvious disadvantage of entrusting a national task to a Provincial body, there is a serious legal handicap in this way of doing things. The Provincial Councils are subordinate legislative bodies. Their legislation is therefore apt to be declared ultra vires by the courts. Any enthusiasm for the cause of planning that may visit Provincial legislators—and it has not hitherto been conspicuous—must be restrained by the knowledge that they dare not exceed the rather vague and undefined powers delegated to them by Parliament. If they do, watchful property-owners take the Ordinance to court and get a vital section of it nullified, as they did last year in the Transvaal.

The municipalities, to whom the Provinces have in turn delegated certain responsibilities, labour under the same handicap in making their own regulations. This handicap is rendered heavier by another burden, namely, the nature of the modern judicial process.

Judges and lawyers simply follow the legal tradition which enjoins them to interpret strictly any statute that infringes the rights of the individual under the common law to do what he likes with his own property. Moreover, the training of lawyers rarely makes them familiar with any subject except law. The essential requirements of modern town planning would be a matter beyond their knowledge and outside their experience.

In other words, the constitutional structure of the Union of South Africa and our traditional legal system are by no means well adapted to the task of town planning. It is a pity that the Planning Council lacked the courage (or is it the knowledge? It has no lawyer among its members) to say so in good set terms. For my own conviction as a lawyer is that planning in our country is doomed to make but slow progress until it enlists the services of some sociologically-minded lawyers anxious to adapt their ancient legal techniques to modern social purposes.

Such lawyers would probably want to devise a new jurisdiction for a special court which would hear all cases arising out of housing and rent as well as town planning legislation and litigation. This court would absorb the functions of the Townships Board whose work also suffers at present from social, legal and administrative obstacles that its members are unable to cope with. Be it specially noted that this court would not consist solely of lawyers. Nor would it consist only of surveyors or engineers or achitects of town planners or sociologists. But it might well have as its president an experienced lawyer with some knowledge of, if not training in, other subjects than law, and he might be assisted by a representative of each of the

other professions I have mentioned as well as by an intelligent layman or two to contribute that saving measure of common sense without which specialists are dangerous men. For planning is essentially a versatile activity that calls for the close co-operation of several different branches of physical and social science.

Unlike our present courts, this town planning court would not restrict the activities of legislators and planners by applying the doctrine of ultra vires. Though many lawyers seem to imagine that this doctrine is as old as Justinian, and therefore worthy of profound respect, it is in fact a comparative youngster in legal history. As Dr. W. A. Robson has pointed out, this doctrine did not emerge until after 1840, when it was devised by the courts to curtail the activities of joint-stock commercial companies. Shareholders who had invested money in, say, a railway company could prevent the company from running ships or selling coal if they thought it unprofitable. They got the courts to intervene on the grounds that " a corporation created by statute exists merely for the purpose for which it has been established. What is done beyond that purpose is ultra vires and void."

This view was adopted on grounds of public policy or social expediency. It was presently applied to Local Authorities because they happened to be bodies corporate operating under statute and resembling commercial companies in this one respect. But is there not a big difference between such companies trading for private profit and a Local Authority providing public services or exercising public control in the common interest? The doctrine of ultra vires as it now operates has the effect of making unlawful any action or expenditure by a subordinate legislative body, such as a municipal or provincial council, which the enabling statute does not authorise expressly or by necessary implication. In South Africa these statutes, even when they are comprehensive, are often " vague and embarrassing," as lawyers say. For instance, the Provinces are empowered by the Constitution to establish " municipal institutions to undertake the functions of local government." No one really knows what these terms include and what they exclude.

Has not the time come to abrogate the whole idea of judicial review through ultra vires ? To do so would not, as many orthodox lawyers may imagine, wreck the Constitution. The necessary safeguard against uncontrolled or wasteful activities rests in the power of the franchise exercised by citizens in a democracy. If town councillors or provincial legislators run amok, they can periodically be replaced by others who are more responsive to pubic opinion. But in truth what Dr. Robson says of England is equally true of South Africa—to-day the problem is not how to limit power but how to compel the effective and proper exercise of it; not how to restrict action but how to enlarge initiative. The doctrine of ultra vires, and the strict limitation of powers which it involves, hangs like a millstone round the necks of Local Authorities. Until it is abrogated by Parliament, it will hamper efforts to broaden the basis and enrich the quality of urban life.

To return to the special court for hearing issues that arise out of town planning, I remarked that it might well absorb the functions of the present Townships Boards and also perhaps of the Rent Boards. There would be many advantages in making one court specialise in such cases. For one thing, its decisions could be regularly and officially reported so that a body of consistent principles could emerge just as they have done in the other older branches of law. To-day we are really all in the dark about the general principles, if any, which the Townships Board seeks to apply. The comparative obscurity and uncertainty of its habits and proceedings—its members are only part-time and they are pre-occupied with other responsible duties — have added to the hostility which lawyers and the public are inclined to feel towards such administrative tribunals. This feeling would greatly diminish if the status of the Board were raised so that it came to resemble an ordinary court of law.

It is a weakness of the Planning Council's Report that it does not even approach the consideration of aspects of town planning such as these. It surveys the jungle in which we are now lost and it indicates how and where the paths and even roads can be cut through it. But if fails to realise that the traffic on these roads will be dense and that legal rules of the road will still have to be made and applied to it.

If I have emphasised some of the shortcomings of the Report, it is not for want of appreciation of its obvious merits, about which others are better qualified to speak. There is good stuff in this Report. It is indeed a pity that much of it is buried under the singularly graceless style in which the Report is written and presented. Perhaps that is the challenge it offers to town planners, whose sense of beauty is presumably strong. Let them translate this Report into something like Basic English and broadcast its substance in the form of a popular illustrated booklet. I do not agree with those who have suggested that the common man does not care a straw about town planning. Don't despise my neighbours in Braamfontein until you have done your utmost to arouse their interest and to explain the question to them. By the proper solution of that question no one stands to gain more than they do. That is why I retain some confidence in their desire to put their pressure behind the social purpose that we all share.

COMMENTS ON REPORT NO. 5 OF THE SOCIAL AND ECONOMIC PLANNING COUNCIL

By A.J. Cutten, Town Planner, Housing Directorate
National Housing and Planning Commission

In extreme brevity, Report No. 5 suggests :—

1. That the State assumes control of land use.
2. That in future all townships shall be laid out and developed by Local Authorities.
3. That land for this purpose be expropriated from present owners at cost plus a certain percentage.
4. That landowners suffering loss of development rights be compensated to the extent of what they paid for the land, less its basic farm value.

In other words :—

All speculation in land shall be terminated immediately. All land shall be deprived of its development value and shall in future be sold only as farm land, irrespective of the use to which it is going to be put; and

All private enterprise shall be excluded from the development of land into industrial or residential townships.

Well, none of these ideas are new. Adam Smith goes one better and says land has no value at all, and should never be individually owned. Its ownership should be vested in the State and individuals be permitted to lease it for approved uses.

So far as the abolition of private enterprise is concerned, this conception has not yet, in democratic countries, been found favourable in principle nor satisfactory in practice. The Uthwart Commission, whose report is generally admitted to be of outstanding excellence, examining the problem at a time when England was in the throes of a social revolution, at least admitted that land could possess development value. It even refers to land being "dead ripe" for development, and in this case is prepared to recommend that compensation be allowed to approach true market value. The Uthwart Report is, however, mainly concerned about "floating" development value, that is, the chance among all the land surrounding a town that the next development will take place in any one spot, as opposed to the chance that it will take place in another. The Report suggests that the aggregate development value of the individual portions exceeds the value of the same land taken as a whole by two or three times, and recommends a general pooling of development rights and compensation on this basis.

Thus the "floating" or potential development value is eliminated, but the right of the owner to claim fair development value is conceded.

These, gentlemen, are the findings of an expert committee, in a country that has since gone Socialist. What hope, then, has a report which suggests that the Government deny all development rights whatsoever, and that compensation be merely basic farm values, or cost, plus interest, whichever is the lesser ?

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I think you will all agree that the land speculator is one of the worst parasites on humanity—that is, the man who buys land for so much and sells it later at twice the price, after having done nothing whatsoever to it.

But a difference must be made between the speculator and the developer. And that such a person as the developer does exist cannot be denied. He is the man who buys up land adjoining urban areas and at the ripe time proceeds to lay out a township. In these days, this is no mean proceeding and involves him in large financial dealings and responsibility, together with a tremendous lot of work. As a rule, of course, we will accuse this person of making too much profit for what he does. Sometimes this is true, but on investigation it will be found that the profits are not so enormous as they appear to be. A case I investigated recently showed that 75% of the selling price of the stand was used to reimburse expenses, and the profit counted over 12 years of waiting and preparation amounted to 10%.

On the other hand, obviously there are those people who, having put nothing into the ground, coolly demand a 100% profit. I think it is in the intention of stopping such speculation that the Report 5 suggests the abolition of the sale of ground for profit, with the result that the authors fall into the pitfall of suggesting the termination of all private development.

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Irrespective of the compensation paid for deprived development value, I submit that Local Authorities are not necessarily the best people to develop ground. One hundred per cent. State or municipal monopoly does not bring out the best in any sphere. It is the old question of competition, and I consider that in the development of land the variety of areas made available by private enterprise is a good deal preferable to the controlled development that would otherwise take place municipally.

Here I might state that I have recently had occasion to visit most of the Union's bigger towns in search of stands for housing, and I was shocked to find that of all the land sharks, the municipality could be by far the worst. I am referring to the coastal towns, where Local Authorities have been fortunate in acquiring large areas of town lands. In one particular town, practically no land is held by outside owners; the price of erven land had been steadily pushed up and up by the municipality relinquishing only small areas at a time and selling by public auction. By this method the lowest price for a quarter acre plot was £400, and no land was cut smaller. In other words, £400 was the cheapest price that could be paid for a building site—however cheap the house. What chance has a poor man ? And this is an example of municipal townships !

Another bad factor is that by including, as the Cape Local Authorities do, the cost of roads abutting a stand in the price of an erf, the general rate is not materially affected, and so new townships are disproportionately burdened.

No, I cannot agree that Local Authorities should develop and sell townships. For planning purposes give them control of the land use—and a greater say in the design—but leave the actual development and administration to private enterprise.

My suggestion consequently admits of a development value and is in agreement with the Uthwart Report and the British Courts White Paper. I consider that if land is deprived of development value, fair compensation should be paid.

How this compensation is to be arrived at is another matter, outside the scope of this paper, but it is interesting to note that New Zealand has overcome the difficulty by instituting a land sales court and land sales committees, which approve the price of every land purchase, and so are in a good position to differentiate " floating " value from real and fair value.

No planning scheme is practical unless the people are behind it. And to deprive hundreds of land owners of the land appreciation is not going to augur well for the success of the scheme.

It is essential to get the public to co-operate. In fact, when the plan is prepared, the people must be made to appreciate that it is for their own ultimate good and that their assistance and co-operation is essential. However good the plan, if it is forced on the public at the cost of the individual property owners, it will never succeed. Thus the landowner must be given a square deal.

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Again, no planning scheme will work unless it will pay its way, which implies that as compensation is paid to affected landowners so betterment must be collected to reimburse the planning agencies, otherwise no dynamic planning can be effected. While accepting the principle of betterment—it is generally conceded that no practical method exists of collecting it—accordingly I consider that the method advocated in the Report 5 is as good as any, i.e., 75% levy on all increases in land value—on re-sale. This, of course, amounts to the Fixed Property Profits Tax in another form—but provided it was made clear to the public that this tax was financing the land compensation incumbent in a thorough town planning scheme, I think even the public could be made to appreciate it.

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I agree wholeheartedly with the Report that some ministerial control of Government departments is necessary. Under the existing Provincial framework, I also feel that it is possible for the Provincial Townships Board to act as regional controllers. If such were accepted, however, complete re-organisation is necessary. The chairman must be of full-time capacity and distinct from the departmental representatives, as at present. He must be a qualified planner, and under his direction positive dynamic planning must be effected. He will have the entire picture of his area and be able to co-ordinate the planning schemes of Local Authorities, who will actually do the planning. But it must be on a basis that is independent of monetary considerations. The suggested betterment tax will be collected by the national department, who will also meet compensation, on its own approval of the case. Thus a certain check is maintained. The costs are equally proportioned and Local Authorities are relieved of local vested interests.

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The National Housing and Planning Commission is not the best body to advise the Prime Minister on location of industry, desirability of new roads and the best functional use of the land.

It has one full-time job in building houses, just as the Departments of Agriculture, Irrigation, and Economic Development of Mines all have their own provinces.

The Department of Planning will inform the National Housing and Planning Commission when to build, just as it might suggest to the relevant department that a certain industry might be sited in a certain place.

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To sum up, I agree that :—

Control of land use is necessary and imperative.

That a separate department should co-ordinate existing departments.

That Regional or Area Planning Boards, under qualified direction, should study the regional problems and endeavour to plan dynamically for their areas.

That Local Authorities should be relieved of financial implications and should prepare plans of areas in advance.

I disagree that compensation should not be paid and that private enterprise should be eliminated.

COMMENTS ON REPORT NO. 5 OF THE SOCIAL AND ECONOMIC PLANNING COUNCIL

By N.T. Cooper, Town Planning Officer and Land Surveyor, City Council of Pretoria

Report No. 5 of the Social and Economic Planning Council is an arresting document, and I agree that it was a " red letter day " for town planning when it was published.

After consulting all the best authoritative works on the subject, the authors have placed a series of recommendations before the Government, which, from a town planning point of view, are highly desirable, even if some of them are impractical and not wholly related to local conditions—from a student's point of view the report is a veritable " reader's digest " of planning and should be studied from cover to cover. I do not agree that Report No. 5 is on a par with the Uthwatt and Barlow Reports, and I do not think that the authors would claim this, seeing that they have made very full use of these reports.

The Report calls for dynamic planning. Well, dynamic planning requires dynamic legislation, and our present legislation is very far from this; in fact, it has been almost invariably proved in the Courts to be ultra vires. If there is one thing calculated to defeat the best laid schemes of planners and to destroy their morale, it is inadequate legislation. I well remember with what high glee the opponents of planning welcomed the Supreme Court's ruling that Section 29 of the Transvaal Ordinance was ultra vires. Only an enlightened public will help us to get the legislation we require, and I feel we should do all we can to educate the public.

One of the weaknesses of the present system is the inadequate control of the sub-division of farm land. The present procedure is this : A farmer leaves his farm to his many children and it is sub-divided into portions, giving each heir some river frontage, a bit of arable land and some mountain veld. A generation or two later this mis-shapen parcel of land, looking like a wasp's body perhaps, must be laid out as a township. How can anyone, be he an Abercrombie or a Sharp or anyone else, hope to plan this isolated, unrelated, mis-shapen piece of land and produce a well-balanced, harmonious township. It simply cannot be done. Report No. 5 gives two solutions to this difficulty. Either private enterprise should not in future be permitted to lay out townships or alternatively compulsory pooling powers should be given to planning authorities to enable them to insist that odd-shaped portions of land must be consolidated and planned as a unit.

The third matter I wish to refer to is the question of the Government promulgating legislation to enable the Provincial authorities to amend unsuitable conditions of title. The Transvaal Provincial authorities have made every endeavour to obtain these powers from the Government, and I do not know with what success, but my guess is that they have failed. What, then, is the use of planning in areas where a superior law dated centuries ago will nullify all your efforts; and what is still more tragic, the Government of 1945 will not amend that law.

We know that the Government delegated its planning powers to the Provinces, who in turn passed the duty on to the Local Authorities. Some of these Local Authorities have town planning schemes in operation, but the more powerful Government and Provincial authorities are not obliged to comply with the provisions of the schemes, and some Departments of State will not do so. The ironic state of affairs is not mentioned in Report No. 5, although it exists, and in some towns, particularly Pretoria, this lack of co-operation bodes ill for the future planning of that city.

The Reef, in spite of some lovely suburbs and well laid out areas, is on the whole perhaps the richest and worst planned area in the world, and we know the reasons for the mistakes which have been made. If, then, we repeat those same mistakes in the planning of the Free State Goldfields, we South Africans can really consider ourselves to be fools. Report No. 5, in paragraph 43, suggests creating development agencies on the lines of the Tennessee Valley Authority. Why not suggest that such an agency be created to prepare a regional scheme for the Free State Goldfields ? This should be done immediately to ensure that our future " Reef " is well planned.

Finally I suggest that all those interested in planning should stop sniping at one another. Inside this hall are perhaps 50 people interested in this subject. Outside are thousands who look upon us as cranks; and don't forget that vested interests are only too keen to keep up the illusion. Nothing can do more harm to the planning cause than quarrelling among ourselves.

SOME REMARKS ON REPORT NO. 5 OF THE SOCIAL AND ECONOMIC PLANNING COUNC

By C. Sholto Douglas
Surveyor-General of the Transvaal

I am grateful for the opportunity of contributing to this evening's symposium on the Social and Economic Planning Council's Report No. 5. It has been suggested that my remarks should refer more particularly to the land surveying aspects of our subject matter.

An immense amount of study has been put into the preparation of the Report, and everyone interested in planning must feel grateful to the Council for producing such an arresting document.

Before, however, we can endorse all its statements and conclusions, we should examine them with care, and where important matters connected with planning are not correctly presented, it is in the public interest that wrong impressions created thereby should be corrected.

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One wrong impression created by the Report is that the history of town planning in South Africa began with the 1925 amendment to the Second Schedule of the Financial Relations Act No. 10 of 1913. It is true that under this amendment the power was first conferred upon the Provinces to legislate in respect of town planning as distinct from and supplementary to the powers the Provinces previously possessed in respect of the control over the establishment of new townships. It is also true that outside the Transvaal there was no such legislation prior to 1925. In the Transvaal the laying out of townships has never been without some form of control. In Republican days certain townships were laid out by and for the Government, and the right of other persons to lay out a township was restricted. Private townships could be laid out only when authorised by a Volksraad Besluit. A tendency to evade the law was checked after the Boer War by a Deed's Proclamation of 1902, which required that, whenever a piece of land was divided into 15 portions or more, a general plan must be lodged. This was followed by the Ordinance of 1905, which established an embryo Townships Board. This enactment proved very inadequate and was amended in 1907 and 1908. The abuses that the 1905 Ordinance sought to remedy were brought to notice by land surveyors in the office of the Surveyor-General. Mr. Maxwell Edwards, who was then Examiner of Diagrams, was the principal mover, but I understand that the Ordinance was piloted through by Mr. Lionel Curtis.

In 1905 public opinion was very unenlightened on our subject and advocates of controlled development were regarded as meddlesome cranks. The land surveying profession has no reason to be ashamed of its efforts in the direction of planning, for they received very scant support and encountered bitter opposition and obstruction.

The early Townships Boards were armed with inadequate powers, nevertheless they achieved some useful results; and with the extension of its powers the Board now exercises at least a complete negative control. The following general requirements are insisted upon :—

1. The provision of roads wide enough for traffic requirements (though perhaps not wide enough for tree planting—local authorities not being in favour of very wide roads on the score of expense).
2. The ensuring of adequate access to and from a main road and the keying in of new roads with existing road systems on adjoining properties.
3. The provision of an endowment and sites for educational, governmental and other public purposes.
4. The provision of essential services such as water, sanitation and electricity.
5. The zoning of the township for trading, industrial or residential purposes.

The control which I have outlined above is admittedly permissive and negative in character. Many of the layouts that have been passed fall far short of modern ideas of planning. The Townships Board was not, however, originally intended by the legislature to relieve owners of the expense of engaging skilled planners by doing their planning for them, and provided the plans submitted were not glaringly faulty in design the Board was expected to pass them. During recent years the Board has been able to induce owners to introduce radical changes in their design in the interests of economy and convenience, but it is still chary if insisting upon change of design merely to relieve monotony or to achieve a more interesting layout. It is very dangerous to dogmatise in matters of taste. Not so very many years ago architects and artists of unchallenged reputation favoured highly ornate buildings and were quite content to have them set in severely straight streets. Now our public building or at least blocks of modern offices

tend more and more to look like a factory or barracks, whilst if some designers had their way our towns would resemble a scenic railway. There is, of course, a happy mean between the checker-board design and that of one of Pretoria's well-known suburbs, where in motoring through the streets it lacks only a hurdy-gurdy to complete the illusion of being in an amusement park! This suburb, by the way, was not designed by either a surveyor or a civil engineer. On paper it certainly looks interesting, but on the ground one is exasperated by a sensation of purposeless indirectness and confusion. The designer must have been something like nature except that what he abhorred was not a vacuum but a straight line!

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In its historical review of planning in South Africa the Report has overlooked or ignored two very interesting events. One of these was the publication of the Report of the Local Government Commission of 1921 known as the Stallard Commission, which, inter alia, deals very ably with the subject of town planning. The other was the issue of the Report of the Transvaal Town Planning Commission of 1929. These two blue books are now almost unobtainable, but they deserved to receive much more attention than was paid to them.

The greatest weakness in our present laws relating to the development of land is the lack of adequate control over the subdivision of farm land on the outskirts of towns. Until the passing of the Provincial Extended Powers Act of 1944, the Provinces' powers of planning legislation were confined to urban land or land deemed by the Administrator to be destined for use as urban land. The result of this has been the springing up of Asiatic shops and the creation of slum conditions on the outskirts of our towns—especially along main roads; and very few of our towns have attractive approaches. Even if slum conditions are not present, the haphazard cutting up of land to suit the whims of individual purchasers effectively prevents its eventual development in a harmonious and co-ordinated manner. This problem cannot be solved without regional planning, and although in the Transvaal, municipalities can be given planning powers beyond their borders, such planning cannot be really effective unless control can be exercised over the cutting up of farm land. The passing of an Ordinance under the Provincial Extended Powers Act is an urgent necessity. This question of regional planning is primarily the concern of the surveyor and the civil engineer, and is thus one of the aspects of our subject with which I was asked to deal more particularly. Before proceeding any further I wish to appeal with all the earnestness at my command for a realistic approach to the subject and a careful assessment of the obstacles to be overcome in order to achieve success in regional planning in South Africa.

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The planning movement has fluctuated violently. Every now and again it receives an impetus through the energy and enterprise of men whose enthusiasm has been kindled by witnessing the success of movements in other countries or who have been shocked into action by a realisation of the disastrous effect of lack of planning in our own country. It is unfortunate that some of these enthusiasts, whilst well versed in overseas literature on the subject of planning, have not been sufficiently acquainted with South African conditions of law and public opinion to be able to discriminate between those aims which are attainable and those which under present conditions are foredoomed to failure. When faced with unexpected obstacles enthusiasm wanes and planning societies fade away without having accomplished very much. We may well ask ourselves why is it that so little has been accomplished. Of course I know the usual answer is to blame the Townships Board. That body's powers for good or evil are, however, very restricted, and we must look elsewhere for the reasons for failure.

I think it must not be overlooked that in Europe there are still relics of feudalism. Owners held their land in fief; so that the idea of restrictions being placed on the use of his land does not strike the European owner as monstrous and absurd. Here in the Transvaal we are only two generations removed from the bold Voortrekkers, who were in actual occupation of their farms before any stable government was established. The totalitarian idea of the State being a supreme overlord is still abhorrent to the rural landowner, though the townsman has become accustomed to being governed by laws and bye-laws. Is it any wonder that Governments of various political complexions shy away from measures involving control over the use of farm land?

Let me give you an example: One of our past Ministers, after studying conditions in Germany, managed, nearly 12 years ago, to persuade Parliament to pass the Unbeneficial Occupation of Farms Act. It was quite a good piece of legislation, but can it be put into practice? So far I believe some six little bits of land have been dealt with. Not long ago there was a proposal to put it into effect in an area where the land was so cut up and occupied that no one was able to eke out a living on it. A capable official was sent to explain the proposals. He assembled the owners and explained at length how the Government was going to take possession of the land and rehabilitate the owners. The response was brief and to the point—a threat to shoot the first official who set foot on the land! Do we sufficiently realise that this fierce individualism is not confined to the backvelder? I wish some of you could be present at interviews I have with educated professional men protesting at what they term "all this nonsense of town planning"! We so often talk glibly of regional planning, and in the Planning Council's Report some scathing remarks are made on the tendency to confine planning to towns, whereas every authority is agreed that town planning should be entirely subsidiary to regional planning. In a totalitarian State this would be the right way to tackle the problem,

and when some wonderful New Order takes over we shall have not only the planning of land use but the planned use of human material as well. Under such an Order a father may have fond notions of turning his son into a doctor, but if the autocrat who conduct's the son's aptitude tests decides that he is better fitted to the work of a mechanic he will, in that wonderfully planned state, be forced to handle a spanner and not a sthethoscope! However, that New Order has not yet taken control, and in the meantime we must face facts as they are. No doubt this attitude will be dubbed defeatism—I prefer to call it realism.

I do not for one moment suggest that planning on a regional or even on a national scale should not be striven for, but I do feel strongly that we are not yet in a position to launch grandiose regional and national planning schemes; and that in the present state of public opinion and of ignorance of the future trend of development in South Africa, the widespread imposition of restrictions on the use of land might do more harm than good. I doubt if there is any country in the world with the trend of its future development more unpredictable than South Africa, because its whole economic structure is bound up with the unpredictable place of gold in international finance. In most countries it is possible to frame a fairly reliable forecast of the probable growth of population, the possibility of establishing and maintaining industries and of the demand for agricultural products. These factors are unknown quantities with us and we cannot follow blindly the example of other countries. At present, however, we are undoubtedly riding on the crest of a wave of enthusiasm for planning. Let us see to it that we do not fritter away this golden opportunity by striving for the unattainable. We must educate public opinion. Our societies seem to imagine that our greatest need is for the services of a few expert planners; but what can an expert accomplish if the will of the people is against him? How can planning be anything but a failure so long as registered conditions of title are sacrosanct and cannot be altered by any planning authority? Let us bend our energies towards the creation of a planning-conscious nation instead of trying to convert each other to this or that school of thought. Only as one deals with attempts to guide or control development can he realise the fundamental antagonism that is aroused in ordinary folk—even educated folk—by such attempts.

I should like to see a campaign launched, commencing in our schools with talks and films illustrating the advantages of panned development. Our children have grown so accustomed to dreary, monotonous, shadeless streets that they are quite unconscious of their extreme ugliness. Why shouldn't children be shown contrasting pictures to educate their taste? Then, too, the help of the Press could be enlisted—not to publish long articles filled with the jargon of town planners, but something short and snapppy that will catch the attention of desultory readers. Whilst this programme of public education is in progress, I would urge that local authorities be encouraged to push ahead with the more positive side of planning and to launch out into planning beyond their boundaries—subject to the limitations imposed by the present state of our laws and of public opinion. Even at this stage provision can be made for projected road schemes, and land could be selected for cemeteries and other public purposes, areas could be reserved for non-European occupation and the uncontrolled development of farm land could be checked.

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The Report under review deals with the questions of pooling and of the removal of the profit motive in the establishment of townships, which I should have liked to touch upon, but am prevented by lack of time. I thank the promoters of this symposium for this opportunity of expressing my views, and trust that the Association will continue its endeavours to keep alive public interest in both town and country planning.

CONTEMPORARY JOURNALS

"THE ARCHITECTURAL REVIEW" October, November 1945

The October number opens with a descriptive article by John Piper on St. Marie's Grange, the first home of A. W. N. Pugin. The author pays lenient tribute to a home which is of interest by reason of Pugin's association with it rather than for any real architectural merit.

W. G. Hiscock, in a well-documented narrative, supported by drawings and photographs, discusses William Townesend's work at Oxford.

"In Memoriam Aristide Maillol," by John Rothenstein, throws an interesting and sympathetic light on the life and last days of that gifted modeller.

The buildings illustrated in this issue include the Swiss National Library at Berne, by Oeschger, Kaufman and Hostetter, erected in 1931, and a small house at Highgate by Mr. Furniss, completed with considerable difficulty in 1940.

The November issue commences with Oliver Sheldon giving the full story of the York Assembly Rooms, designed by Lord Burlington and built in 1730. C. W. Craske's Greenwich Treasure Hunt focusses attention on examples of domestic architecture built there between 1810 and 1910, and makes a plea for mercy for "the homely little side streets of our suburbs which may be swept away under the new plans."

The highlight of this issue is, however, the second part of Cristopher Tunnard's review of the American Planning Tradition. In the first part, published in the August number, he covered the period up to the end of the last century. In this second part the author outlines the general trend of progress towards greater responsibility in shaping the contemporary American scene. The bold planning of the T.V.A. and the Farm Security Administration is justly recognised as a vital phase in the evolution of American Planning; and the American technique of mastering physical environment by democratic planning is of significance whenever planning proceeds to-day.

Of considerable interest, too, is the Congress Hall, Zurich, built in 1937, which with new buildings comprising a congress hall for 2,000, banqueting hall for 500, a hall for chamber music, a lecture hall and a restaurant, incorporates the old Concert Hall. This work is fully illustrated by plans and photographs.

"THE ARCHITECTURAL RECORD" November 1945

Research Laboratories are featured in this issue, with particular attention paid to the Firestone Laboratories by Voorhees, Walker, Foley and Smith, which are impressive for their co-ordinated details and planning of the complex services and equipment, and these are adequately covered by plans, drawings and photographs. Others which are illustrated are the laboratories for Hoffman-La Roche Inc., by Fellheimer and Wagner, a research and manufacturing unit for the Johns-Manville Corporation; the laboratory for the Georgia School of Technology by Bush-Brown and Gailey; and a large project for the General Electric Company on a 155 acre site.

Building Types Study 107, in collaboration with "Mill and Factory," deals with factory design, with its many ramifications, for low-cost production.

"THE ARCHITECTURAL FORUM" November 1945

This issue gives a glimpse of the future of American design and presents a wide variety of projects shortly to be built which cover almost the whole range of building. Pre-war and wartime technical developments are apparent, and the review leads to the editorial conclusion that the "Trend is Forward."

OBITUARY

LIEUTENANT REGINALD ROEBUCK LINSLEY, S.A.A.F.

We regret to have to record the death on active service of Lieutenant Linsley. Lieutenant Linsley was born in Johannesburg on 9th January, 1922. He was educated at Jeppe High School, where he matriculated with distinction in 1939. Largely as a result of this success he was able to obtain a pupilship in Quantity Surveying in the Johannesburg City Engineer's Department in 1940, at which time he commenced his studies for the B.Sc. in Quantity Surveying at the University of the Witwatersrand, Johannesburg.

In June of 1942 he interrupted his studies to join the South African Air Force as a pupil pilot. He received his "wings" in October, 1943, and in February, 1944, was posted to his squadron.

He saw service in North Africa and later in Italy. On November 6th, 1944, his aircraft was shot down by anti-aircraft fire during an air battle over Sarajevo in Jugoslavia, and subsequently having been reported missing, he has now been presumed killed.

As a student he showed great promise and his untimely death is a great loss to the profession.

To his parents and brothers we offer our sincere sympathy in their sad loss.

CORRESPONDENCE

South African Railways and Harbours.
General Manager's Office,
Johannesburg.
22nd January, 1946.

The Editor.

The Tender Board of this Administration has recently drawn attention to the frequency with which tenders returnable to the Chairman of the Tender Board are erroneously addressed.

The tender documents issued to prospective tenderers contain detailed instructions in regard to the submission and delivery of tenders, but despite this tenders are on many occasions sent to the wrong address.

The position is aggravated by the omission on the part of tenderers to indicate on the envelope the number of the tender and the particular commodity covered by the tender as requested in the instructions to tenderers. This leads to tenders being opened before the due date, which is undesirable in view of the necessity of maintaining the strictest secrecy in regard to offers received, until all quotations can be opened together on the closing date of the tenders.

Another aspect of the matter is that tenders enclosed in incorrectly addressed envelopes, or envelopes which do not indicate the number and title of the tender, are liable to be received by the Chairman of the Tender Board after the date and hour fixed for the receipt of offers. In such cases the offers cannot be accepted for consideration in view of the stipulation made in the Tender Board Regulations and Instructions that no late tender will be considered.

It is desired that the fullest publicity possible should be given to the necessity for addressing tenders in accordance with the instructions issued in each case and, in the circumstances, I shall be glad if you could assist by drawing attention to these omissions and irregularities in one of the issues of your publication : "The Architectural Record."

Yours faithfully,

E. H. WILSON,
for W. M. Clark,
General Manager.

Accent On Housing

THE over-riding preoccupation of the architectural and building world will for some time rightly be the provision of housing.

While, however, the national shortage of domestic building receives immediate priority, there are also to be met the huge accumulated demands for commercial and institutional construction, for which plans must be prepared to be put into operation as soon as the limited factors of labour and materials are available.

Here the need will once more be felt for expert design and craftsmanship in the provision of those features for which in the past the House of Sage has set a standard and established a tradition. With resources renewed and experience enhanced by the exceptional services to which it was called during the war years, it is to-day ready to play its expected and important part in the appropriate spheres of the wider field of Post-war Reconstruction.

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