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R. A. I. C. JOURNAL

OCTOBER 1944

LA TE in September we received two extraordinary documents from Australia, one of which we reproduce, practically in full, in this issue. It is the planning report of the Royal Australian Institute of Architects. This would be a remarkable document if it came from the American Institute of Architects or the Royal Institute of British Architects. It comes from a country with a population of just over seven millions, of whom the architects, not in the armed services, must number only a few hundred.

WE read the second extraordinary document under the impression that it was written by some well-informed enthusiastic political party who, when they used the words "The Government will do so and so", intended them as a pious hope for the present, or a promise of why they, themselves, would do if elected to office. It was toward the end that we realized that we were actually reading a government paper on housing and planning, and this was confirmed on the last page by the name of the Minister, the Hon. J. B. Chifley and of the Government Printer, Alfred Henry Pettifer. We admit to a feeling of shock and slight bewilderment. It was, as though we were attending, in a dream, a meeting of mayors, at which a federal minister was telling them that they simply had no conception of the housing shortage in their respective cities; that, if only they were bright enough to see it, whole areas in their municipalities were rotten with slums; that the problem was so great, and so acute, and so long neglected that it was beyond the financial capacity of the province or the municipality to cope with it; and that it must be handled with federal funds. To prove his contention, he handed us each an attractive illustrated pamphlet entitled "We can do better" and read us the following —

"THE Commonwealth Government is sponsoring a war housing programme with a target of at least 1,215 low-cost permanent homes for each quarter of 1944. State housing authorities are responsible for the actual building of the homes, but are backed initially by Commonwealth finance. Fifty thousand houses is the target for the first post-war year. Of those, the Commonwealth will sponsor 30,000 for low income earners and 20,000 will be built by private enterprise. . . . Large scale slum clearance cannot be undertaken until the housing shortage has been relieved. Until the housing shortage is overtaken and slum dwellings replaced, the demand for dwellings will be greater than the supply. It will be necessary, therefore, for a preference system to operate which will allot a proportion of houses to ex-servicemen, people at present inadequately housed and those with especially low incomes. Special consideration will be given to those with large families. . . . By the end of the third post-war year, the Commonwealth plans to increase its building target to 80,000 dwellings a year. This will be necessary to reduce the shortage, effect slum clearance and keep pace with current needs. . . . The health of Australians is a national matter. The time for a national plan is certainly now.

"THERE will be no excuse if we are ever caught in a similar position again. Causes of the shortage and of slums all boil down to one thing — lack of proper planning and national control. New Zealand, England, America and the Soviet Union have tackled this problem years ago. A dwelling of good standard and equipment is not only the need, but, the right of every citizen." One country is conspicuously missing.

Editor.

FOREWORD

*"There is a tide in the affairs of men,
Which taken at the flood, leads on to fortune;"*



This tide already runs, swiftly and irresistibly, towards a new era in this world's life and in the affairs of men. That era to which the United Nations have set their hands, embodies not only National ideals, but the ultimate fulfilment also of individual hopes and aspirations.

Re-construction may find its own limitations but construction engenders new zeal and a future not visionary only but one capable of achievement by capable means, allied to ordered imagination.

To attain this goal, method with knowledge is essential and the scientific application of these attributes will provide that vital necessity, the pattern, the plan for the future. Social security, housing, industry, transport, the people and the individual, all find a related place in this great plan.

A plan there must be but only a far-seeing one is worthy of the name and opportunity. It must be based upon known facts, upon resources of this land and, when classified, welded to the needs and aspirations of its people.

This Report gives emphasis particularly to this point, viz.: that planning of this nature should precede action by at least two years.

The need for action is already urgent but we are still awaiting that essential prerequisite, the Plan. Knowledge of the present is an obvious necessity for the formulation of adequate preparation for the future and it is natural that the Architect who, through training and experience is essentially plan-conscious, should be aware of, appreciate and now stress, the extreme and urgent necessity for that systematic and progressive action so strongly emphasized in this report.

The proposals submitted in these pages provide not only an outline of the problem to be faced, but indicate also those lines along which a plan for post-war development should proceed.

A plan there must be; it must, however, be worthy of its purpose; and it is for the leaders to initiate this plan, to advance its application and to strive for its success — the adequate solution to the post-war problems of Australia.

It is, then, to those who represent the thoughts and interests of the peoples in our parliaments, our councils, administrators of affairs within our land, to all upon whom the mantle of direction and leadership has fallen, it is to them this brochure is addressed.

President

The Royal Australian Institute of Architects

POST-WAR DEVELOPMENT!

REPORT SUBMITTED BY THE ROYAL AUSTRALIAN INSTITUTE OF ARCHITECTS

This report has been prepared for the New South Wales Chapter of The Royal Australian Institute of Architects, so that Architects of New South Wales may have the opportunity to offer their views in such fields of Post-War Development in which they can contribute special knowledge as technical men, and also in some cases, their views as citizens.

While this report is in preliminary form only, it has been decided to submit it for distribution, so as to give a summary of the general conclusions already reached. It attempts to indicate the best conditions under which the Architect can most fully satisfy the individual and public needs of the community in his special field.

The four main sections of the report deal with—

- I. National Framework.
- II. Building Industry Organization.
- III. Codes and Standards.
- IV. The Architects' Contribution.

SECTION I.

NATIONAL FRAMEWORK

It is assumed that the fundamental principle on which Post-War Development is based is that it shall be for the maximum benefit of the greatest number of people.

The post-war problems, national and international in scale, with the very existence of the country depending on their solution, demand comprehensive and integrated national planning. This may be defined as the machinery for the sensible and ordered carrying out of the national policy of the people, always in terms of the human values involved.

1. Producing a National Plan

Any national plan must be based on knowledge of all resources and physical features, actual and potential, of the country, and of the lives and activities of its people.

This can only be acquired by surveys of all geographical, climatic and geological features of all present uses of natural resources, and all existing transport, industrial, agricultural and human statistics.

A large proportion of this work has already been done, but the information is not yet set out or collected in usable form. This should be done at once.

From such completed survey can be deduced all factual matter needed for national planning towards an ideal and balanced physical and social structure.

2. National Planning Body

Someone must plan. It is not for Architects alone to devise the machinery by which a national plan can be realized, but it is obvious that there must be a National Planning body. Such

a body must be competent to undertake and digest the survey work referred to above, as well as to carry out its main functions of receiving from Parliament the national policy to be planned, planning it, and presenting the planned scheme with all the necessary information as to how to achieve it.

Any views the Institute may have on the relations of this body to Parliaments, Federal and State Governmental bodies and private individuals, as well as the degree and type of authority it should possess to implement its planning, would be those of citizens only. The problem has received a great deal of expert study in Great Britain, and the several possible solutions are well set out in the reports to the British Government by the Scott, Uthwatt and Barlow Committees.

We wish to state our insistence, however, that the National Planning Body must have certain characteristics—

- (a) A continuing function to obtain benefit from the accumulation of knowledge and experience.
- (b) Its task to be continuous national planning, not the formulation of a fixed plan.
- (c) It must have the standing of a major instrument and be in close touch with the source of national policy.
- (d) It must have very carefully devised machinery for co-ordinating its relations with the various Government Departments obviously involved.

3. Organization of Planning Authority

Assuming the formation of a National Planning Body as beforementioned, the organization as a whole would presumably consist of—

- (a) Central Planning Body.
- (b) Regional offices of the National Planning Body to deal on the one hand with such parts of the national planning as affect the regional areas, and on the other to co-ordinate planning schemes prepared by groups of local authorities.
- (c) Groups of local authorities to prepare local planning schemes.

Such a framework would ensure that the larger principles of national planning would be applied to all activities and also encourage the very necessary growth of local, regional and State enterprise and enthusiasm. It is assumed that local planning would be directed into conformity with national planning where necessary.

4. Architects and Physical Planning

The Architect is already concerned with many of the physical matters which will be involved in national planning, in particular with the design and planning of individual buildings, groups of buildings, neighbourhoods and towns. The architectural profession is a logical field from which the new profession of "Territorial Planners" may be drawn.

As Architects we assume that, in the physical matter of providing homes, neighbourhoods, towns and planned countryside, the well established principles of town, country and neighbourhood planning will be mandatory in the future.

In an attempt to apply these principles in Australia, where they have not yet been used to any great degree, there are certain matters which will need special attention if success is to be obtained.

5. Recommendation for Physical National Planning

(a) Success will not be possible in the physical aspects of planning unless the use and treatment of all land is publicly controlled, whether it is publicly or privately owned. Such control will automatically prevent unhealthy speculation in land and buildings and will permit of development being efficient and economical.

Two points arise out of this statement. No further Crown lands should be alienated. At most they should be suitably leased. In the bringing of land under such a form of controlled title, consideration should not be given to the improvements thereon for the purposes of assessing its value. The values of these should be kept separate and distinct.

(b) The extension of planning on to a national basis will call for a large number of trained persons, such as, in the field immediately under consideration, town planners and territorial planners. It is necessary that good facilities for their training be immediately provided, and also that the technical men already trained, and about to be trained, should be used to the fullest extent of their abilities. The particular position of the Architect in this matter is referred to in Section 4 of this report.

(c) While there are many factors governing the optimum size of any town or city, we are of the opinion that the capital cities are in some cases too large for their own satisfactory working. From this point of view alone, we recommend a definite scheme of decentralization, as a reason for urgent action in the matter, to be added to those of economy, defence and well-being.

(d) Such decentralization will in the end depend on the location of industry, which in itself is dependent on the physical resources of the country. If the relationship of town and country is well conceived the national planning will express itself in logical topographical units centring round suitable nuclei of urban population and best described as regions. It is our opinion that, along with the obvious need for a balanced economy in the Nation generally, these regions should be so developed that they have balanced economies in themselves, within the national framework, and allowing decentralization of cultural and economic activities. The planning and development of these regions in this manner is a major requirement of any national plan.

The State boundaries do not always coincide with the logical boundaries of such regions, but for administrative and constitutional reasons, as well as the existing transport and economic conditions, it would appear that the regions should, as far as possible, be subdivisions of the States, and, indeed, under present conditions, must be entirely so.

(e) It is of course necessary for the best results in any building work attendant on a national plan that the industry is as efficient as possible, and that the codes and standards under which it works are the best conceivable. The Architect in these matters can speak with the highest authority, and the views of the Institute on them are set out in Sections 2 and 3 of this report.

In the urgent matter of housing standards, certain precise recommendations are sent out therein, and similar precise standards for neighbourhoods will be included in the final report.

(f) The very broad outline above is at least sufficient to show that large scale physical planning cannot be done without considerable preparatory work, and we therefore stress the urgency of the matter. Some of the work, such as the training of personnel and the completion and collation of the surveys, could and should be undertaken immediately. We might point out that the British Government has already withdrawn nearly all town and territorial planners from the Fighting Forces.

We are also of the opinion that, while sufficient planning must be centralized in principle, the utmost encouragement must be given for the initiation of planning work from the smallest groups capable of such work. Without this, the local urge is removed, and popular enthusiasm, on which the plan must ultimately depend, is curbed and dissipated.

Similarly, the work of technical men, a policy of greatly distributed personal responsibility will tend to use all the technical skill available, instead of merely a section.

6. Possible Emergency Development

It is possible for a set of circumstances to arise which will call for the commencement of developmental work, the rehabilitation and absorption of ex-servicemen in large numbers, and housing to be carried out before a clear national development policy, or its implementing machinery, is established.

Such a condition would require immediate and large scale action, which, as far as possible, must not be in conflict with, or prejudicial to, the later normal development on a full scale. The following suggestions are made as pointers to the fields in which this can most easily be done:—

(a) The urgent employment of all persons needed to implement the surveying, town, neighbourhood, and country planning, and detailed structural planning involved in the main work. Their activities must be at least two years ahead of realization of their work if they are to function effectively.

(b) The undertaking of water conservation schemes. In our opinion these are the governing factors in a national development of Australia, just as power has been in Russia and the U.S.A.

(c) Large scale forestry work and prevention and curative treatment of soil deficiencies and erosion. As this is the key to the fertility of the country, it cannot conflict with any long range plan. The nursery activities for such a policy are an urgent consideration. Coupled with this question would be the establishment of National Parks, Coastal Reservations, and adequate sites for recreation and physical fitness.

(d) The development and modernization of trunk communications facilities and power supplies. The former of these would be almost fully welded into later development; the latter would appear to require a conservative approach.

(e) At the risk of temporary strain on existing services, housing schemes primarily to alleviate present shortages and ultimately to replace sub-standard dwellings should be undertaken as near to the affected areas as possible. Demolition of sub-standard dwellings cannot be undertaken until the numerical deficiency is overtaken, but all new development should form part of a town plan in order that it will not handicap the long range development of the locality.

(f) The planning and construction of remedial works in towns and cities for traffic disabilities known to exist now and likely to persist in the future.

(g) A firm policy of low priority to any proposed development which would encourage the growth of Sydney, Melbourne and other large centres until their place in a decentralized economy is apparent.

(h) The rehabilitation of servicemen and the provision of employment for people at present engaged in war production, is a primary consideration in this state of affairs. It is not entirely a problem for structural development, but attention is drawn to certain aspects of the matter set out in Section 2 of our report.

(i) Attention is drawn to the remarks in Section 2 of the report, where a gradual resumption of building activity is recommended. If an emergency, such as we envisage here, is likely, that recommendation is doubly urgent.

SECTION II.

BUILDING INDUSTRY ORGANIZATION

Architects feel there will be a great task before the industry after the war, caused by the sheer demand for its products and its accepted place as a field for absorbing labour from the Services and war industry.

The main fields will be—

- (a) Development construction work of a national character.
- (b) A large scale housing programme.
- (c) The conversion of existing industries, and the servicing of the construction of public works.
- (d) Full scale repair and renovation of existing buildings.
- (e) A programme of social service buildings, including schools and hospitals.

These are matters of the very first importance and must be well in hand before the heavy demand for replacement of obsolescent buildings, and for the more ambitious types of commercial and public buildings can be met. These latter have to be classed as non-essential for some time. Every effort should be made to produce a building output large enough to prevent any possibility of a low standard temporary housing.

1. Effects of Post-War Requirements on Industry

At the end of the war the number of skilled tradesmen will be much fewer than in 1939, so that the needs of the community are unlikely to be met at a speed which may prove desirable if pre-war building construction methods are alone used. It appears, however, that existing manufacturing and supply facilities can easily be adapted to meet all likely demands on them.

To make sure that the existing machinery of the industry is in proper condition to reach a high output as soon as the major post-war demand occurs, an earlier and gradual resumption of building work is essential, with all the production of materials and equipment, and the training and re-training of tradesmen which such a move implies. The main methods of raising the speed of output should be the wide use of standardization, of mass production methods, and of factory technique at the expense of site work. Only large scale operations can exploit these matters, and they in turn bring problems of large scale finance, heavy capital expenditure and the

provision of a steady market. Even with the use of all these, it is unlikely that demand will be immediately overtaken, and a system of priorities may be expected for some time after the war.

These facts, together with a consideration of the disaster which will occur if the building produced by this great effort is not set within a proper frame of town and country planning, all point to inevitable national control of the industry to a greater degree than before the war.

2. The Building Industry

The building industry is a very large and heterogeneous group in the community, and its outward limits are hard to define. It has four main divisions:—

- (a) Design
- (b) Construction.
- (c) Services and Supply.
- (d) Control.

This last is not strictly part of the industry, but means those bodies under whose laws, rules and regulations, and vagaries, the industry works.

The pre-war output capacity of the industry was at least £43,000,000 annually, based on its work in 1928-9, when it produced £40,000,000 worth of buildings throughout Australia, exclusive of State and Federal Government buildings, repairs and renovations, and work in rural areas. This output was achieved under obsolete and restrictive by-laws, and concurrently with a large number of public works other than buildings which absorbed much labour which could have been used by the industry.

There were also major deficiencies within the industry:—

1. The construction section suffered from the existence of a relatively large number of small firms operating, who had inadequate technical training, financial backing or equipment, with a consequent use of out-of-date methods. Far too high a proportion of casual labour was engaged.

2. The manufacturing and supply section suffered from too many firms operating in our relatively small market, causing a costly overhead charge on the supplies of the industry.

There was also an excessive use of specially made goods, an undue number of varying patterns of similar articles, and a thoroughly unsatisfactory system of finance as between builder and supplier.

3. Existing Industry Relative to Post-war Problems

We do not feel able to suggest the extent of the post-war building of the country, or the rate at which political and economic circumstances will make it desirable to achieve it. When these matters are clearly set out, it will become obvious how far the existing framework of the industry is adequate, and to what extent it must be reorganized or relieved by other means.

It appears, after allowing for various influences affecting the matter, that the 1939 industry taking up its post-war task should have an annual potential output of about £60,000,000, which, if entirely devoted to housing and a minimum amount of ancillary building to enable such housing to function, gives a very round estimate of 51,000 dwellings per annum using the

technique of 1939. It is considered that a large increase in this capacity could be obtained without drastic reshaping of the industry by some or all of the following means: —

(a) The removal of a large part of house building from the normal building field by the use of factory and pre-fabrication technique, employing manpower from the Services and war industry. The degree of skill required from this manpower should in no case be greater than that of process worker.

(b) Ensuring that constructional units are on an efficient basis, that they use better equipment, and as far as possible mechanical methods.

(c) The elimination as far as possible of casual employment.

(d) The development of improved building materials and methods, also the provision of efficient by-laws and similar instruments by authorities.

(e) The limitation as far as possible in the variations in design and patterns of similar articles, and the manufacture of equipment and fittings being organized in units of a size large enough for proper efficiency.

(f) The fullest and proper use of the design section of the industry, both by the community and the other sections of the industry.

4. Industry and General Economic Conditions

Economic and wartime circumstances have a very adverse effect on the output of the building industry. There has been a tendency to use December, 1944, as a date for measuring the housing deficiency in this country. It is therefore worth noting that from July, 1929, to December, 1944, the industry had a possible output of at least £666,000,000, but during this period, using the 1942 output as the rate for 1943 and 1944, it will have delivered only £261,500,000 for civilian use. The low output of the depression years (av. £7,000,000) underlines this weakness, which is due to the products of the industry being nearly all capital goods as distinct from consumer articles—a characteristic which remains under both *laissez-faire* and strictly planned economy.

5. Provision for Steady Output

To provide a steady output for the industry it is suggested:—

(a) The proportion of its labour and money which the community may properly devote to obtaining shelter for its activities should be decided. The output of the building industry would be more or less stabilized.

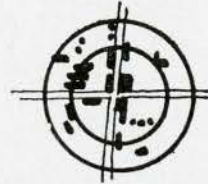
(b) Where the community shows signs of over-building, a system of credit control and building priorities be introduced to discourage the tendency, and where demand is less than the desirable output, credit expansion, the erection of public buildings, replacement of obsolescent buildings and the provision of a higher standard of shelter be used to prevent a downward movement.

The suggestions mean that the industry will be correctly treated as a purveyor of capital goods, and the post-war period may be deduced as a dangerous time when big human demands will have to be met to an extent which will call for severe restraint on non-essential building, both public and private, if a grossly over-capitalized industry in labour and equipment is not to result.

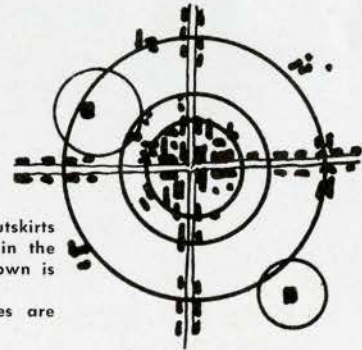
DIAGRAMMATIC HISTORY OF A TOWN



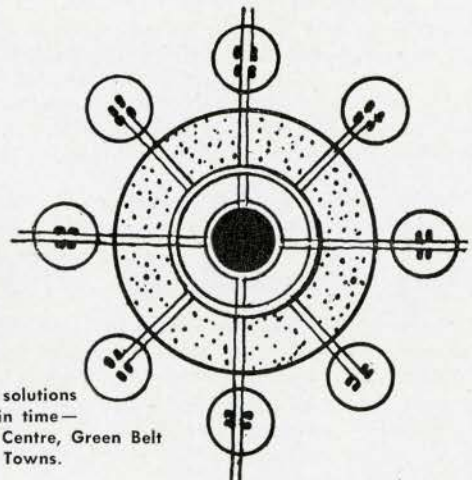
A town is born—at the crossroads. Houses and business mixed.



The town begins to grow—new houses in the outer ring.



Uncontrolled growth continues on the outskirts while slums spread in the centre. Again the town is at the crossroads. Most Australian cities are at this stage now.



One of many solutions—if planned in time—Zoning, New Centre, Green Belt and Satellite Towns.

6. Mutual Assistance in the Industry

Due to its size, and the very diverse interests and occupations of its members, the industry has never worked as a unit. Some sections are quite ignorant of other sections. Technical advances in the past have had serious repercussions or been rendered fruitless for a lack of a clearing house of ideas, and the industry has never had the strength which its numbers and importance warrant, to have even its most pressing and non-contentious problems considered by administrations.

The idea of a "Parliament" for the industry as exemplified in the National Building Council in England and the various Building Industry Congresses in Australia has much to recommend it, and should be encouraged in every State.

These bodies should be quite autonomous, and on a basis of suitable regional membership. Any body of this type should have the following features:—

- (a) The widest and most democratic expression of all parts of the industry, including its labour force.
- (b) Public bodies responsible for matters affecting the industry should be represented.
- (c) It should have machinery to ensure that constant practical information of building standards and practice is provided to all research and control bodies and to those framing technical standards.

Bodies of this type may well be used to consolidate the various trade and technical journals of the industry, into one or more publications of the highest standard, these to act as proper bulletins describing research and technical developments, economic and employment problems, and public policy in building matters.

7. Some Problems in Sections of Industry

The numerous secondary and sectional problems associated with the industry cannot be properly considered in a preliminary report. Many important matters of this nature are implicit in the various surveys and recommendations.

Certain urgent recommendations under this heading are, however, set out as follows:—

- (a) The acceptance of the principle that building siting should be subject to the widest degree of town and country planning, emphasizes the fact that in Australia we have no great number of technical men really trained to undertake this vast, complicated and urgent problem. As this work is fundamental to any programme of post-war building, the training of such persons is a matter of paramount urgency.
- (b) All persons wishing to undertake the occupation of "Builder" should be required to measure up to a high standard of education, practical experience and business credit.
- (c) Building Surveyors administering any building standards should be certified after being properly trained for their duties. Their training should give a reasonable standard of knowledge of construction and design.
- (d) To enable the industry to use its technical manpower to a proper and efficient degree, the general fields in which town planners, architects, and the various types of engineers should work should be well defined, and a full study made to ensure effective collaboration between them. The design group should be consulted in all matters of design in the articles produced by manufacture.

8. New Construction Methods

A large scale building programme if executed quickly would absorb an enormous amount of trained manpower if existing building techniques were used, as these involve skilled work on the site to a great degree. New techniques, possibly including those involving new materials, or old materials in new form, are needed to implement such a programme. New methods should be developed to reduce special purpose site work, and should move as much work as possible into factories or central depots.

9. Means of Implementing New Construction Methods

In the past the developments noted above have been retarded by the restrictive effects of building by-laws, and for want of sound technical information on such matters. A large scale planned building programme would eventually draw from the industry many new methods, and the use of many new materials. These innovations would be slowly introduced, however, so that the benefits would not be fully received until the programme had been well under way, or even nearly completed. It is therefore necessary, if methods are to be in working condition before the building programme is begun, for a Structural Research Body to be set up which can make the necessary research in design and development of new materials and methods of construction.

10. Scientific Investigation of New Construction Methods and Materials

This body should be under a Commonwealth aegis, of the nature of the present Council for Scientific and Industrial Research, and might well be an extension of that institution. Its work should be on an entirely scientific basis, and it should be divorced from any constructing authority. Its funds should be sufficient to allow it to carry out whatever research its own personnel finds necessary, on a practical scale if needed, and it should also be available to carry out research for public bodies and private individuals on a properly established fee basis. It should also have machinery to enable it to give advice, based on its accumulation of research, to anyone seeking it, and the results of its research work, both positive and negative, should be widely publicized. These last facilities should be decentralized to a degree which will make sure that the advice and information is cheap, easy and quick to obtain.

11. Field of Application for New Methods

The addition of the techniques of shop production and field assembly to the existing building techniques is not possible in all fields of building work, but in low cost small housing, particularly rural housing, it appears possible and eminently desirable in the interests of speed and economy. This is the field of repetition work, and therefore the most suitable field for the application of quantity production.

12. Prefabrication and Local Factors

The degree to which factory work can profitably be carried in Australia is not yet established, and only proper research work will show if the full pre-fabricated house is an advantage. This local condition of a relatively small market, set in a

large area involving serious transport problems, makes it unwise to blindly draw conclusions from the examples of similar work in Europe and America. The achievements there are, however, sufficiently striking to make it imperative that the subject be fully investigated by full analytical work, test constructional work and production experiments.

13. Laboratory Experiments in Prefabrication

It is, therefore, recommended that an intensive move be made to design in detail types of houses suitable for factory production in whole or in part, for use in the metropolitan areas, or for transport over considerable distances. This must be done with due regard to the probable number of units needed, the speed at which they will be required, and the social and economic implications of the location and equipment of the necessary factories.

It appears desirable that the research begins with the small units of such houses and is first devoted to the production of standard kitchens and bathrooms, complete with every detail of equipment, which policy appears to make desirable. In addition, research should be carried out at the same time on the production of a unit system of construction which could be suitable for adoption in the structural fabric of house units. This implies an exhaustive study of the availability and cost of materials in Australia.

1. Field Experiments in Prefabrication

While the above programme of research would teach many valuable lessons, it would still leave the problem studied in a theoretical manner only. It would still be necessary to apply the test of actual operations, and it appears that the traditional antipathy to living in houses produced in such a manner must be removed if the necessary helpful attitude of the community to such a scheme is to be obtained. It is therefore suggested that, after the problem has been fully examined, a number of houses, sufficiently large to give definite figures on the cost of the units on a large scale basis, be produced to the order of a suitable public body. These houses to be allocated:—

- (a) As samples at selected centres throughout the country.
- (b) As units of a model housing estate.
- (c) For sale to the public or municipal bodies.
- (d) For letting to the public (on a hire purchase basis).

15. Urgency of Research

All this work will take a great deal of time to undertake properly. It will be only partly successful if it is not carried out thoroughly, so we urge that it be put in hand as a matter of extreme urgency.

SECTION III.

CODES AND STANDARDS

It will be noted that previously the existing regulations under which building is carried out have been referred to as a severe handicap, varying and conflicting instruments, and in many cases the lack of any definite codes present a most unsatisfactory picture. The principal disabilities are contradiction of rules of various authorities, no effective right of appeal from arbitrary decisions, lack of a scientific basis for rules, no provision for periodic revision, and little appreciation of the incidence of new methods or materials.

1. Building Codes

Building regulations fall, broadly, into two main groups:—

Those pertaining to structural safety, safety of the public (e.g., fire-proofing and escapes), and public health (e.g., light, ventilation, etc.). These are capable of standardization over wide areas; some, such as structural safety, on a Commonwealth-wide basis; others, such as ventilation, on a State or regional basis.

Those affecting matters of local interest. The principles on which such regulations are based are usually capable of standardization, but it must be left to local authorities to apply those principles. It is noteworthy that this type of regulation is usually a matter of town planning rather than building (e.g., determination of areas for noxious trades, residential areas, size of house to be built in certain areas, etc.), and have in the past been included in building regulations only because of the lack of town planning legislation.

A thorough system of building regulations should include:—

- (a) The determination and control of standards governing health and safety by a central body which, under existing conditions, would probably be a State body.
- (b) The limitation of discretionary powers of local authorities to matters of local interest only, as determined by the central body, and subject to appeal, as defined later.
- (c) The administration by local authorities of regulations drafted by the central body.
- (d) The right of appeal to a central body to interpret special cases and new methods and materials, machinery for such appeal to be simple, fast and economical.
- (e) Periodic revision by a central body.

While the central bodies, referred to above, would probably be State bodies, every effort should be made to standardize model regulations as far as possible on a Commonwealth-wide basis.

We suggest that Building Regulations be considered on the following basis:—

1. That in each State which has not recently done so, steps be taken to draft a building regulation applicable to the whole State, and to all bodies administering matters to do with building.
2. That this work be undertaken by a competent temporary drafting body in each case, representative of Municipal and Governmental authorities, Architects and Engineers.
3. That in each State a small, competent, permanent body be established to make interpretations of the regulations and hear and decide appeals and special cases.
4. That permanent machinery be established in each State, to ensure the periodic revision of regulations without recourse to Parliaments, in order to incorporate rulings made and provision for new materials and methods.
5. That liaison should be established between the responsible bodies in each State, through an appropriate Commonwealth agency, in an endeavour to ensure standardization of all matters capable of standardization on a Commonwealth basis, uniformity of interpretation and rulings, and interchange of information on new methods and materials.
6. That as many regulations as possible should be in accordance with S.A.A. Codes, which should be speedily extended in scope. The Committee's remarks under scientific research should be noted in this connection.

7. That regulations should be drafted as codes of minimum requirements rather than as specifications for good practice, as is done at present; should define the minimum performance and standards required rather than the detailed means of achieving such standards; and should, as far as possible, be based on scientific research, test and experiment rather than the rule-of-thumb methods hitherto employed.

It is unlikely that regulations to cover a successful type of pre-fabricated house can be drafted in advance. The authority developing such structures should be the testing authority which would produce a statement on the necessary standards. Once this is accomplished, the co-ordination of such standards with such legislation as Local Government, etc., would be subject to the ordinary control set out above.

2. Neighbourhood Standards

Before the units in any neighbourhood can be dealt with, it is necessary that the neighbourhood itself should be defined. It will be recognized that the area to be occupied by a residential community should be just what is required for the nice working of the community. Thus a neighbourhood unit would have the following characteristics:—

(a) A residential unit development to provide housing for that population for which one elementary school is required.

(b) A neighbourhood should be bounded on all sides by arterial streets sufficiently wide to facilitate its by-passing by all through traffic.

(c) It should have parklands and recreational spaces planned to meet the needs of the particular neighbourhood, with schools and other service spheres coinciding with the limits of the unit suitably grouped about a central point or common.

(d) There should be one or more shopping centres as may be required by the population to be served, preferably laid out at traffic junctions.

(e) The neighbourhood unit should be provided with a special street system, scientifically designed, and the system as a whole designed to facilitate circulation within the unit and to discourage its use by through traffic.

Neighbourhood standards will be more fully dealt with in our final report. It is mentioned here on account of the importance of neighbourhood units being of such a size and so planned as to create in each person the consciousness of his place in the community. In combination, families can organize cultural, social, health and recreational advantages which are at present recognized as essential in the social welfare of any community.

3. Housing Standards

In exploring the field of housing standards the various basic principles and standards that are suggested are advocated as being the minimums considered necessary to provide for a functional and economic dwelling. It is assumed in every case that planning, orientation and construction will be of the highest order. This assumption is most important, for if allowances are made for shortcomings which may adversely affect the conception of a project and are applied in a mandatory way, it will penalize good design to the detriment of the community.

Both single and multi-unit dwellings will be necessary in the community, governed largely by vocational circumstances.

The single unit dwelling is generally most suitable in all areas, excepting those more intensely developed, where multi-unit buildings will be necessary. Single persons are most suitably housed in multi-unit apartments where communal life is afforded. Pensioners, however, generally prefer a degree of detachment, but with ready access of communal interests when desired.

The question of single and multi-unit dwellings in one or more storey buildings has not yet been investigated by the Committee. These matters will be considered by the Committee in its final report.

The following paragraph represents our recommendations of the minimum standards necessary for the various details of house units.

4. Areas of Rooms

Floor areas as adopted in U.S.A., England, and the Continent and Australia have been discussed relative to local conditions, and the following table sets out our recommendations. The area of all rooms is inclusive of built-in furniture or cupboards, etc., in or opening from any room.

(a) Living Space (total area of Living, Dining-room and Kitchen)—

For 2 persons	200 sq. ft.
3 persons	230 sq. ft.
4 persons	260 sq. ft.
5 persons	280 sq. ft.
6 persons	300 sq. ft.
7 persons	310 sq. ft.
8 persons	320 sq. ft.

(b) Bedrooms—Each dwelling shall have one bedroom with a floor area of 130 sq. ft.

Other bedrooms for 1 person	70 sq. ft.
Other bedrooms for 2 persons	100 sq. ft.
And for each additional person	50 sq. ft.

(c) Bathroom without W.C.	30 sq. ft.
Including W.C.	40 sq. ft.

Note—Where dwellings are planned for five or more persons a separate W.C. is necessary.

(d) Laundry—The laundry should be the utility room of the house, sufficient in area to allow also for the storage of cleaning materials, etc.

(e) General Comment—It is not considered desirable to apportion the living space into separate basic standards as the division of the space will be influenced by the habits of the people, type of dwelling and climate.

Regarding bedrooms, it is felt that, apart from the main bedroom, the ideal would be an individual room for each occupant of the dwelling, as it gives the desired privacy for each member of the family and overcomes the difficulty of sex segregation of the children, which cannot otherwise be satisfactorily achieved without considering each case as an individual problem. It is realized, however, that this ideal may not be economically possible in all cases, but it is felt that family dwellings generally should contain at least three bedrooms or provision for their future addition when sex segregation of

the children is necessary. The suggested basic standard of 70 sq. ft. for one person is designed to encourage planning of buildings with individual bedrooms. We see no reason why this limited area will not be suitable, provided the room is properly planned. As a general rule, it is felt that family dwellings should have provision for at least one bed in addition to the present family requirements.

5. Ceiling Heights

Having reviewed the standards of ceiling heights adopted abroad and in this country, also the physical and scientific factors relative to local conditions, it is felt that a basic standard ceiling height of 8 ft. should be adopted. In the final report we will refer in detail to the matters taken into account in arriving at this conclusion.

6. Natural Lighting

As a mandatory requirement it is considered that the existing regulation of glass area being 10 per cent. of the floor area with certain minimum qualifications is satisfactory. However, additional window area is desirable in some cases, particularly on the tablelands. Aspect is also very important, but must be considered as an individual problem. In the western division of this State it is generally undesirable to exceed the minimum requirements to any appreciable extent. It is desirable in the case of very small rooms, such as kitchenettes, that the window area be greater than the minimum requirements. In all cases the heads of windows should be as close as practicable to the ceiling.

7. Ventilation

In this regard it is felt that existing regulations are satisfactory as a mandatory requirement for fixed ventilation, although many occupiers consider it to be more than ample, and it is not uncommon to find ventilators temporarily obstructed. It is realized also that the practice of fixing insect-proof gauze in the ventilator does, especially with age, considerably reduce the effective ventilation.

It is considered essential to place the ventilators as near as possible to the ceiling as required by the regulations. Where the eaves are lined it is considered quite good practice to ventilate into the boxed eaves, providing they in turn are similarly ventilated, and the practice of councils requiring, as is frequently the case, that ventilators be fixed below the level of the eaves soffit is deprecated. The relation of the ventilator to the ceiling on the inside is of far greater importance than the position of the ventilator on the outside.

Consistent with the previous recommendation that window heads should be as near as possible to the ceiling, it is considered to be good practice to design the fixed ventilator as an integral part of the window head.

In addition to fixed ventilation it is considered that the windows of any room equal in area to 5 per cent. of the floor area should open for the purpose of adjustable ventilation. In the coastal areas generally, and particularly the sub-tropical areas of the north coast, considerably more ventilation is desirable.

8. Heating and Insulation

It is difficult to formulate any general standards with regard to heating, as public opinion and preferences vary so widely.

REHOUSING



Slums—City.



Slums—Country.



New Zealand shows the way!

Some form of heating is necessary in all parts of the State with the possible exception of the far north coast, but it is pointed out that even there heavy frosts are experienced over a considerable period of the winter in areas more than five miles from the coast.

In rural areas generally the type of heating is usually limited to wood, which is burnt in an open hearth. With the exception of the tablelands, it is not uncommon to find the occupants of the smaller homes satisfied with the heat from the kitchen stove, notwithstanding that the building may contain a fireplace. However, it is recommended that all buildings have at least one fireplace in addition to the cooking stove.

Slow combustion stoves are probably the most efficient form of heating, and their installation is recommended in all areas where suitable fuel is available at a reasonable cost. Open grates are essential where coal is the fuel used, and these are reasonably satisfactory for coke or wood fuel.

Town gas and electricity are clean and convenient, but generally more expensive. They are very desirable as an optional manner of heating, and in small multi-unit buildings they are probably satisfactory as the only form of heating in moderate climates.

Central heating or partial air conditioning has not in the past been applied to any extent for domestic purposes, and it is felt that greater consideration should be given to it, particularly in multi-unit buildings. The practice frequently adopted overseas of distributing heat from a central source in the same way that town gas and water are distributed should also be fully investigated, as it is felt that the method may have practical application to some housing projects in this country.

Insulation for the control of heat is very desirable in most districts, and should be provided to some extent in all types of dwellings. In districts where the winter conditions are generally mild and the summer heat has a high relative humidity, such as the coastal area generally, but particularly the north coast, benefits to be derived from insulation are limited unless accompanied by a system of air-conditioning. The ventilation of the roof is of great importance as a means of heat elimination, and should be adequately provided.



THE ANSWER—Neighbourhood Unit for an outer suburb

9. Elimination of Noise

It is considered that special measures to eliminate noise within a dwelling unit are not necessary. Under special circumstances measures should be taken to control noise from an outside source. In multi-unit dwellings it is essential that noise be controlled as between units. Particular regard should be had for service pipes and ducts in this regard.

10. Other Features

Although a considerable amount of research has been undertaken concerning site coverage and in connection with recreation, community, health and education centres, it is not possible to record the results of our investigations in this preliminary report.

There is no doubt that communal facilities should be provided in every neighbourhood unit. The size and nature of the building groups to enable these facilities to be undertaken will, of course, be varied to suit the particular individual needs and could best be provided grouped together in a community centre and located adjacent to the park and recreation area. The Baby Health Clinic, the Nursery School and the Kindergarten are the Child Section in such a centre, and should be given first consideration. These units could most conveniently be grouped with the Adult Section and together would form the young people's club, designed to meet both educational and recreational purposes, and where adequate facilities for physical fitness, such as the swimming pool, gymnasium and sports fields can be provided.

Other questions, such as artificial lighting, refrigeration, cooking and washing equipment, built-in furniture, sanitary and refuse disposal, are also under consideration, and will be dealt with in our final report.

SECTION IV.

THE ARCHITECTS' CONTRIBUTION

It would seem proper, after setting out their views on certain aspects of Post-War Development, for Architects to express their own ideas of any qualities their training may have given them which will be of use in such a field, and to set out some general and specific suggestions which may enable these qualities to be fully utilized.

Architects are one of a number of technical groups on whom the Nation must rely for the planning and design of its structural development, using this phrase in its widest sense. The others are in a large part designing engineers of every kind, including even so widely separated groups as industrial planning engineers and irrigation engineers. There are also the specialists who assist these main groups in the domestic details of their work, such as land and quantity surveyors and valuers. The remaining group are the "Town Planners." This will be a key profession in Post-War Development. It is specially discussed later.

Successful Post-War Development calls for the fullest utilization of, and co-operation between these various bodies, and in the years before the war, the increasing complexity of modern building had already caused a high degree of co-operation to be quite usual. It had also caused an invasion of the architectural field by engineers and vice-

versa, which was sufficiently widespread to have given both professions a fairly clear idea of their own limitations and the *raison d'être* of the others. The basis for the needed co-operation is thus well established and can easily be carried through every step of Post-War Developmental technique and machinery.

What must be stressed is that no success is possible unless all these technical groups are given full scope for the use of their talents at every such step.

1. Experience of Architects

The training and experience of Architects have much that is common to the other groups, but, in addition, have three special features:—

(a) They are the only "structural designers" whose work constantly has to deal with human and social values.

(b) They have, perforce, had to meet the problem of correlating the services of specialist designers towards the completion of projects in an infinitely higher degree than any other of the groups.

(c) They are the only body whose training demands that their work must have as much beauty and dignity as their native ability can provide.

The field in which Architects in Australia have worked until now covers the design and planning of single buildings, groups of buildings, and very occasionally neighbourhoods. They will remain the primary force in this field in the future, and their work will be assisted by the adoption of the following suggestions:—

2. Architects' Services

Architects' services should be mandatory on all building projects, (a) as controllers in their undisputed field, and (b) as associates in their contributory field.

The first recommendation will remove the extraordinary anomaly that a great number of the Nation's buildings are carried out without any proper technical design whatsoever, with results which are painfully obvious.

In regard to the second, Australian Architects are hardly ever consulted on large scale public works and heavy industrial buildings. We may best illustrate the effect of this by comparing the aesthetic and sensible results achieved on many dams and bridges in U.S.A., particularly in Tennessee Valley Authority, and on heavy industrial plants in Germany, with those in our own country.

In the two cases mentioned, Architects played an important part in the designing and acted as catalysts on the main engineering technicians.

3. Proper Town Planning Legislation

Proper town planning legislation should be provided as a framework within which all buildings are erected. This will ensure that individual effort on buildings will contribute to the general success of the larger units and will eliminate the present confusion of design.

DECENTRALIZATION



Workers' homes grouped around a country factory

4. Building Surveyors

Building surveyors should be fully trained Architects. This will result in skilled advice being available to local government authorities and in the provision of trained observers who can undertake survey and report work for any central planning authority.

5. Work of the Architect

The actual way in which Architects work depends entirely on who their employers are and the scale of the work to be done. The present arrangement of Architects working in Government and semi-Government organizations in carrying out their structures, with practising Architects attending to the needs of private firms and individuals may be expected to continue, but with considerable variation. There will most likely be a large increase in governmental undertakings, and increased degree of local government demands on architectural service, and a tendency for the details of building work to become standardized and for projects to increase in size. In addition, there will be the Architects who will be needed to implement certain aspects of national planning, with the central authority and its regional divisions.

The needs of private institutions, firms and individuals are sufficiently well catered for by existing architectural services and require little comment. Good "town planning" legislation would be of tremendous help in guiding the work of this section into proper forms. The Architects are already meeting the purely domestic problem of grouping and pooling their manpower and of organizing the use of consultants, so that they meet the demands of this work as efficiently as possible.

Work for Government projects and undertakings will require much architectural service. The following suggestions are made whereby Governments may take advantage of the services and talents available amongst Government employees and others:—

(a) "Structural design" should be in the hands of properly constituted technical groups, which are not subservient to constructional bodies; not after-thoughts to departments whose interests are not primarily structural matters. These groups or departments should fit into the Public Service structure in such a way that their advice is dispassionate and expressed with freedom and authority—acting really to Government work as the private Architect at present works for his clients.

It is appreciated that some departments other than Works Departments require Architects on their staff, but such men should be used in survey and advisory work for their departments and in assisting them to clarify their needs to the design groups. They should be distinguished by their titles (e.g., "Architectural Surveyors" or "Advisers") from the true function

of the Architect as a designer. This design function should as far as possible be the province of the technical groups or departments mentioned above.

(b) The higher ranks of such departments should be recruited from persons with high technical qualifications. A wide scheme for providing overseas' study should be available to senior personnel, and it cannot be too strongly emphasized that widespread personal responsibility and opportunity is needed amongst personnel if decentralized initiative is to supplement physical decentralization. Any senior departmental vacancy should be filled on merit from the widest possible field of candidates.

(c) No small group of even the most brilliant Architects has more than a minor fraction of the talent of the whole profession. It is illogical for the most important architectural projects to be studied by only a few. Such projects, particularly in their schematic phase, should be open to all Architects, governmental and otherwise, on a basis of competitive design. The machinery necessary for this method and to relate it into normal governmental facilities is already well established in France, Germany and U.S.A. Its success in those countries proves that its comparative weakness in Australia in the past has been due to known handicaps which can easily be overcome.

6. Local Government and Regional Activities

This field is one in which the Architect will be called upon to implement his side of the decentralized development set out in Part I of this report. It will most likely be characterized by a fluctuating volume of building work in each particular locality concerned. Some of the work to be done in the areas under these authorities will be governmental and private, the remainder will be done under the local government authorities.

The British system, which has been evolved to meet a similar need can be recommended. Under the guidance of the central authority as regards planning and mandatory standards, and subject to its approval, the local authorities carry out the work through private Architects drawn from panels of men qualified for the work.

Only the very large groups of local government bodies employ architectural staffs.

There is a high degree of co-operation and zoning of these architectural services. The whole system thus envisages decentralization in responsibility and initiative, and avails itself of all possible technical skill, and is at the same time provided with safeguards which ensure consistency of work in design and construction.

7. Town, Country and Regional (Territorial) Planners

It will be noted above that Town Planners as technical men were relegated to a special section of this report. The reason for this is that a very anomalous position holds in this matter. All are unanimous in the need for such persons to work in our National development, and at the same time the number of Town Planners in Australia trained theoretically for their work is hopelessly inadequate for any serious attack on the problems. Worse than that, there has been so little application of their theories that there is scarcely anyone who has had any practical experience in the work, or who has been proved competent by his achievements.

Even the description "Town Planner" shows how the technical man has, perforce, had to lag behind the swift change in National thinking. Now his work must call for neighbourhood, town and country planning as a whole, and regional and national physical planning in considerable part. The name of the occupation might well be changed to the more descriptive and less confusing one of "Territorial Planner."

Such persons must be recruited and recruited quickly. Overseas' experience has shown that the subject is so comprehensive in its scope as to demand co-operation from all technical people, but the best co-ordinator of their work (the Territorial Planner) is one who being either an Architect, an Engineer, or a Landscape Architect, has the personal qualifications enabling him to evaluate and direct such co-operation.

While it would be foolish to claim this field for the Architect to the exclusion of the kindred professions, except in minor roles, it must be claimed that his training fits him most to the imaginative and human approach to the subject. The three special characteristics of his professional training mentioned above are so necessary in matters of Territorial Planning that it appears logical that this new profession must in the main be recruited from the Architects, on whom the onus is thereby placed to fit themselves to provide its personnel.

While many of the Architects have had elementary training in the work and have furnished the bulk of the driving force in Town Planning matters, they do not (nor can they) offer themselves in this field merely because they are Architects. The mastery of their profession is merely the point of departure, but it is the main logical foundation on which the Territorial Planning of the country can be built up. Other professions must co-operate in also providing technical and specialized skill, and from their ranks will undoubtedly emerge many persons able to become prime movers in Territorial Planning, but if the architectural profession is not taken as the main starting point, it seems that such planning in its early stages stands little chance of being set on a framework of beauty, dignity and efficiency with a full appreciation of the human values implicit in full National Development.

8. National Planning and Human Values

It is an everyday experience for an Architect to find a man or woman intensely alive and enthusiastic to planning. The hopes and expectations of the average individual are laid bare in their approach to building their homes, or the institutions in which they are interested. This enthusiasm is a very real but very delicate force, and must be kept alive.

In National Planning, enthusiasm is still more delicate and could be still more powerful.

Planning, as Sir William Beveridge constantly reminds us, cannot really be imposed on a people—it must grow out of them, and for this reason we commend to the authorities in the matter these suggestions:—

- (a) Found the planning on public enthusiasm and sense of rightness.
- (b) Educate the Nation to its responsibilities and opportunities.
- (c) Keep uppermost in a planned framework local initiative and breadth of participation in decisions.

On behalf of the Committee.—COBDEN PARKES, Chairman and President, New South Wales Chapter, Royal Australian Institute of Architects. 11th September, 1943.

RECONSTRUCTION IN CANADA

The Report of the Subcommittee on Housing and Community Planning

An Analysis by CECIL S. BURGESS

I have been asked to review this report which bears the date March, 1944. Circumstances have conspired to allow me insufficient time to do so in any complete manner. I can only try to record my personal reactions to such of its contents as come nearest to my experience and interests.

The subcommittee consisted of thirteen members of whom six were from Ontario, five from Quebec, one from Nova Scotia and one from British Columbia. Mr. C. A. Curtis of Queen's University was Chairman. Mr. Lionel Marsh, Research Adviser, prepared the report. The report itself extends to a total of 339 pages, including much statistical and tabulated matter. A Summary of Findings and Recommendations presents these in 109 items occupying 14 pages. These facts indicate the laborious nature of the work of the committee and the amount of thanks due to them by the public.

The terms of reference of the subcommittee were:—"To review the existing legislation and administrative organization relating to housing and community planning, both urban and rural, throughout Canada, and to report regarding such changes in legislation or modification of organization and procedure as may be necessary to ensure the most effective implementation of what the subcommittee considers to be an adequate housing programme for Canada during the years immediately following the war."

So much is included under the terms of reference that one cannot blame the committee for not attempting to widen it. Attention may, however, be drawn to the fact that in course of their report the expression "regional planning" is employed. By this is merely meant some subdivision of a province. The word regional is not uncommonly used to indicate a "natural Region" such as a river basin. The work of the Tennessee Valley Authority is the classical example of regional planning. It would be well indeed that reconstruction in Canada should be considered on this wide and rational basis of natural regions as distinguished from the artificial and unnatural division by provinces. Perhaps the subcommittee on Conservation and Development of Natural Resources has some suggestions on this basis. A large scale scheme of community planning should be related to it. A useful outline of this treatment by regions was made by R. F. Legget under the title, *Water, Its Use and Control*, as one of a series of lectures given at the University of Toronto in the fall of 1942 and published in 1943.

A large part of the present report is occupied by a factual survey, the necessary basis to justify legislation and to guide planners. The man in the street, especially if he happens to be looking for a house, is impressed with more than enough of the facts to be quite convinced that "the government should do something about it". The statistical facts and figures presented by the committee will make him realize that the whole situation is even worse than he thought. When it is shown that half our population cannot afford and does not have adequate housing the case for action is complete and the question is ready to be put,—what action?

The mainsprings of action about housing or anything else reside in the people and not in the government. The government can outline policies and enact statutes which will enable action to become concerted and effective. It may provide supervision and may remove difficulties and obstructions and

even undertake work beyond the powers of lesser corporations. Government makes the frame. The public fills in the picture and pays all expenses. It is necessary that the picture shall fit the frame and that the frame therefore, be made adequate to accommodate and hold the picture together. The committee has employed itself in designing such a frame and consequently has much to say as to legislation, administration and financing. It seems unnecessary to comment here on the proposals regarding financing, for, meanwhile the government has been going on guaranteeing mortgages and preparing to lend on reduced interest, the two principal things for which they may properly be looked to in the matter of housing finance.

The terms of reference first call on the committee to review the existing legislation and administrative organization relating to housing and community planning throughout Canada. The committee has taken this part of their work too superficially. In 'finding' No. 47 they say, "Provincial and Municipal Governments.—Since the necessary legislations and techniques required for adequate town planning are not in operation anywhere in Canada, and since few are acquainted with their requirements, these have been set out in detail in the text." Again in chapter 7, on Town Planning:—"It is true that some 'town planning' legislation exists. Most of the provinces have passed statutes, and town planning powers of a kind have been available to local authorities for a number of years past. Most of the provisions are of a general nature, and by and large they represent a form of negative control. In some cases they do little or nothing creatively by themselves, though they prevent certain things from being done. Even within these limitations, however, town planning legislation in Canada has not been successful, and for the most part it is inoperative."

Now this is very ungracious and it looks like kicking away the foundations which alone can be built upon. These provincial and civic legislations and organizations, such as they are, are the only live and fighting pioneers of town planning in the country. These are the roots from which the town planning must grow if it is not to be a mere lifeless imposition. In the view of those who have kept the fires burning the attitude of the committee must make them appear as men who having recently received the gospel make haste to preach it to the apostles. Provinces and cities have, under difficulties, been doing really creative work for many years. It is the federal government who have been the laggards and the shortsighted. These provinces have statutes directed to the same ends and exhibiting more detailed and studied knowledge than the present report outlines. The cities have their master plans and regulations that in some cases go far beyond the fulfilment of the suggestions now being made. An outstanding example of this is the "Plan for the City of Vancouver", a fully illustrated book of about 400 pages published four years ago and still, today, a master plan and a model of town planning method well fitted to be the guide for town planning in every city in Canada and to be a prominent text book in any school of town planning that may be established in the country. It contains all the studies suggested in the report and more. Its preparation cost many thousands of dollars. The city of Vancouver did the work. Similarly the provincial statutes will be found to have probed more deeply into the needs of the situation than the writers of the report. They provide, for example, for Appeal Boards, a vital neces-

sity in administrating town planning bylaws. Those cities who have operated any kind of town planning have gained a practical experience which is worth much more than any amount of inexperienced theory. Legislation must be built upon existing conditions and institutions.

It is obviously true, however, that a federal organization and a certain amount of financial assistance can be an immense help in forwarding the cause of town planning throughout the country. It is also true that local efforts have had but limited success. The main cause of this relative unsuccess is, however, not so much lack of suitable legislation. It is due in a much greater measure to the lack of trained professional town planners. British Columbia engaged planners from the United States. The committee recognizes this want and make a plea for training in town planning. I shall try later on to indicate its crucial importance.

The most valuable part of the subcommittee's report is probably the chapter on Town Planning (7). It is, properly, prefaced by an analysis of the situation pointing out what is wrong with our residential lay-outs or want of lay-outs, what would be right or at any rate better; what are to be our aims in an endeavour to cure our ills. Briefly, what is wrong is disorder, congestion, ugliness and the evils, bodily and mental, arising therefrom:—waste, bad health, disease, danger, crime and general low ideals of life. Neither good advice nor legislation will cure these ills although they will not be cured without them. Here, nature works no automatic cure, no "vis naturae medicatrix". Left to itself the situation goes from bad to worse. Preventive, curative, and even surgical measures must be taken. Who is the physician and what is the art that can deal with these civic ills? Who is to make the necessary studies and researches and to investigate the methods of treating these deep rooted diseases, to diagnose and prescribe for its various cases and phases? Town Planning is the art and the Town Planner is the expert. His training must be broad and deep. His work requires to be backed by powers conferred by legislation and by sound administrative organization, just as in the case of public health officers. He must have a thorough professional training and hold a recognized and highly respected professional standing. Compare with this the place the committee assigns to the town planner. They do indeed (p. 181) recognize that "One of the most serious practical considerations for the future of town planning is the dire shortage of adequately trained and experienced persons. This is due to the lack of training courses and of governmental positions in which town planning in the comprehensive sense has been practised. There has been no inducement to universities to set up more rounded courses, nor for individuals with a taste for the subject to equip themselves professionally or to seek to practise." This is tragically true, but the committee's reference to the position to be held by the town planner in the town planning department is almost equally disappointing. It consists in this;—"The principal responsibility for the detailed techniques of the master plan and its components will necessarily rest with the director of the planning department. He should be 'ipso facto' the liaison member of the planning board." This does not suggest the position of inspiration, initiative, leadership and authority that is required. It rather suggests that he will be a functionary at the mercy of a number of know-it-alls who know nothing. The knowledge required by the town planner is, as has been said, of a very wide and varied kind. Above all he must be able to apply that knowledge by means of his designing and creative skill. Without such expert skill we are fumbling in the dark. A town planner whose position does not command respect, who does not yield the authority that is due to special knowledge will himself get nowhere and the hopes for town planning will be vain.

A planning board on any level, municipal, provincial or federal, will be a comparatively lifeless thing if composed merely of members of governmental staffs whose main duties

are definitely concerned with something else. Such boards exist of necessity and they do essential routine duties, but it can be readily understood that they can exercise no initiative. They apply the restrictive controls which are always a large part of the legislation. It is to be sincerely hoped that no reliance will be placed on this sort of thing in future reconstruction legislation.

In discussing the personal of a municipal planning board, the committee definitely favours a small number of members. Their argument does not seem to me to be satisfactory. They say, "too numerous a body, even for a large city, could easily become unwieldly, and this should be guarded against. It must be remembered that, apart altogether from the necessity of submitting the plan to the city council (or other local government body), consultation and participation of the residents of the community would be safeguarded through public meetings, exhibition of the maps and details of the plan, and other methods. There is no justification for the existence of the planning board, whether small or large, unless it is competently informed in the purposes and problems of the town plan". This seems reasonable in theory. I venture to remark on it from personal experience. The commission to which I belong consists of nine members, appointed by the city council, plus the mayor who is an ex officio member. At no time have we felt that this is too large a body. The committee's suggestion that public participation can be ensured through public meetings, exhibition of plans etc. is far from convincing. Public participation is an essential element of success and should be secured in quite another way. There should be a definite method of appointment laid down by legislation. There should be members from the public at large and also representatives nominated by all important public or semipublic bodies with interests in town planning: the architectural association, the engineers, the board of trade, the automobile association, the medical association, the council of social agencies or other philanthropic society. A representative of the Salvation Army would probably give yeoman service. The board should be large and representative, a small executive would probably be necessary. The board should be under obligation to meet once a month. The representatives should each be responsible for the interest he represents and be expected to voice its views. The town planner should at each meeting give an account of his stewardship and progress, answer questions and note suggestions. This would enlist public participation and create a body of real strength. Public meetings and exhibitions may stir up a good deal of temporary enthusiasm, but they are not suited to maintain continuous interest or to offer practical suggestions.

It may be worth while to call some attention to the Master Plan upon which the discussion of town planning centres. The report rightly enough says: "While it is convenient to use the term 'plan', it should be evident that a series of detailed plans are in fact required, both in the preparatory stages, and in the regulations as to future land use which must eventually be established". It goes on to detail what is comprised in the various plans and regulations. The fact is that the master plan does not consist in these things but in the policy of producing a "city for living" which all these documents at the best only meagrely set forth. The flexibility of these instruments and the inflexibility of the general purpose must be recognized or a master plan may easily become either a strait jacket or a football.

The report boldly declares for mandatory planning. This, if not qualified, commits the government not only to doing the planning but also to carrying out the work planned. Cities have not, under present tax arrangements, the means to carry out those city improvements that they now desire. Some cannot even keep their streets properly maintained. The suggestion is made that the tax system will be rearranged. Even so, direct compulsion is a practical impossibility. You may lead a horse

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BILL 183

known by its short title as the National Housing Act 1944 was passed on August 10th. No sections of it are yet operative. The Bill was brought down by and will operate under the Minister of Finance. The following is an analysis of this Act. By A. P. C. ADAMSON.

Part 1—Housing for Home Owners

Part 1, Sections 3 to 7, empowers the Minister of Finance to enter into a contract with an "approved lending Institution" defined as "a loan, insurance, trust or other company or corporation, trustee of trust funds, building society, credit union or other co-operative credit society authorized to lend money on the security of real or immovable property". Such contracts shall be for the purposes of lending money to "assist in the construction of houses". The terms of the contract between the Minister and lending institution permit the Minister to advance 25% of the total joint loan made and stipulates that repayment of this joint loan "shall be secured by a first mortgage or hypothec on the house and land" in favour of both parties jointly, the interest rate payable to His Majesty by the institutions for the 25% share shall be determined by agreement. The amount of loss, however, to be borne by His Majesty "shall not exceed 15% of the aggregate amount of the share of the lending institution in all joint loans within the class".

Details of Loans to Home Owners

The length of the joint loan shall not exceed twenty years "except that in the case of a house to be constructed in an area which in the opinion of the Minister is adequately protected by community planning and appropriate zoning restrictions", the loan may be for as long as thirty years. The size of the joint loan shall be not less than 50% of the "lending value of the house", which by definition includes the land also, and it shall not be more than the aggregate of—(1) 90% of the first \$2,000 of the lending value or any part thereof, (2) 85% of the amount by which the lending value exceeds \$2,000 and does not exceed \$4,000, (3) 75% of the amount by which the lending value exceeds \$4,000". The terms of contract for the joint loan includes provisions that the house be "according to sound standards approved by the Minister and under such supervision as may be prescribed by regulation". The method of advancing the money of the joint loan during construction and the terms "as to repayment of principal, interest and taxes by monthly instalments" may be prescribed also by regulation. The rate of interest of the joint loan payable by the borrower "shall not exceed an effective rate of 4½% per annum calculated semi-annually" and no other charge in respect of the said loan shall be payable by the borrower except as authorized by regulation.

Co-operative Housing

Part 1 of this Act also permits the Minister to enter into contract with an approved lending institution to lend money to "a trustee or corporation constituted or incorporated for the purpose of constructing and managing a co-operative housing project". All the provisions outlined as to joint loans to a home builder or a home owner also apply to joint loans to co-operatives provided that each member "is to have possession" of a house in the project "under a lease for a term at least as long as the term of the joint loan", or, is to own stock in the co-operative "in the proportion which the cost of construction" of his house "bears to the cost of construction of the said project". Also all loans made to a co-operative must be contracted for under conditions obligating each member to pay not only his

share of repayment and operating costs but also "a proportionate share" of all the costs "which any other 'cestui que trust' or member or shareholder fails to pay". The charter and by-laws of the co-operative must be acceptable to the Minister. The size of the joint loan made to a co-operative shall be the aggregate amount of the loans available to individuals for their own proposed houses just as if such individuals were seeking loans for them separately. The rate of interest is 4½%.

Administrative Provisions and Size of Grants Under Part 1

Other sections of Part 1 describe administrative methods of carrying out the provisions of the Act, and the Minister is empowered to make loans under this Act and to pay losses under previous housing Acts "out of unappropriated moneys in the Revenue Fund" not exceeding \$100,000,000.

Part 2—Housing Loans for Economic Rental Purposes

Part 2, Section 8, empowers the Minister of Finance to make contractual terms with lending institutions similar to those in Part 1 for the offering of joint loans at the same 4½% "to provide housing accommodation to be rented to prospective tenants". The terms under which these loans may be obtained are also exactly similar to those under which money may be obtained for building houses for sale or for the enjoyment of ownership, except that the joint loan "shall not exceed 80% of the value of the house and land" whatever its cost.

Limited Dividend Housing Corporations

Part 2, Sections 9 and 10, empowers the Minister to lend public money directly at the lower rate of 3% to "limited dividend housing corporations", which are defined as corporations "incorporated to construct, hold and manage a low-rental housing project, the dividends payable by which are limited by the terms of its Charter or instrument of incorporation to 5% per annum or less". A "low-rental housing project" is defined, Section 2, as "a housing project undertaken to provide decent, safe and sanitary housing accommodation to be leased to families of low income at the economic level therefor or at a lower rental. Such projects under the Act may be new buildings or old ones converted.

Three Per Cent. Loans

The conditions under which the 3% loans are available are such that the need for low-rental housing must be locally established, that the area in which "the project is to be situated has in the opinion of the Minister been adequately planned", that "zoning regulations are sufficient" to assure suitability and provide safeguards for the "security of the loan", that "adequate municipal services are available", that the size of the project is such as to secure "reasonable economies in construction", that the management is "competent", that "suitable design" and "sound construction" will assure "minimum practicable expenditures for repairs", that the limited dividend corporation is financially responsible and that all its contracts for buying land and building buildings are "satisfactory to the Minister".

Rent Reduction Funds

It is also empowered if it can get them "to receive contributions to a rent reduction fund" from any source "solely for the purpose of reducing the rentals that would otherwise be charged".

Prescribed Methods of Operation of Corporations

The limited dividend corporation, having obtained this 3% loan, must agree to certain provisions in their contract. The first is that "the minimum ratio between the rentals to be charged and the probable family income of the lessees of each family housing unit shall be such ratio as the Minister may deem fair and reasonable or there may be made such other provision for maintaining the low-rental character of the project as the Minister may agree to". Other terms of the contract are such that the corporation must keep satisfactory books, make satisfactory payments, and agree to inspections and to regulations as to the limited amount of surplus earnings set aside for reserves and maintenance. In the event of the corporation "failing to maintain the low-rental character of the project or otherwise committing a breach of contract" the Minister may "declare the unpaid principal of the loan due and payable forthwith or increase the interest payable thereafter on the unpaid balance of said loan to such rate as the Governor in Council may determine".

Administrative Provisions

The Governor in Council is also empowered to make regulations prescribing the manner of estimating costs of proposed buildings, prescribing standards and procedures of various kinds and the making of regulations "for any other matters concerning which regulations are deemed necessary".

Permission to Life Insurance Companies to Construct Housing

Part 2, Section 11, empowers any life insurance company to "invest its funds to an aggregate amount not exceeding 5% of its total assets in Canada . . . in the purchase of land and the construction thereon of a low cost or moderate cost rental housing project, including such buildings . . . for retail stores, shops, offices, and other community services, but not including hotels, as the company may deem proper and suitable for the convenience of the tenants of such rental housing project, and thereafter hold, maintain, repair, alter, demolish, reconstruct, manage, collect or receive income from, sell or convey in whole or in part land so acquired and the improvements thereon".

Conditions of Investment of Insurance Company Funds

The conditions under which an insurance company may make such investment are that "the project shall be constructed in accordance or in harmony with an official (adopted) community plan satisfactory to the Minister", that "the Minister may prescribe a maximum average cost per room or per family unit", that the company shall submit application and proposals in a form and manner prescribed by the Minister, such form and manner including "plans and specifications prepared by an architect", and an estimation of costs and rentals. The insurance company shall plan its rental projects to assure "a minimum return of 5%" per annum after deducting both complete operating costs and "annual amount sufficient to amortize the cost of construction of the project less the cost of the land within a period representing the useful life of the project but not in any case exceeding fifty years from the date of its completion".

Guarantee of 2½% Return

The Minister may guarantee to the company "a net return in any year after the completion of the project of 2½% per

annum of the cost of the project and land for a period also "not exceeding the estimated useful life of the project and in any case not exceeding fifty years". The terms of the contract under which this guarantee is available are such that separate books must be maintained and kept open for the Minister's inspection, and that a reserve must be established "comprising all net earnings in any year in excess of 6% per annum on the cost of the project" out of which reserve the "advances made by the Minister" if any, under the 2½% guarantee shall be repaid. Two or more insurance companies may join together to construct rental projects, and the Governor in Council may designate also "an approved lending institution" to operate under this guarantee. The Governor in Council may also make regulations as "deemed necessary to carry out the purposes" of this section of the Act.

Size of Grants for Rental Housing Under Part 2

The Minister may make loans under the whole of Part 2 to anyone building housing for rental purposes, and may pay guarantees to insurance companies against returns of less than 2½% from unappreciated moneys in the consolidated fund up to an aggregate \$50,000,000.

Slum Clearance Grants

Part 2, Section 12, empowers the Minister to assist in the "clearance, replanning and rehabilitation" of slum or blighted areas, by making grants to municipalities up to a total of \$20,000,000. Grants made under this Section must not exceed one-half of the total amount by which the cost of acquiring the slum area is greater than the value of the land as sold to a limited dividend housing corporation or insurance company to erect a rental housing project. "A grant shall be made . . . only if . . . the land is sold" to such companies, and "is to be developed in accordance or in harmony with an official community plan" adopted by the municipality, and if the province approves of the whole transaction. No grant shall be made unless the municipality or province pays the other half of these "excess acquisition costs".

Part 3—Loans for Rural Housing

Part 3, Section 14 gives additional powers to the Minister not included in Part 1 to encourage loans "for the construction of houses on farms, or in small or remote communities". These additional powers include permission to allow a grant to the lending institutions up to twenty dollars plus "necessary travelling expenses incurred by employees in respect of each loan" made. He may also permit a different timing for the repayments by farmers in accordance with their receipt of income from farming operations, and allow the consolidation of a farmer's old debt with a new loan.

Encouragement to Equipment Manufacture

Sections 15 and 16 permit the Minister to enter into contract with "a manufacturer of plumbing or heating equipment or other component parts of houses" in order to develop products experimentally or for sale and distribution "in farm or rural homes". He may also "underwrite or guarantee the sale" of such equipment manufacturer "in such volume as may be agreed upon", the total cost to His Majesty for either experimental production or guarantee of sales shall not exceed \$5,000,000.

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WHITHER HOUSING?

By FRED LASSERRE

We are hearing a good deal about housing. Headlines read something like this: "Housing for Soldiers' Families", "Housing for the Returned Soldier", "Fifty New Houses Being Built", "Housing Will Provide Jobs", "Report of Housing Committee Tabled", "Housing Bill Passed", "Thousands of Houses Will be Made Available", and many more in a similar vein. We all know that the housing situation is steadily deteriorating; that there have been no concrete steps taken to guarantee that there will be immediate housing; and that what we read and hear about promises of or legislation for housing seems to belong to the category of idle gossip. Assistance for those who wish to build houses, yes! Fine! But who is going to build that great mass of much needed housing, and do it well, quickly and efficiently? These "gossip" promises seem to us unscientific and even dangerous to the development of our cities. They certainly are no guarantee that anyone is going to see to it that the Canadian people will be well housed! Where is the war-like big stick?

The purpose of this article is to establish a few key points around which housing should be carried out. With these principles in mind the reader will be better armed to criticize what is being promised in the way of housing, what legislation is being contemplated or passed, and what is being called a housing programme. He will be able to add his voice to the growing demand that housing be planned for the people and for the community in which they and their children will live, and that this housing will be built.

We are not going to spend any time swimming around in a sea of statistics. Figures for the housing shortage range from the conservative 150,000, through the Reconstruction Committee's 320,000 to 606,000, to the Minister of Labour's "... a million new homes will have to be built. . ." Even the lowest figure represents a lot of houses and our problem is to see to it that those houses are built well and attractively; that they are built economically and speedily; and that they are built to serve those who are going to live in them.

We will look at three aspects, the most important in the whole development of modern housing. We should have a full understanding of them and fully grasp their significance so that we can make good housing ours.

Housing and Town Planning

It is very unfortunate for the future welfare of Canadian citizens and cities that the control on housing, so far, is purely one regarding the quality of the house itself. Government action and legislation are based on extending individual loans at low rates of interest for houses over which a certain superficial control is exercised as to construction, size and appearance. Some slight consideration is paid to location, to the extent of extending loans, in some cases, if the houses or flats are built in an area which forms part of an approved town plan. Cities which have zoning may bar houses from being built in a neighbourhood which seems, *under existing circumstances*, to be completely unsuitable.

This shows a very limited understanding of housing. Even if limited dividend companies should build large housing schemes, this will still fall short of the need to have those schemes geared to a town plan. It is not enough for them to just "fit" into a town plan, they must conform to that plan. The Advisory Committee on Reconstruction was clear in its Report,

to quote: "The Committee places in the forefront of all housing projects the matter of town and community planning."

"Housing" now covers an extension of the house into the neighbourhood of that house. We all know that when we are looking for a house to live in, and to raise a family in, we look for certain fundamental points. The house must be well built, with a good working plan, easy to furnish, attractive, and agreeably located on the street. Even before looking at the house have we not considered something else? Yes, we have searched for our house in certain districts in the city, districts which appealed to us because of their "residential" character, and because they were handy to means of transportation or streets leading to the place of work or to the commercial, business and recreational centres of the town.

Before we decide upon the house itself, are there not some other points which we like to enquire about? Yes, there are other points, and many of them. A fine house is turned down or not built because we are dissatisfied with the answers to these enquiries.

Here are some of the points: How heavy is the traffic on the street? What play space is available for the children, must they play on the street? How far is it to school—must they cross many streets? How heavy is the traffic on them? Is there a park for an after-supper stroll? Is there a nursery school handy? Where are the nearest stores and offices—are they far? Are they near the school? Are they within easy walking distance? Is the district blighted by objectionable factories, railways, and heavy traffic through streets? Is it far to the nearest recreation? Where is the nearest theatre, the nearest bowling alley, swimming pool or other sport facilities? Where is our church? What local administration do we have? Are we well served with electric lights on our streets, with water supply, with police and fire fighters? Are the streets well maintained in summer and winter? Is the garbage efficiently taken away? What of the future development of the district—is it safe from encroachments by creators of blight? Is it likely to deteriorate fast? Are the houses going to become rooming houses? Is it on the way to becoming a slum?

These are pertinent questions, and no housing is good housing which cannot give a satisfactory answer to these questions. What would be a good answer?

The answer would be: "This city has town planning. Housing in it has been carried out in accordance with the town plan. Houses have been built in large groups to form neighbourhoods completely planned to include all of those buildings housing the activities covered by the term 'dwelling.' The neighbourhood has been planned as an extension of the house, and the activities carried on in the neighbourhood are planned for and not built separately from the houses, but with the houses."

Housing is not a single house, or a number of single houses, apartment blocks, flats, etc. Housing, in its present day meaning, embraces all of those activities which are: "dwelling." These are as follows (1) the houses, (2) the streets, (3) the services, (4) park and play space, (5) school and nursery, (6) stores, offices, markets, commercial and office buildings, (7) theatre and recreational buildings, (8) community halls, (9) fire and police protection, (10) churches and other special buildings which would round out the usual daily life in the immediate neighbourhood of the house.

This is the meaning of "Housing" as defined by housing experts. In their recommendations to the Government, the Advisory Committee on Housing and Community Planning strongly urged that housing be undertaken on that all-comprehensive scale just outlined. It is pointed out that unless it is carried out in this manner we will aggravate rather than remedy the ills of our cities, with slums as a growing cancer. (See pages 159-183 of Report).

Slums inside the city need immediate eradication. Many are located on sites which should never have been used for dwellings. We hear, however, that probably to have them cleared we will have to replace them—on their expensive and often very objectionably located sites—by housing schemes.

Slum conditions are no longer the sole property of the overcrowded, ancient central districts of our cities. In our cities many of the worst slum conditions and the most degrading residential districts are found among the newer sections on the fringes of our cities where houses are built indiscriminately, one at a time, or in a row with no over-all planning control. They are a blight on the city and on the countryside, having no future and offering none to their inhabitants. Never in history have slums been created at the rate we are building them today.

All towns and cities should have town plans. We must have town planning parallel to our slum clearance and our housing. This housing must form part of the town plan. This town plan will guarantee protection of the residential area from blight, from unnatural deterioration, from traffic roads. It will also guarantee an efficient system of speedways passing on the edge of the area and offering a link with places of work, the centres of the city and with other districts. It will guarantee a continuous park system and the protection of beauty spots. It will guarantee the welfare, health and efficient enjoyment of urban life for the citizens.

Housing in Neighbourhoods

The new conception of housing is the "neighbourhood." The building of individual houses not co-ordinated into a plan for a residential area as a whole is not housing.

When housing is mentioned, it is important to check what is meant. Housing, as now defined and as recommended by advisory committees and all bodies which have studied this subject professionally, socially or scientifically, means the building of houses, apartments and other types of dwelling to form neighbourhoods containing many buildings and features which are not usually planned and allowed for when building houses singly or in small groups.

What makes up a "neighbourhood"? A "neighbourhood" has many names in different countries, but its form and contents have become universally accepted. It consists of about 5,000 people. This is the number which will usually provide approximately the number of children recommended for an elementary school. With this basis the neighbourhood is laid out within a certain area allotted to it in the town plans, with traffic speedways passing at its edge to link it up with the rest of the city. The centre of the neighbourhood is parkland, preferably joined to the city's park system. Part of this park is playground at the side of the elementary school buildings. Sprinkled about the park are tot lots with nursery schools, (about six of these to serve equal numbers of dwellings). Through the park are pathways and cycle paths which serve all the houses and connect these with school, stores, offices, theatre, community hall, etc. This means complete safety for the children as no streets cross the park in which they play and run. This means health for babies whether crawling or in carriage. This means opportunities for relaxation and for recreation to the grown ups and older people.

The streets are mostly dead end or hairpin streets off one or two feeder streets which connect up with the speedways. Off

the streets near where they converge, and near the school, are the shops, offices and other buildings which complete the neighbourhood. This means that there are few street intersections; that one can reach the stores by car or through the park on foot with greater comfort than at present; that women can leave children at the school or playgrounds and go on to their shopping without making any big detour; that there is a clear cut division between the dangerous but speedy and efficient modern traffic ways and the more leisurely pedestrian traffic and recreational areas.

The neighbourhood is complete with central heating, laundry, clinic, fire and police station, etc., etc. As an entity, as a close knit integrated little community, it will have a personality of its own requiring a certain amount of administration, thereby offering an expression of our democratic ideology. Such planned and democratically administered neighbourhoods will restore the human scale of our cities by making us a part of the city and bringing the city down to our every day level.

The Construction of Housing and Prefabrication

How are these neighbourhoods to be built? Two parallel processes are recommended. The first is the gradual alteration of existing areas in the city by the tearing down of old structures and the building of new dwellings, etc., to conform to a neighbourhood pattern. Most of our existing street layouts are easily adaptable to transformation into a neighbourhood layout by cutting out certain cross streets, making dead ends of others, turning some into parkland, and so on. In this case no new house will be allowed to be built without having it conform to the proposed plan for the transformation of that area. This does not encroach on individual freedom since even now we have to conform to street regulations when we build.

The second process is the building up of a whole area, preferably in one large scale operation, into a neighbourhood. This second process is what is now usually considered as "housing", (though the first can be called "controlled individual housing"). This second large scale process can be carried out in a number of ways, of which two are outstanding: (a) by individuals building to fit into a prepared plan for the neighbourhood, or (b) by the government, the municipality or a large enterprise undertaking the building of the whole neighbourhood.

It can be said with authority that the latter method of providing housing in neighbourhoods is by far the most efficient, the most scientific and the most satisfactory to those who will live there. The cost of the project will be less; and more added features for the enjoyment and welfare of the residents will be readily possible (central heating, communal laundry, public gardens, etc.)

Wartime Housing gave us a very significant example of the method by which we can obtain planned large scale housing. We may question the results achieved—but by comparison with other districts of houses renting at a similar price in Canada this housing is not bad at all—however, the method used is one we should study and learn from. Wartime Housing Limited is the prototype of what we will have to have, more and more, if we are to obtain housing of a high standard and with low rents or costs.

This method of producing housing relies on thorough research, planning and control. The control is primarily control of what is generally suspected of being the most wasteful, inefficient, cartel-forming industry—the construction industry. Through research and planning, which is preferably done by government and municipality, a programme of action can be undertaken for the efficient, economic and speedy erection of a neighbourhood. The research and planning will deal largely with prefabrication.

Here we do not mean wholly prefabricated houses which are a menace to our cities because of their rapid deterioration; because of their transient character which is harmful to the morale of a community; and because of their lack of civic responsibility which will cause a district to deteriorate even faster than many of our newer districts are deteriorating now. One of the tragedies of the development in house building is that the life of a new house is every year becoming shorter. This means a great expense for upkeep to the owner or resident, and a potent slum breeder. Prefabricated houses for our cities—especially without any town planning control—will accelerate the growth of our great slums.

We need to learn to build well again, as our ancestors did. They built to live in. Houses are now built to sell or to rent high. Research into methods of building utilizing our great new technical and industrial resources is essential and is a government responsibility. Factories which are manufacturing large parts or pressed sections for war machines should be organized for the transfer to the manufacture of building parts. It is hoped that many war industries are already studying this re-organization. It will be a boon to both the housing situation and the post-war labour situation. The government should, through its research, set standards for sizes and details of prefabrication. It should establish a strict code of construction ensuring good building.

The government should also set—with a certain amount of sugar-coated compulsion—the housing programme, making it possible to estimate the quantity of prefabrication and number of mechanics necessary. It will be able to guarantee the sale of the industry's quota and the full employment of our large technical manpower.

By prefabrication we mean the manufacture of building parts—such as wall sections, kitchens, bathrooms, closets, stairs, etc. In the design of the building, probably with a structural

skeleton as basis, the architects will adapt their layout, elevations, etc., to these parts,—much as we adapt our houses now to standard windows and doors, to sizes of fibreboard, lumber and other building materials.

The planning required to lay out the site, to plan the buildings, streets and grounds, to order the materials, to erect the skeleton and affix the prefabricated walls and parts and to complete the scheme with parks and communal buildings seem to be the obvious responsibility of the municipalities. It can produce its own organization to carry out this work, (like its works and parks, street cleaning, transport, utilities, etc., departments). In this way, as did Wartime Housing, the building industry can be effectively harnessed, and houses built in an organized way which even government bureaucracy cannot degrade to the speculatively built chaos we know so well.

When we hear of housing let us think of the scale of the job to be done. Let us think of the importance to us and our children that this job be done right. Let us think of how we can best get it done right.

This article has set out a conception of housing which is not new. It is unfortunate that Canada cannot be a leader in this field. Canada can, however, learn from the experience of England, the United States, Russia, Sweden, Holland, Switzerland and many other countries where housing in the form of neighbourhoods has been successfully carried out—an expression of democratic progress. In these countries such housing has become a necessity. The people demand it, and the cities prosper and become beautiful because of it. Canada can also gain by giving heed to popular appeal, and by its action to give its people houses and cities fit for citizens of a great nation.

This article originally appeared in the July issue of *The Canadian Railway Employee's Monthly*, before the passing of the Housing Bill, 183. The author has revised it to bring it a bit more up-to-date, even though the basic contention remained valid.



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THE PROVINCIAL PAGE

ALBERTA

I have been asked by the Director of the Department of Mines and Resources to review present conditions at the town-sites of Banff and Jasper with a view to preparing for future developments and have visited and inspected both places in company with two of the senior officers of the National Parks Bureau. On these visits conferences have been held with the park officers and with representatives of the townspeople at which a number of suggestions have been discussed. The work will involve a careful consideration not only of the townsites themselves but also of the immediate surroundings. The chief industry of these towns is the entertainment of summer and winter visitors, the influx of whom increase the population to about four times the permanent number. All plans for their future must therefore have as one of their chief aims the furthering of that industry from the points of view of both entertainers and entertained. War conditions have in recent years hampered the extension and even in some respects the maintenance of desirable requirements. It is the intention of the Parks Bureau to make this the occasion for taking a fresh view of the whole situation.

This work has involved much travelling about on my part and I trust that this brief notice will take the place of my usual monthly letter.

Cecil S. Burgess.

ONTARIO

An Italian sculptor wasted a fine piece of white marble in producing a work which can, or could be, seen in a gallery in Florence, and which was named "Architecture." He carved a reclining female figure of doubtful charm but with a classic disregard of drapery. This dejected female may have typified Architecture of the mid-thirties, but in no way represents the Architecture of the moment. Instead, she is a luscious beauty, vibrant with every promise for the future.

Industrial projects, in chunks of one-quarter of a million and down are in the sketch stage. Prospects for summer resort developments in this beautiful part of Ontario are good. A projected tourist centre of superior type and with every recreational facility is to be located on the shore of the Bay of Quinte. There has even been talk of the development of a new mine with all its accompanying buildings for mining and men. This raised a few new questions such as "What does a head-frame look like?"

Local post-war committees have long lists of projected and necessary schemes, all the way from flood control to sewage disposal but most of them are still up in the air, or even in the stratosphere. The new Housing Act seems to be a solid bit of ground in a future that is more or less nebulous though as yet there are no definite signs of any slum clearance or city-sponsored housing development. Even in a small city of 20,000 there are slums and housing accommodations of a really sub-standard nature, with very inadequate open space for playgrounds. The city of Belleville fronts on a Bay of great beauty, but the waterfront is devoted to a great extent to garbage dumps. About ten years ago much of this front was laid out (on paper) for recreation grounds, bathing beaches, tourist parks and ball diamonds, but civic apathy has largely swallowed up any effort made. It is hoped that interest will be revived and the development continued in the burst of activity that is expected to follow the defeat of the Axis.

There is a real stirring among the dry bones though, in the matter of child welfare, among local service clubs. Our office has two fresh air camps and a city playground complete with a public swimming pool, in various stages of development. The present paternalistic trend in government policies reflects, or may even be caused by, public sentiment in the same direction. However, expediency would not recommend too strong a participation in politics for the benefits that might accrue to ones practice. In a two party system, the law of averages would indicate that in electoral races, ones chosen horse could win only one-half the time.

This month saw the street lights and window lights turned on again, right on the heels of the "lights of London." In the "dim-out" we had forgotten exactly how these lights looked. The return of such lighting was a surprise and delight to our five-year-old son, but was viewed with mixed feeling by the architect. The sins of bad lighting seem now to obtrude themselves on one and the success of a fine installation is doubly apparent. If shop-keepers and the general public are affected like ones self there may be a decided improvement in the night appearance of our business street architecture.

W. A. Watson.

QUEBEC

Au début de la sixième année de la guerre, trois faits dominent l'industrie de la construction et font prévoir avec netteté la situation à laquelle nous devons faire face dans les premières années d'après-guerre: ce sont l'énorme volume des projets, la hausse accélérée des prix et la difficulté de faire exécuter les travaux. Ces faits persisteront—inégalement—après la guerre, parce que les causes dont ils découlent ne seront pas supprimées par l'armistice ou les traités, mais disparaîtront graduellement, à mesure que le pays reprendra son économie normale.

On a dit que le problème de l'après-guerre ne consistera pas à remettre la machine en marche, comme dans une crise, mais à contrôler un essor, un "boom"; si les projets retardés par la guerre étaient l'unique facteur en jeu, cette opinion serait tout à fait juste. La crise de 1930 avait déjà fait remettre à plus tard un nombre considérable de projets; ces constructions allaient être exécutées après la reprise de 1937, lorsque la guerre est venue suspendre la construction pour fins civiles; d'anciens et nouveaux projets ont été suspendus indéfiniment.

Dans la seule région de Sherbrooke, il est facile de faire une liste de projets sérieux pour un montant dépassant 6 millions de dollars, en édifices civiques, écoles, institutions, résidences, etc. Si l'on a en vue tous les Cantons de l'Est, ce montant peut être porté à 10 millions; et la situation ne doit pas être bien différente dans l'ensemble du pays. Ces chiffres provoqueront peut-être des rêves d'or . . . nous souhaitons simplement que les architectes et les dessinateurs puissent revenir à leur occupation normale, car on ne peut considérer comme un bien pour la profession qu'un nombre important d'architectes soient employés à dessiner des parties de bateaux, des membres de structure ou des machines au service des grandes compagnies ou même du gouvernement.

La guerre et la crise ne sont pas les seules causes qui peuvent retarder des travaux nécessaires. Une autre cause peut fausser bien des prévisions enthousiastes: c'est la hausse des prix pour

Here we do not mean wholly prefabricated houses which are a menace to our cities because of their rapid deterioration; because of their transient character which is harmful to the morale of a community; and because of their lack of civic responsibility which will cause a district to deteriorate even faster than many of our newer districts are deteriorating now. One of the tragedies of the development in house building is that the life of a new house is every year becoming shorter. This means a great expense for upkeep to the owner or resident, and a potent slum breeder. Prefabricated houses for our cities—especially without any town planning control—will accelerate the growth of our great slums.

We need to learn to build well again, as our ancestors did. They built to live in. Houses are now built to sell or to rent high. Research into methods of building utilizing our great new technical and industrial resources is essential and is a government responsibility. Factories which are manufacturing large parts or pressed sections for war machines should be organized for the transfer to the manufacture of building parts. It is hoped that many war industries are already studying this re-organization. It will be a boon to both the housing situation and the post-war labour situation. The government should, through its research, set standards for sizes and details of prefabrication. It should establish a strict code of construction ensuring good building.

The government should also set—with a certain amount of sugar-coated compulsion—the housing programme, making it possible to estimate the quantity of prefabrication and number of mechanics necessary. It will be able to guarantee the sale of the industry's quota and the full employment of our large technical manpower.

By prefabrication we mean the manufacture of building parts—such as wall sections, kitchens, bathrooms, closets, stairs, etc. In the design of the building, probably with a structural

skeleton as basis, the architects will adapt their layout, elevations, etc., to these parts,—much as we adapt our houses now to standard windows and doors, to sizes of fibreboard, lumber and other building materials.

The planning required to lay out the site, to plan the buildings, streets and grounds, to order the materials, to erect the skeleton and affix the prefabricated walls and parts and to complete the scheme with parks and communal buildings seem to be the obvious responsibility of the municipalities. It can produce its own organization to carry out this work, (like its works and parks, street cleaning, transport, utilities, etc., departments). In this way, as did Wartime Housing, the building industry can be effectively harnessed, and houses built in an organized way which even government bureaucracy cannot degrade to the speculatively built chaos we know so well.

When we hear of housing let us think of the scale of the job to be done. Let us think of the importance to us and our children that this job be done right. Let us think of how we can best get it done right.

This article has set out a conception of housing which is not new. It is unfortunate that Canada cannot be a leader in this field. Canada can, however, learn from the experience of England, the United States, Russia, Sweden, Holland, Switzerland and many other countries where housing in the form of neighbourhoods has been successfully carried out—an expression of democratic progress. In these countries such housing has become a necessity. The people demand it, and the cities prosper and become beautiful because of it. Canada can also gain by giving heed to popular appeal, and by its action to give its people houses and cities fit for citizens of a great nation.

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tout ce qui se rapporte à la construction. Le contrôle des prix a été mesure opportune et assez efficace pour rendre plus supportables ces années de guerre; mais le domaine de la construction est celui qui échappe le plus à ce contrôle, parce qu'il est l'aboutissement et la somme des variations subies dans tous les autres domaines de la vie nationale: coût des matières premières, coût de produits manufacturés nombreux et variés, coût de la vie, salaires, transports, rareté de main-d'oeuvre, etc. Si une hausse se produit sur un ou l'autre de ces points, elle se fait sentir immédiatement dans la construction; et si elle se produit sur tous les points à la fois, les prix de la construction tendent vite à devenir prohibitifs.

Cette tendance s'est manifestée en 1944 plus qu'en aucune autre année de la guerre. On répète que la démobilisation fournira une main-d'oeuvre abondante et déterminera une baisse des prix après la guerre. Cette opinion ne tient pas compte qu'il faudra une couple d'années pour entraîner cette main-d'oeuvre aux différents métiers de la construction; elle néglige aussi les autres facteurs qui influencent les prix, comme la demande nouvelle provoquée par la démobilisation, le coût d'ajustement de l'outillage industriel à l'économie de paix, l'habitude acquise des salaires élevés. Nous pouvons nous attendre que ce sera le problème le plus délicat à régler après la guerre; et malheureusement, c'est un problème sur lequel notre profession n'a qu'une influence limitée: nous pouvons et devons apporter une importante contribution d'idées, surtout par nos Associations, mais la solution directe doit nous être donnée par les pouvoirs publics.

Les difficultés de faire exécuter les travaux, qui tiennent à la présente rareté de matériaux et de main-d'oeuvre se résoudre avec plus de facilité et de rapidité, pourvu que les contrôles établis pour les besoins de la guerre ne cherchent pas à se maintenir en temps de paix. Tout pouvoir établi tend naturellement à se maintenir. On pourra inventer bien des prétextes, on le fera probablement, mais ce ne seront toujours que des prétextes; la raison d'être des organismes de contrôle, à savoir la conduite de la guerre, disparaîtra avec celle-ci, et l'opinion publique doit se tenir en éveil pour réclamer aussitôt après la guerre l'abandon de contrôles devenus inutiles, sans quoi la guerre pour la liberté nous aura coûté notre liberté même.

L'immense effort d'adaptation et de réalisation fourni par l'industrie de la construction pendant la guerre a démontré que cette industrie sait régler ses propres problèmes, à la simple condition de ne pas être entravée. Dans les suggestions que nous pourrions faire au gouvernement, nous devons nous garder de proposer des mesures qui amèneraient celui-ci à régler des questions que nous pouvons résoudre nous-mêmes.

Albert Poulin.



CORRECTION

We regret that, in the August issue of the *Journal*, we described the Architect responsible for the Military District Hospital, Eckville, Alberta as the Alberta Provincial Public Works Department. Mr. C. S. Burgess was the Architect, and we tender him our apologies with this correction.

Editor.

Part 4—Home Improvement and Home Extension Loans Guaranteed Against Loss

Part 4, Sections 17 to 23 empowers the Minister to "pay to a bank or to an approved instalment credit agency, the amount of loss sustained by it as a result of a home improvement or a home extension loan, which it issues, provided that twelve provisions are complied with. These provisions define in detail the manner in which the loan shall be extended and repaid. In the case of a home improvement loan, the principal shall not exceed \$2,000 for a one-family dwelling nor exceed \$2,000 for the first unit in a multi-family dwelling plus \$1,000 for each additional unit. In the case of a home extension loan, the principal shall not exceed \$3,000 for the first family unit added to original dwelling plus \$1,000 for each additional unit beyond this. The loan shall be repayable monthly over three years at 5% with no additional service charges allowed. With a home extension loan the Minister shall approve the plans first.

If the above provisions are fulfilled, the Minister will guarantee the lending agencies against loss not in excess of 5% of the aggregate loans made by them under this section of the Act and the Minister shall not be liable in any event for a loss of over \$100,000,000. He may terminate this offer to guarantee loans on 24 hours' notice and the Governor in Council may make various regulations prescribing and defining the mechanics of his guarantee and safeguarding the rights of His Majesty against fraud or default.

Part 5—Housing Research and Community Planning

Part 5, Sections 24 to 27 makes it the responsibility of the Minister to undertake research into housing conditions and costs and designs in Canada and elsewhere and suggest and distribute information on proposals for methods for their improvement. It also becomes the responsibility of the Minister to undertake research into land utilization and community planning and "study arrangements to be made for the furnishing of information and advice with regard to the establishment of community planning agencies, and the planning of regional areas, communities and subdivisions" in co-operation with other authorities.

The Minister may also with approval of the Governor in Council cause to be undertaken with the co-operation of any department of any government or educational institution a programme of technical research covering any or all aspects of housing and planning. He may enter into contracts for the production of materials and equipment on an experimental basis and publish findings, conduct competitions, and offer scholarships "for promoting training in the construction or designing of houses, in land planning or community planning or in the management or operation of housing projects. No definite sum of money for such purposes under Part 5 is mentioned.

Part 6—General Provisions

Part 6, Sections 28 and 29, empowers the Minister to employ technical and clerical assistance necessary to the administration of the Act from money appropriated by Parliament for the purpose, also, to make arrangements with insurance companies for a borrower to purchase reducing term insurance to pay the amount of the loan in the event of his death before the loan is fully paid.

(The Hansard debates on this Bill may be found on the dates August 5th, 9th and 10th. These may be obtained from the King's Printer at 10 cents each, and Bill 183 is available also from the same source at the same price).

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