

HOUSING, BUILDING, AND CONSTRUCTION

INTRODUCTION

This Chapter traces the main aspects of housing and building construction since 1934. Both the process of erecting buildings and their final appearance bear witness to the major social and economic trends of this era.

The themes follow a basic chronological pattern: pre-war beginnings, the effects of the Second World War on the building industry; the great changes in all aspects of building after the early 1950s (when the immediate post-war shortages no longer constrained building); the domestic impact of changes in home construction building legislation; building and its interaction with planning requirements; the work of the Housing Commission and the National Trust; and major private and public sector construction.

In the 1930s building activity, because of the Depression's after-effects, was somewhat muted, and during the war years all resources of men and materials were directed towards the war effort. It was only after the Second World War that Victoria entered on an era of wide-ranging construction never equalled since the boom years of the 1880s. Suburbs grew further and further away from the inner metropolitan area and the urban area underwent a great visual change, the totality of which was clearly evident by the late 1970s, when construction again waned.

Special attention is drawn to the developments in the urban and suburban areas of Melbourne. There was new building activity in most country towns, although the overall impression of new structures replacing the old was nowhere near as strong as in Melbourne. For example, Geelong, Ballarat, and Bendigo still retain most of their pre-war visual features. Not so Melbourne.

Also, as there was considerable rural prosperity in the 1950s and 1960s, many farmers were able to build new homes in that period.

The Chapter does not give a detailed treatment of the architectural trends of the period, but notes these as they impinge on the themes of building construction and the design of dwellings. An assessment of the impact of the functional style in city building construction which has had so profound an impact on Melbourne's visual environment awaits a definitive analysis.

1934 TO 1939, POST-DEPRESSION ERA

By the time the Depression began to lift, building activity in Victoria had dropped dramatically. Values had fallen, and housing finance was available to borrowers only with a wide margin of safety to lenders. Housing development was disorganised, and there had been an unusual number of mortgagee sales of houses. Many of the low and medium priced houses had been built on unsewered sites with unmade roads.

By 1934 housing values had begun to rise as the Depression years began to recede, and the demand for public and private buildings was gradually being met in areas including housing, commercial and industrial buildings, churches, sporting facilities, and hospitals.

Some technical innovations became evident in the housing industry, and the first comparatively modern display houses were built by A.V. Jennings on the Beauville Estate at Murrumbena for the Colonial Gas Company. These houses displayed innovations in the kitchen, stainless steel sinks replaced wooden sink tops, wood-fuelled bath heaters were

replaced with gas-fuelled hot water services, and refrigerators replaced the ice box. Lath and plaster ceilings were replaced by fibrous plaster, and timber houses with iron roofs by solid brick houses with tiled roofs. These all-brick houses complete with land, equipment, and services were sold for about \$3,500, many without a deposit at a time when the average nominal weekly wage for an adult male worker was approximately \$8.00. Roads were laid, including concrete footpaths with crossings for cars, and sewerage was connected. This first housing development by the Colonial Gas Company was followed by a comparable project of the State Savings Bank of Victoria at Fishermens Bend which included many two-storied individual and semi-detached brick houses, and all houses were available for purchase on very low deposits and repayments.

During the 1930s, building permits and approvals were easy to obtain, building techniques were improving, and there was comparative industrial peace. Strikes and disturbances were mostly minor.

The first attempt at organisation of the building industry, was the Building Industry Congress of Victoria, which brought together architects, engineers, unions, builders, sub-contractors, manufacturers and suppliers, with some success in understanding the industry and in settling difficulties.

In general, most building projects were completed on time with comfort installations such as air conditioning and acoustic controls in their early stages of development. Construction of several major institutional buildings proceeded on schedule, an early example occurring in 1933 with the completion of the Shell Company building, with the then height limit of 40.2 metres, in William Street. Designed by Kingsley Henderson and his partners, and soon followed by their Alcaston House, a comparatively modern apartment house at the top of Collins Street, these buildings typified the architectural standards of well mannered and restrained neo-classicism which was consistent with the several new banks and insurance company offices being constructed at this time in the City of Melbourne. The MacRobertson Girls High School, functional and modern in design, was built in 1934. With the average construction time for a 12 storey building decreasing from 2-4 years to 12-18 months the Manchester Unity building was completed in 12 months with organised construction and accurate planning. The Royal Melbourne Hospital, completed in the early 1940s, was one of the foremost hospital designs in the world and enjoyed wide acclaim.

The 1930s produced the first evidence of "Contemporary" or "International Style" architecture influenced by Burley Griffin, Mies Van Der Rohe, Walter Gropius and the Bauhaus, with dedication to traditional forms beginning to give way to the experimental freedoms of the new movement. Before 1934 the standard of the average house was mediocre, with little variation and no quality of design. Larger houses were usually of so-called Georgian design or Tudor or Spanish Mission. It was about this time that some of the more imaginative younger generation of architects including Roy (later Sir Roy) Grounds, Geoffrey Mewton, Robin Boyd, and Norman Seacourt, produced individual houses specifically designed for the Australian way of life and its climate. Many blocks of flats were also built in this manner. The movement gained impetus and gradually spread to the rest of Australia.

As the expansion of Melbourne increased with its almost invariable single home suburbs, it left in its wake depressed areas of sub-standard or semi-derelict houses in the inner suburbs which had developed into slums, many of which were occupied by pensioners or low income families.

In 1937 a Housing Act was introduced with the object of solving the problem of slum reclamation; it resulted in the creation of the Housing Commission of Victoria. In 1939 the Commission formed into an organised group the successful competitors in an architectural competition and entrusted them with the design and construction of the first housing estates to be developed by the Commission. Each member of this group was a principal in a well established firm and, therefore, brought to the service of the Commission considerable resources in equipment and experienced staff, which included architects, engineers, supervisors, and administrative personnel.

The Commission at the time had as its objective the role of a slum clearance (or urban renewal) authority with the aim of improving housing conditions and providing adequate

accommodation for persons of limited means. Finally, in 1938 it began the construction of the first housing estate of 412 dwellings at Fishermens Bend.

With the outbreak of war in 1939, the withdrawal of manpower and building materials restricted the Commission's construction activities, but throughout the war it continued with research and development into construction design and techniques for the future, especially concrete houses. Slum reclamation began again in the early 1950s and the immediate post-war period was devoted to overcoming arrears in house construction.

The Commission had erected its first concrete house at Fishermens Bend, and in 1943 took over the Fowler Construction plant to develop the project; by 1945, 2,000 such rental houses had been built. The plant at Holmesglen was taken over in 1946 and 2,000 concrete houses were built between 1945 and 1956.

The time taken to construct a house had increased from a few months in 1934 to between eight months and two years in 1951. From 1945 to 1952 building materials and labour were in very short supply, a maximum area for new houses was enforced, and ceiling height fell to below 3 metres. By the early 1950s brick veneer construction was twice as common as solid brick and timber. Land costs began to rise and the cost of sites became higher in relation to dwellings.

1939 TO 1951, ERA OF MATERIAL SHORTAGES

In the early period of the war in Europe controls were enforced slowly, and private building carried on at diminishing levels. Luxury homes, for example, were still being built in Melbourne during 1939-40 although, generally, housing construction declined.

Victoria, and in particular Melbourne, was a main contributor and centre for the administration and direction of the national war effort, and the base for the headquarters of the Directorate of Munitions under Mr Essington Lewis, the Department of War Organisation and Industry, and the Commonwealth Department of Works which designed many of the Australian war facilities.

The War Workers Housing Trust was also based in Melbourne to provide munition workers and their families throughout Australia with hostel and cottage accommodation, wherever it was demanded. Some 22,500 persons were supplied with accommodation, including two-bedroom family cottages selling at \$560 each.

Melbourne was the centre of many controlling authorities, including the Works Priority Sub-Committee, which met at frequent intervals to determine the priorities of wartime construction projects submitted to it by the Armed Services of both Australia and the United States of America. Representatives attended, supported their applications, and retired with an approval or rejection usually given on the spot. The Department of Defence was also still based in Melbourne.

Government wartime projects involving engineering and construction for both Australian and United States Forces included munitions factories, camps, airfields, military hospitals, war worker housing, roads, harbour facilities, utility services, and warehouses (all aided by United States heavy equipment such as bulldozers), and storehandling facilities with pallets, fork lifts, and other mechanical techniques. To save time, very direct procedures, often oral and without defined costs, were used to order and speed up completion of engineering and construction projects related to munitions, war equipment, and buildings.

Many of the projects were completed by normal on-site construction, although some of them were pre-fabricated. The Australian requirements were largely designed by the Commonwealth Department of Works, and by the various works sections of the Armed Services. In the main, on-site construction throughout Australia was carried out by a vast building construction organisation, the Allied Works Council, a co-ordinating and field construction body.

A significant part of the design of structures and projects for the war effort originated from Victoria. Melbourne representatives of the Institution of Engineers, Australia, and the Royal Australian Institute of Architects urged the use of partially employed private architects and engineers to assist the Commonwealth Department of Works in its design work load. Gradually these surplus professionals were employed by both Australian and American services. Within weeks of the attack on Pearl Harbour in December 1941, United

States service personnel, called from scattered bases in the mid-Pacific and elsewhere, came at a steadily increasing rate to Melbourne.

The United States Navy, Army, and Air Force in the South-West Pacific area arrived in Australia without any organised engineering-architecture section and Engineer Headquarters immediately sought out and recruited local architects and engineers into a civilian design force of some 200, headed by the Chief Engineer of the Melbourne and Metropolitan Board of Works, and the then President of the Royal Victorian Institute of Architects. With many top professionals from Victoria and some senior United States Army Engineers, the force was rapidly built up. This unit, which operated from Melbourne throughout the war with offices in each State or area, moved from Melbourne to Sydney and then Brisbane during successive years and was responsible for design of the major projects for the Navy, Army, and Air Force, using local techniques and materials.

In the early stages these projects were designed for normal construction but as the war moved north into the Pacific, much of the manufacturing capacity of Australia, largely based in Sydney and Melbourne, was transferred to a pre-fabrication programme, designed by the US Engineer unit and approved by the Works Priority Council. It began to operate early in 1942. The products were first used on mainland projects but soon were totally absorbed in New Guinea and the various islands of the Pacific zone of the war; fabricated and site tested on Randwick Racecourse in Sydney, these products were packed and shipped as required. They included such substantial items as 500 huts per week for camps, messes, hospitals, etc; a 500 bed hospital (including all accessories) per week; eleven warehouses per week; a portable hangar per week for transport in ships or in three Dakota aircraft loads; and various smaller projects. With the rapid shifting of operations much wastage occurred; for example, this programme produced and completed a 4,250 bed hospital at Herne Bay in Sydney, which was by-passed by the northward move of the war before it was used. Similarly by-passed was a major storage complex made from pre-fabricated hangars and constructed in Cairns, again to be almost unused.

When the end of the war came in Europe in May 1945, there was still a major war effort in the Pacific area. The Japanese surrender in August 1945 meant that Australia would be confronted by the effort required to repatriate and house returning forces and switch from a war-orientated to a civilian economy. The end of the war and a major industrial and social adjustment to peace called on the controlling authorities and the building and construction industry to adjust once more. In the background were various strong political tensions, such as the proposal to nationalise the banks, and a high level of industrial unrest.

Shortages of materials continued to and beyond 1951, including bricks, glass, steel, soft timber, petrol, and many other items. Controls persisted for some years with some rationing of petrol, clothing, and certain foods. Permits were still required for any civil building.

Uncertainty prevailed in the building industry, which had been disorganised by the war and was now trying to re-establish itself. There were tensions among construction workers and this era saw the emergence of greatly increased strikes, delays, and increasingly unstable construction costs. Industrial action and negotiations for improved conditions and salary levels, together with shortages of materials, created problems in erecting buildings on time and to scheduled costs.

In these conditions, the consumer market for commercial and other space was hesitant and investors were reluctant to undertake the risk of uncertain capital expenditure. For many years there was little commercial building, some industrial construction, and a limited but fast growing volume of housing. Provision of structural steel, available only from unpredictable rolling schedules, was uncertain and led to wide-scale importations at higher cost.

Some projects of importance were undertaken, and engineering works in Victoria included the Eildon Dam, a world standard earthworks project which included the Eildon township for housing some two thousand workers during the several years of construction, which was also designed to adapt to normal civil usage on completion.

During 1944-45, post-war housing needs had been assessed by the then Commonwealth Department of Labour and National Service. Its task was to assess the requirements of housing repatriated servicemen, and advise about the best means of ensuring adequate construction. In the event the problem was over-estimated and the target of some 70,000

houses per annum was never realised. However, the Department produced valuable technical housing data.

The Royal Victorian Institute of Architects Small Homes Service commenced operations in 1947 and provided, for people of limited means, plans, specifications, and contracts for well designed homes at a nominal fee. This service made a significant improvement to the quality of small home design in Victoria and indeed throughout Australia.

The Commonwealth-State Housing Agreements emerged in 1945 and 1956, and under these arrangements, methods of construction were examined, a strong swing from solid brick to brick veneer was established, and many pre-fabricated wall panel systems were tested. Shortages of materials and labour, and other factors, inspired the pre-fabrication programmes. These included the Victorian Railways' so-called "snail" project which included modern room units designed in Victoria, imported complete and ready for local erection, and widely used. Similarly, the Victorian Hospitals Commission sponsored a locally designed pre-fabricated hospital project, providing the total parts for some 1,200 beds, designed in Victoria, and imported ready for assembly.

The first large Victorian post-war hospitals were built by normal construction at Footscray and Northcote. Designed in the late 1940s, they each had several hundred beds. They proceeded to construction and completion in the early 1950s, with Footscray being the first fully air-conditioned hospital in Australia. Around these and other projects, firms of builders and architects started to find work again.

In the early 1950s some major industrial projects were constructed, such as the refinery at Corio (1954) and the petrochemical complex at Altona (1955). Towards the end of the decade, new commercial construction and industrial projects were begun. Designers, worried by rising costs and labour shortages, investigated new assembly techniques, new forms of construction, and the pre-fabrication of parts for major projects. All these were subsequently used in the early 1960s. Such developments were basically addressed to overcoming shortages and the high post-war cost of labour, and to achieving reduced construction time and improved standards.

The Commonwealth Experimental Building Station, together with the Commonwealth Scientific and Industrial Research Organisation, carried out notable research and testing for architects, engineers, manufacturers, and owners. These agencies achieved the rationalisation of regulations covering fire protection, heat-resisting solar glazing, eye-protective anti-glare tinted glazing, acoustic controls by means of ceilings and sound-proofed partitions, curtain walls, light-weight steel frames and pre-fabricated steel floor sections, pre-fabricated stairs, and other components. These components were designed, tested, and in due course often used in city projects. These new techniques sought to lessen dependence on conventional labour intensive construction, and as far as possible transfer on-site exposed working conditions to the indoor workshop.

In engineering, too, there were far-reaching effects. The war had brought into use immense quantities of mechanical equipment for earth moving and trench digging. Techniques of air strip construction used growing knowledge of soil dynamics, and store handling methods using modern forklift-cum-pallet proved a short-cut to goods handling. Australian personnel learned many new techniques. As the American Forces left Australia and New Guinea much of this equipment was left behind and became accessible to Australian municipal engineers and various other organisations, and in a short time the advantages of these new mechanical techniques were being fully exploited by municipalities, road authorities, and others. The day of the labourer with pick and shovel had virtually ended.

The following tables provide statistics on the number of dwellings, and new dwellings commenced and completed in Victoria during the period since the end of the war:

NUMBER OF OCCUPIED DWELLINGS: VICTORIA, 1947 TO 1981

Year (a)	Occupied private dwellings			Non-private dwellings	Total occupied dwellings
	Melbourne Statistical Division (b)	Rest of State	Victoria		
1947	310,863	206,972	517,835	9,571	527,406
1954	415,989	234,884	650,873	9,817	660,690
1961	518,476	263,057	781,533	8,996	790,529
1966	621,685	259,763	881,448	7,536	888,984
1971	731,687	278,499	1,010,186	5,299	1,015,485
1976	813,402	308,176	1,121,578	4,726	1,126,304
1981	892,047	346,898	1,238,945	4,506	1,243,451

(a) Censuses of Population and Housing at 30 June.

(b) The figures shown for the years 1947 to 1961 relate to the Melbourne metropolitan area. From 1966 onwards the figures relate to the dwellings within a fixed boundary embracing an area referred to as the Melbourne Statistical Division.

NUMBER OF NEW DWELLINGS COMMENCED: VICTORIA, 1947 TO 1982

Year ended 30 June--	Commenced (a)		
	Melbourne Statistical Division	Rest of State	Victoria
1947	n.a.	n.a.	13,293
1950	10,870	9,101	19,971
1955	16,419	7,438	23,857
1960	19,065	7,657	26,722
1965	23,433	8,388	31,821
1970	31,228	6,852	38,080
1975	21,085	10,571	31,656
1980	15,598	10,346	25,944
1981 (b)	15,825	10,487	26,312
1982	15,110	9,208	24,318

(a) Figures prior to 1974 include alterations and additions of \$10,000 and over.

(b) Figures from 1981 are based on data supplied by local and other government authorities. Prior to this figures were obtained from builders.

NOTE: Dwelling statistics are not adjusted retrospectively for boundary changes to Melbourne Statistical Division (formerly Melbourne metropolitan area) and Rest of State.

NUMBER OF NEW HOUSES AND OTHER DWELLINGS COMMENCED (a) BY OWNERSHIP: VICTORIA, 1947 TO 1982

Year ended 30 June--	Private			Public			Total		
	Houses (b)	Other dwellings	Total dwellings (b)	Houses	Other dwellings	Total dwellings	Houses (b)	Other dwellings	Total dwellings (b)
1947	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	12,981	312	13,293
1950	15,778	225	16,003	3,865	103	3,968	19,643	328	19,971
1955	18,948	178	19,126	3,726	1,005	4,731	22,674	1,183	23,857
1960	21,143	2,956	24,099	2,058	565	2,623	23,201	3,521	26,722
1965	19,641	9,030	28,671	2,126	1,024	3,150	21,767	10,054	31,821
1970	22,600	12,272	34,872	1,975	1,233	3,208	24,575	13,505	38,080
1975	21,102	6,961	28,063	3,116	477	3,593	24,218	7,438	31,656
1980	21,144	3,570	24,714	809	421	1,230	21,953	3,991	25,944
1981	21,040	3,909	24,950	906	778	1,684	21,950	4,687	26,630
1982	18,450	4,450	22,900	671	765	1,436	19,120	5,215	24,340

(a) Figures prior to 1974 include alterations and additions of \$10,000 and over.

(b) From 1981 figures are based on a sample of jobs. Prior to this figures were obtained from a census of builders. 1981 and 1982 figures are rounded to the nearest ten units.

NEW DWELLINGS COMPLETED (a) : VICTORIA, 1946 TO 1982

Year ended 30 June—	Houses (b)		Other dwellings (b)		Total dwellings (b)	
	number (c)	\$'000	number (c)	\$'000	number (c)	\$'000
1946	3,666	7,604	14	14	3,680	7,618
1950	15,611	57,708	246	1,326	15,857	59,034
1955	23,839	135,276	781	3,664	24,620	138,940
1960	24,157	163,496	2,062	10,920	26,219	174,416
1965	22,821	185,692	8,674	47,564	31,495	233,256
1970	24,702	261,899	13,992	101,953	38,694	363,852
1975	26,902	511,546	10,440	129,749	37,342	641,295
1980	22,617	785,744	4,323	110,680	26,940	896,424
1981 (d)(e)	21,480	817,500	4,420	115,600	25,900	933,100
1982 (e)	19,960	870,500	4,530	132,100	24,490	1,002,600

(a) Figures prior to 1 July 1966 include alterations and additions of \$10,000 and over to other dwellings only. From 1 July 1966 to 30 June 1971, the figures include alterations and additions of \$10,000 and over to both houses and other dwellings. From July 1971 the figures exclude alterations and additions of \$10,000 and over to houses and other dwellings. The figures exclude all alterations and additions of less than \$10,000.

(b) Excludes value of land.

(c) Individual dwelling units.

(d) From 1980-81 statistics are based on a sample of jobs. Prior to this figures were obtained from a census of builders.

(e) 1981 and 1982 figures are rounded to the nearest ten units.

1950s AND 1960s, METHODS AND MATERIALS

Houses

Pre-war housing construction techniques predominated for a few years until many familiar aspects of the house began to change in the 1950s. Windows, once steel casements or double-hung timber, began to increase in size and soon almost entire walls were glazed. Roofs, once invariably hipped or gabled, became skillioned or flat. This latter form was made easier to achieve by using the new steel roofing materials. Originally introduced from the USA as formwork for concrete, such material became popular when an architect reversed it, placing its strengthening ribs uppermost. Concrete slabs laid directly on the ground became an acceptable floor and banished the State's long time fear of white ant.

The plan of the house became freer, and was opened up into wings of one room thickness, although the majority continued to be of the eighty year old shape in which one front room projected slightly, producing the L-shape and the U-shape house in significant numbers, to be followed by a fashion for angles and skews. Houses were angled in plan by moving entire wings or by skewing only one wall. Often the skew line was continued externally in a flower box.

Houses were also skewed in volume with ceilings following the roof slope and windows following the ceiling to present a curtaining problem as curtains themselves came to compete with the new venetian blinds. Unused for 60 years, they reappeared in the 1950s, with plastic coated metal replacing the earlier cedar strips.

In the early 1950s the pre-war disposition of rooms still prevailed: two bedrooms, a sitting room, and a dining room in addition to the usual service rooms. This gave way to the three bedroomed (and later the four bedroomed) house. To maintain the overall size, the extra space required came from the dining room which tended to become merely an adjunct of the living room and thus the L-shaped main room was born. When the dining room vanished as a second living/study area, the former small eating area in the kitchen was expanded to provide the lost work area and towards the end of the decade the family room adjacent to the kitchen was born. The introduction of television in 1956 made a second living/sitting area essential if conversation or homework was to be provided for. The bathroom, once a single room containing a bath with shower above it and a basin, became two and then three small compartments with the bath and basin in one, shower in another, and the lavatory, in the third, the latter a trend which began before the war.

The mechanical equipment of the house in the early 1950s showed little change from that of of the late 1930s. During the 1960s the house became mechanised with automatic washing machines, clothes drying cabinets, dish washing machines, and central heating systems, which made possible a more open planning of interiors. The automatic washing machine changed the house plan as the laundry and kitchen could now be combined. This kitchen/laundry amalgamation which originated in architect designed custom-built houses was soon adopted generally in less elaborate houses designed by the owner or a builder.

It was about this time that colours became fashionable and many details in houses were painted in a different bright colour.

As the decade proceeded the role of change in superficial details quickened, as the house itself became lighter and everything short of outright prefabrication and rationalised factory-based construction was welcomed as a means of containing costs and increasing amenity.

Changes again became evident in the 1960s. The Depression of the 1890s, the First World War, and the subsequent Depression had each been a major watershed of house design and the credit squeeze of 1961 was no exception. The post-1891 house exchanged stucco, slate hips, and double hung windows for red bricks, tiled gables, and casements, with electric light, telephone, and bathrooms and kitchens in the main block of the house (beyond stained glass panelled doors or beaded curtains draped from timber fretwork infills).

When the house of the 1960s appeared, it abandoned cream paint and reverted, after 40 years, to stain. To show off the new status of stains, timber was left rough-sawn and exposed along the new "cathedral" ceilings. Rumbled bricks and clinkers (once rejected because of their uneven shape), full height doors, and, in the lower price range, aluminium windows were preferred, and ceiling heights reduced to 2.4 metres. The new type of developer who sold the house as a complete package of site and building was responsible for many of these new facets of taste.

NUMBER OF NEW HOUSES COMMENCED: BY MATERIAL OF OUTER WALLS, VICTORIA, 1947 TO 1982 (a)

Year ended 30 June—	Melbourne statistical area						Victoria					
	Brick etc.	Brick veneer	Wood	Fibro	Other and not stated (b)	Total	Brick etc.	Brick veneer	Wood	Fibro	Other and not stated (b)	Total
1947(c)	n.a.	n.a.	n.a.	n.a.	n.a.	7,711	7,460	(c)	4,101	(c)	1,420	12,981
1950	1,980	2,632	5,594	295	84	10,585	2,750	3,340	11,208	2,070	275	19,643
1955	1,705	4,140	8,965	388	95	15,293	2,163	5,068	13,794	1,391	258	22,674
1960	972	9,511	5,016	122	7	15,628	1,517	11,228	8,436	1,808	212	23,201
1965	603	12,611	700	155	2	14,071	927	16,556	2,313	1,747	224	21,767
1970	510	17,457	364	430	10	18,771	642	21,126	937	1,797	73	24,575
1975	825	13,701	270	493	13	15,302	1,283	19,954	800	2,075	106	24,218
1980	929	11,737	332	205	16	13,219	1,839	17,714	966	1,372	62	21,953
1981(d)	977	10,495	364	60	1,182	13,078	1,978	16,007	1,067	940	1,615	21,607
1982	828	9,217	444	42	1,374	11,905	1,581	14,015	1,088	898	1,649	19,231

(a) Figures prior to 1974 include alterations and additions of \$10,000 and over.

(b) Not stated included from 1981 only.

(c) For 1947 only, brick veneer is included with brick etc. and fibro is included with other, etc.

(d) From 1981 figures are based on data from local government sources. Prior to this figures were obtained from a census of builders.

Flats

Flats had first appeared in Melbourne in the 1890s. Then they were for the very rich and later for the middle classes, but only as a second choice in housing. In the 1920s and 1930s, "family" flats appeared in very limited numbers and in the 1940s the "bachelor" flat, with bar-kitchen and fold-down bed became available.

From 1951 to 1959 the annual number of flats produced in the State grew significantly and all of them were built in Melbourne. This resulted, in part, from the idea of giving a flat its own entity, first by ownership of shares in a building venture and later by its own actual title which produced a new building type description, OYO for "own your own". With an adjustment to the Titles Act, an apartment could be owned, not rented. By the end of the 1950s, flats were well on their way to acquiring recognition and permanence. After the credit squeeze of 1961, flats became an attractive investment and acceptable shelter. The 1960s were noted for their construction.

Flats were rarely built in the country and in the city they were concentrated in St Kilda, Elwood, South Yarra, and Hawthorn. Because they were essentially speculative, they had even less professional involvement than houses. Some of the houses were designed by architects or designers, or were influenced by design philosophies.

The typical apartment block of the 1960s was three storeys high, set above a pillared, dark, parking area. Its garden consisted of stones and cacti. Back stairs, a requirement of

the 1930s were no longer built. Yellow bricks, interspersed with "feature" panels of bricks or mosaic tiles, emphasised the building's conceptual link with the 1950s. In the later years of the decade, flats accounted for more than a third of Victorian housing and this proportion was even higher in the metropolitan area. Thus Victoria had almost unconsciously altered course and changed its housing values. The visual changes in the 1960s and 1970s were very significant but limited in range.

From 1970 on, the number of flats declined. The economic climate towards the end of the decade contributed to the reduction in the building of flats.

1970s AND EARLY 1980s, HOUSING AND LIFESTYLE

Houses in Victoria adopted central heating, using gas and oil discovered in Bass Strait in the 1960s. The typical kitchen of the decade possessed two sinks set in a tiled bench, the tiles sometimes showing striking colours. Cooking was by separate units: bench hotplates and a wall oven. A dishwasher solved some problems for the householders and three bedrooms were usually sufficient for the smaller family size which now became common.

FUEL USED TO HEAT PRIVATE OCCUPIED DWELLINGS: VICTORIA, 1976 (a)

Type of fuel used	Number of dwellings
Coal, coke, and briquettes	40,182
Wood	102,980
Electricity	212,690
Gas-mains	344,060
Gas—bottled or LP	27,446
Oil, kerosene	319,848
Solar energy	572
Other fuel	7,908
No fuel used	5,774
Not stated	60,118

(a) Figures from the 1976 Census of Population and Housing.

Two important planning developments which started in the 1960s, became increasingly popular in the 1970s. These were the *en suite*—the small bathroom (basin, shower, and pan) off the "master" bedroom, and the family room.

This latter development was really another shift in emphasis on living areas. The built-in eating "nook" of the 1940s used in conjunction with the L-shaped living/dining room no longer suited living patterns. The separate dining room was visually re-established, then the wall between it and the kitchen was eliminated. The small family gathered in the living room where they watched television.

During the 1960s very few buildings over four storeys were built thus preserving the existing character of the suburbs. The economics of construction preserved many suburbs. However, four level buildings could be and were built 1.8 metres away from the side boundary. Thus where redevelopment was intensive, adjacent dwellings faced the equivalent rooms of their neighbours only 3.6 metres away.

Although houses were regarded as the norm of family accommodation, the industry in the 1960s had turned to other forms of accommodation. After the imposition of the credit controls of 1961, house building began almost immediately to taper off, but the effects took several years to show up on statistical tables; the average house still took at least 6 months to build.

Home building volume declined each year throughout the decade and did not attain the 1960 level for another 10 years. The leeway was made up, to a certain extent, by flats. In 1960, 26,000 dwellings were built; 24,000 houses and 2,000 "other" dwellings. The houses were usually of brick veneer.

In the 1970s many houses were so designed that the operative in the kitchen could enjoy inter-meal family life and see the television screen at the same time. The formal living room was reserved for quiet activities, or more precisely, visitors. Outside the house the dramatic change came in the back garden. Swimming pools, formerly the preserve of the

rich, became more common. In the lower budget, they were "above ground". The ideal was the inground, i.e., a concrete pool and the bright blue rectangle (or kidney) soon surpassed the orange roof as the typical accent in an aerial view of suburban Victoria. The traditional trades, bricklaying, carpentry, etc., in the 1970s were supplemented by the pool sprayer, the air-conditioning unit installer, and the dish- and clothes-washer service man.

The following table shows households, living in all types of private dwellings with various water using appliances, in October 1980:

**HOUSEHOLDS (a) WITH VARIOUS
WATER USING APPLIANCES:
VICTORIA, OCTOBER 1980**

Type of appliance	Number of households
	'000
Washing machine —	
sole use	1,107.4
share	25.1
Dishwasher	179.9
Swimming pool —	
above ground	90.5
below ground	29.0

(a) Private dwelling households only. The total number of these was 1,247,000.

Carpeting became most popular. Houses were now more and more set on slabs while flats, by regulation, had concrete floors. In the 1930s this was invariably covered with timber but now carpet was applied directly to it. Carpet became one of the first rather than one of the last purchases by occupants.

The 1970s also produced the first significant luxurious houses since the 1930s. These houses, almost invariably designed by architects, were entirely different from their predecessors. They were smaller, but their main rooms were very large indeed. The saving in size came from several areas. Kitchens were simple and there were no servants' quarters. In the 1930s, a luxury home building budget would contain substantial items for brick work, masonry, and tiling. In the 1970s new major items of expenditure were airconditioning, inbuilt furniture, pool, and outbuildings. Some houses installed solar water heating systems and occasionally solar space heating plants, but these items were very expensive. Victoria's relatively cheap energy had encouraged consumption, but higher charges have educated people in more careful usage.

The table below shows households with energy using appliances and facilities in private dwellings:

**HOUSEHOLDS (a) WITH VARIOUS
MAJOR APPLIANCES AND
FACILITIES: VICTORIA, NOVEMBER
1980**

Appliance/facility	Number of households	Per cent
	'000	
Electric refrigerator	1,242.3	99.5
Dishwasher	190.5	15.3
Washing machine	1,123.6	90.0
Clothes drier	549.3	44.0
Hot water system	1,240.5	99.3
Central heating	152.1	12.2
Oil heater	184.5	14.8
Gas heater	633.4	50.7
Fixed electric heater	329.6	26.4
Air-conditioning	323.1	25.9
Swimming pool	114.0	9.1

(a) Private dwelling households only. The total number of these was 1,249,000.

Fashion produced a reaction against apricot bricks (themselves reacting against the older red bricks) and as taste had turned against the extravagances of the polychrome phase, the brown timber stains of the 1960s now spread to bricks and tiles. The prototypical suburb of the 1970s was a collection of low brown tile roofs over low brown boxes. The window frames were brown anodised aluminium. The service room floors were brown vinyl pressed to resemble old tessellated tiles. The front door's sidelights were glazed in brown patterned glass.

The public sought houses with some visual and emotional content and as a consequence the post-modern attitude began to influence all design and thus were born "cathedral roofs" and other "romantic" features. The styles which became acceptable were "Colonial", "Homestead", or "Spanish Mission" houses which became a normal feature of suburban streets. At the bottom of the market a nostalgic wave brought back pressed cement balusters to form the extensive balustrading of some new houses. Carved front doors became a status symbol in some areas, and slates, shutters, and small paned windows (on modern spiral balances) appeared. The small panes did not complicate maintenance in some cases because the framework was clipped on and could be detached for cleaning.

Arches, carefully contrived from cut bricks, reappeared after forty years absence, and were used in commercial as well as domestic buildings. Cast iron lace (usually reproduced in aluminium) re-appeared after eighty years. Towards the end of the decade the cast iron of the 1880s and the Spanish Mission style of the 1920s were somehow married. Brick fences had the Spanish openings but were filled partially with cast iron or aluminium lace.

During the 1960s and 1970s there was a growing appreciation of the Victorian houses of earlier generations, so much so that any 19th century house commanded a high price. The Victorian revival was partly due to nostalgia and partly to the historical consciousness largely created by the National Trust. These old buildings needed refitting and, in addition, most owners went to considerable expense to enlarge them. This was usually done by the addition at the back of a "family room" usually displaying a slate paved floor.

Towards the end of the 1970s three isolated practices began. First, the apartment blocks of the 1960s and 1970s were repainted, and sunblinds, names in brass, and garbage bin housings were added. Second, in the wider streets behind brown brick and balustraded houses, newer recreations were being catered for. In large gardens it was tennis; in smaller areas it was a trampoline installed above a shallow depression in the back lawn. Third, in the inner suburbs, many of the high Victorian houses which had been sand-blasted in the 1960s and 1970s, were in difficulties. Specialist engineers and architects were in constant demand, because the bluestone footings were failing. The intensive planting and conscientious watering of the native trees was having its effect on the structures, and after 100 years of service—30 years of popularity followed by 50 years of disuse, then rediscovery—they appeared to be overcome by the simple gum tree, the effects of whose transpirations are felt over a surprisingly wide area.

A major trend in housing construction since the mid-1970s has been the increasing renovation of existing houses. The most common improvements have been the addition of extra living and leisure space, an additional bathroom, and the updating of kitchen equipment.

The following tables give an indication of more recent trends in house sizes and alterations and additions to dwellings:

AVERAGE SIZE OF HOUSES
COMPLETED (a):
VICTORIA, 1971 TO 1982

Year ended 30 June—	Average size of houses completed
1971	137
1975	143
1980	153
1981	156
1982	162

(a) Average size of floor area measured in square metres.

ALTERATIONS AND ADDITIONS TO NEW DWELLINGS (a):
VICTORIA, 1972 TO 1982

Year ended 30 June—	Houses (b)		Other dwellings		Total dwellings	
	number (c)	\$'000	number (c)	\$'000	number (c)	\$'000
1972	237	n.a.	14	n.a.	251	n.a.
1973	332	5,283	1	10	333	5,293
1974	557	8,888	11	278	568	9,166
1975	1,187	18,560	22	515	1,209	19,075
1976	2,268	36,977	28	731	2,296	37,708
1977	3,780	63,734	52	1,610	3,832	65,344
1978	5,014	85,948	66	1,099	5,080	87,047
1979	5,578	90,660	63	1,303	5,641	91,963
1980	5,240	93,952	78	1,436	5,318	95,388
1981	5,830	115,534	90	3,954	5,920	119,488
1982	7,120	153,093	140	6,752	7,260	159,845

(a) \$10,000 and over only.

(b) From 1981, private sector component is based on a sample of jobs. Prior to that, figures were based on a census of builders.

(c) 1981 and 1982 figures are rounded to the nearest ten units.

Several reasons have contributed to the popularity of renovation. On the technical side, Uniform Building and Council Regulations have been modified to make renovations possible at a time when a new consciousness of the environment had made the restoration of old buildings desirable. Also higher social and educational expectations have raised the requirements for larger houses as has the increase in leisure time. Swimming pools, billiard tables, saunas, and the hobbies of a technological age all require extra space.

There have also been some significant economic and social factors contributing to this trend. The cost of moving house has increased: legal, mortgage, stamp duty, interest, and removal charges have become increasingly steeper. This has been part of the inflationary pattern since the early 1970s and has been reflected in other areas such as the rising cost of building materials, industrial disputes, and the threat of unemployment. On the other hand, in an inflationary age, property has been seen as a sound investment and renovation a comparatively lesser absolute cost than rebuilding.

Proximity to transport assumed an increasing significance in deciding property values after the "energy crisis" which began in 1973. A convenient location, not too far from the city, with good access to schools and other community facilities, was highly prized and encouraged the renovation of houses in such fortunate areas.

BUILDING LEGISLATION AND MUNICIPAL RESPONSIBILITIES

The post-war reorganisation of the building industry presented the first real opportunity for translating the Uniform Building Regulations of Victoria into practical effect. Soon after these regulations were first published in 1945, they came under attack from the Master Builders Association, the Institute of Engineers, the Royal Victorian Institute of Architects, and the public in general. As a result, a Board of Inquiry was set up by the Victorian Government in 1953 to enquire into matters relating to the control of building operations by municipal authorities and this led to the establishment of the Building Regulations Committee.

By 1955 several amendments to the Uniform Building Regulations had been issued, with particular reference to numerous site requirements for town planning. By 1959 further amendments and modifications had been introduced to the extent that a revised issue of the Uniform Building Regulations had to be printed as a new volume. These included the interpretation of the 40.2 metres height limitation.

Until this time, building heights in the City of Melbourne were limited to 40.2 metres, being one and one-third times the width of the widest street, with most wide streets being 29.1 metres wide. Height restrictions were ended late in 1957 when a special dispensation as to height granted by the Building Regulations Committee in the design and construction of the ICI Building in East Melbourne. However, the actual regulation remained unchanged.

With increased high-rise construction within the inner areas of the City of Melbourne, many existing regulations required revisions to effect fire ratings and exit provisions, as well as allowing modern techniques in construction such as high tensile bolts and lightweight

construction generally. The regulations were re-issued on twelve occasions between July 1962 and February 1969.

Changing technologies and changing demands affected ceiling heights and toilet facilities for offices, shops, warehouses, and factories; revised site requirements for houses; and required new Standards Association codes. The amendments covering these factors resulted in five reprints between 1969 and 1973, and, with the acceptance of national metrication, another reprint in 1973.

Concurrently, several other State and local authorities had power to make building regulations. The Health Act of 1958 brought about many new separate health regulations, most of which dealt with various types of building occupancy and were frequently in conflict with the Uniform Building Regulations. Again, in 1958, some major changes in general building regulation philosophy took place with the introduction of the new Local Government Act, and, at the same time, a Housing Act was introduced, with power for other authorities to make building regulations.

The combination of authorities controlling regulations affecting buildings had become so complex that it was virtually impossible to design a complete building with the knowledge that it would comply with all of the regulations of all of the various authorities. Indeed, since 1945 there had been some fifty Acts and ninety sets of regulations. All of these together formed the total legislation and regulations controlling the design, construction, and maintenance of buildings.

In May 1965 the University of Melbourne staged a three day conference dealing with a review of building regulations. A submission to consolidate the multiplicity of Acts and Regulations into a single Building Act and a volume of technical regulations was made to the Premier in August 1965. A bill for a new Building Act however, was deferred, and thus the industry carried on, while the number of referee awards steadily increased year by year.

A new attempt was then made by the Institute of Architects in 1974, requesting the Premier to set up a special inquiry to investigate and to recommend better procedures in regard to obtaining building permits and planning approvals. The Premier appointed a special committee known as the Building and Development Approvals Committee (BADAC), which interviewed relevant departments and institutions. Its final report and recommendations dealing with the building controls were submitted to the Premier in April 1977.

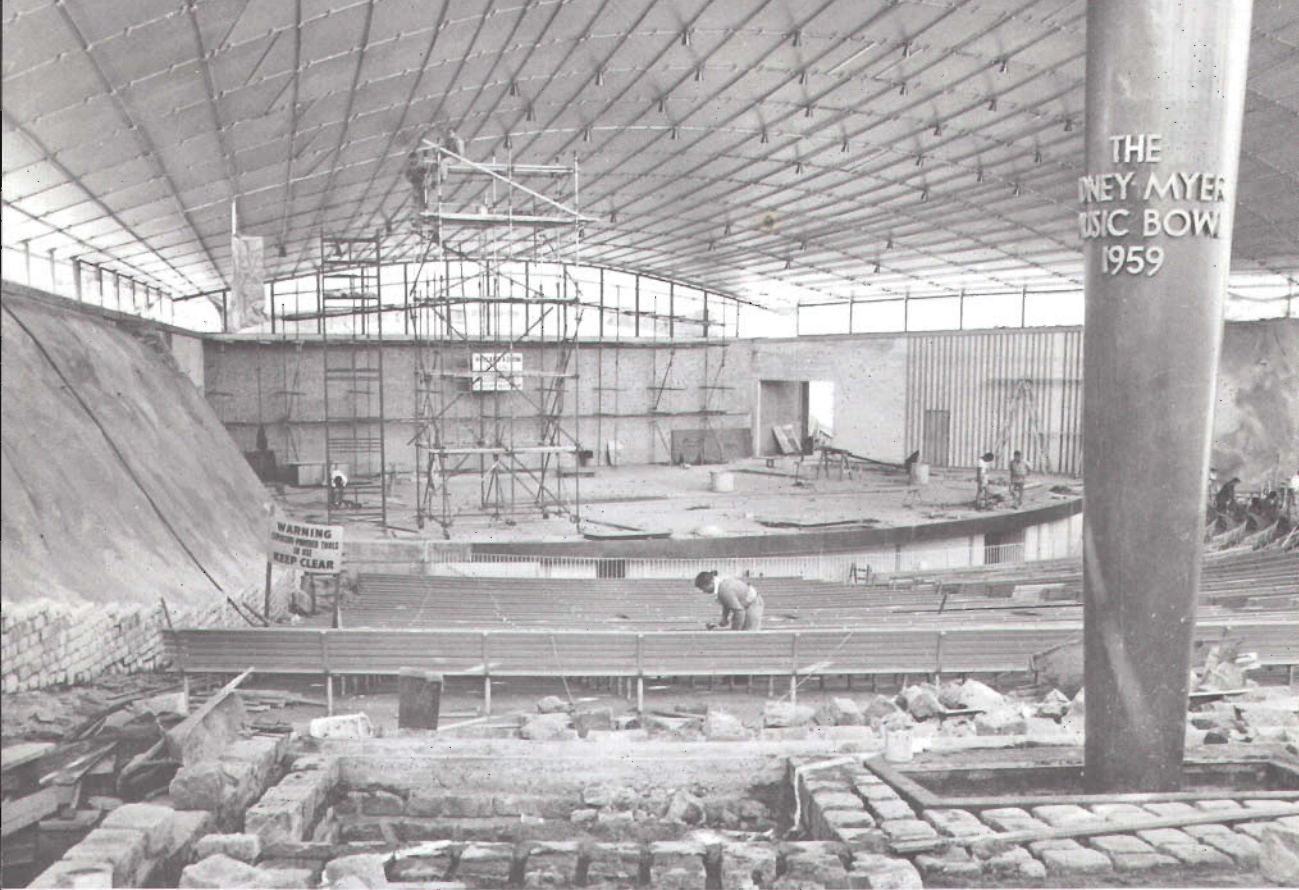
Victoria and the other States moved to a more uniform approach to Building Regulations in the mid-1970s by the adoption of the Australian Model Uniform Building Code (AMUBC). The acceptance by the Victorian Government of the principles in the BADAC Report of 1977 narrowed the gap towards the objective of a new and more up to date set of regulations comprising all types of occupancies and constructions of buildings.

On 12 January 1982, a new Act, the *Building Control Act 1981*, which provides regulations for the uniform control of building throughout Victoria, received Royal Assent and was operationally phased in with progressive proclamations of its various parts commencing on 2 August 1982. The Act, which was based on the recommendations of BADAC, consolidates, amends, and extends the law relating to building in Victoria.

Under the *Building Control Act 1981* the power to administer building regulations is vested in the councils of municipalities. The Uniform Building Regulations specify minimum requirements with respect to construction and it is the responsibility of the councils of the various municipalities to ensure that the regulations are complied with. If any doubt, difference, or dissatisfaction arises between any parties concerned or between any party and the Development Approvals Co-ordinator of a municipality or a relevant authority in terms of the building regulations, they may appeal to a Building Referees Board appointed pursuant to the provisions of the Act which will determine the matter. Building Referees Boards also have power to modify or vary any regulation or by-law provided that the modification or variation sought might reasonably be made without detriment to the public interest.

Under the provisions of the Uniform Building Regulations no person can commence any building work unless the Development Approvals Co-ordinator has granted building approval for the work and the appropriate building approval fee has been paid.

The Council of the municipality concerned is required to ensure that the building during

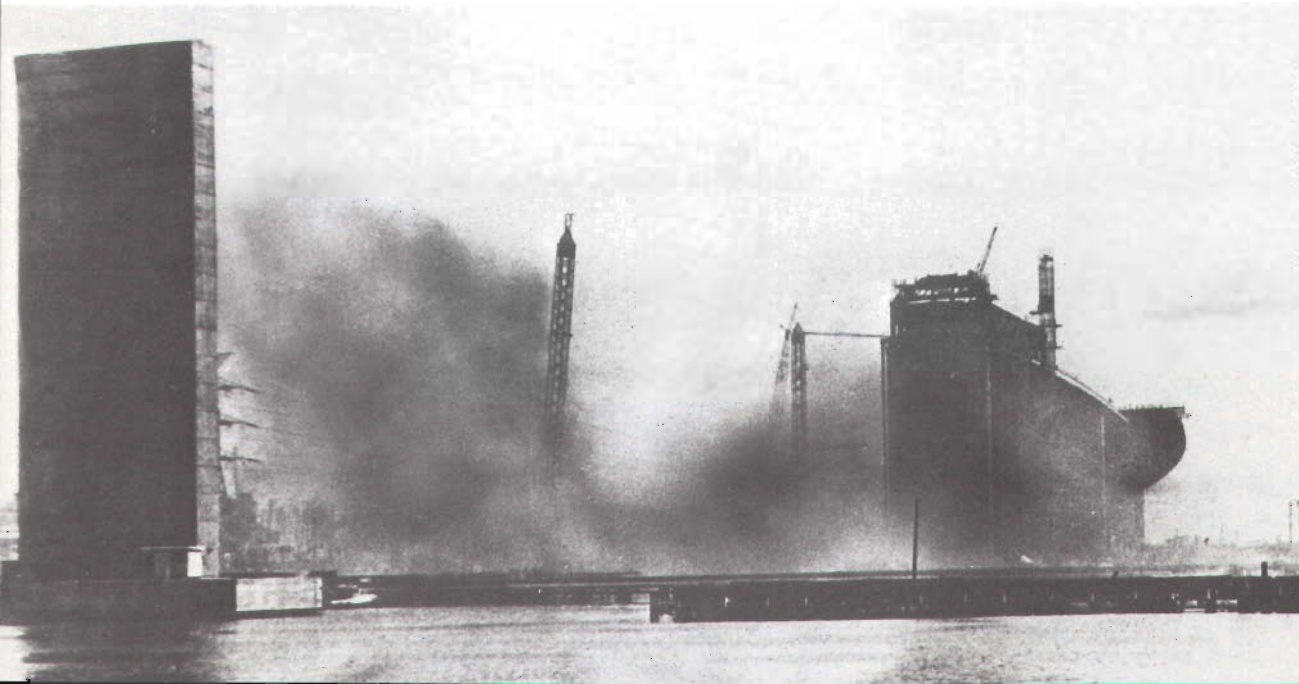


Construction of the Sidney Myer Music Bowl which was opened on 12 February 1959. Sidney Myer, founder of the retailing company, provided for the establishment of a Charity Trust in his will. The Music Bowl became the largest single donation from the Trust.

Historian, Myer Emporium Ltd

Collapse of one of the spans of the West Gate Bridge while under construction in October 1970. The collapse resulted in the deaths of 35 persons.

The Herald and Weekly Times Ltd





In 1937 more than 7,300 slum "shelters" were identified and later surveys showed more than 400 hectares of sub-standard inner city slums. Families of ten or more lived in one and two-roomed dwellings.

Ministry of Housing

(Below left) High-rise Housing Commission flats in Hoddle Street, Collingwood were constructed in 1968.

Herald and Weekly Times Ltd

(Below right) A pre-fabricated Housing Commission house under construction during the 1950s.

Ministry of Housing





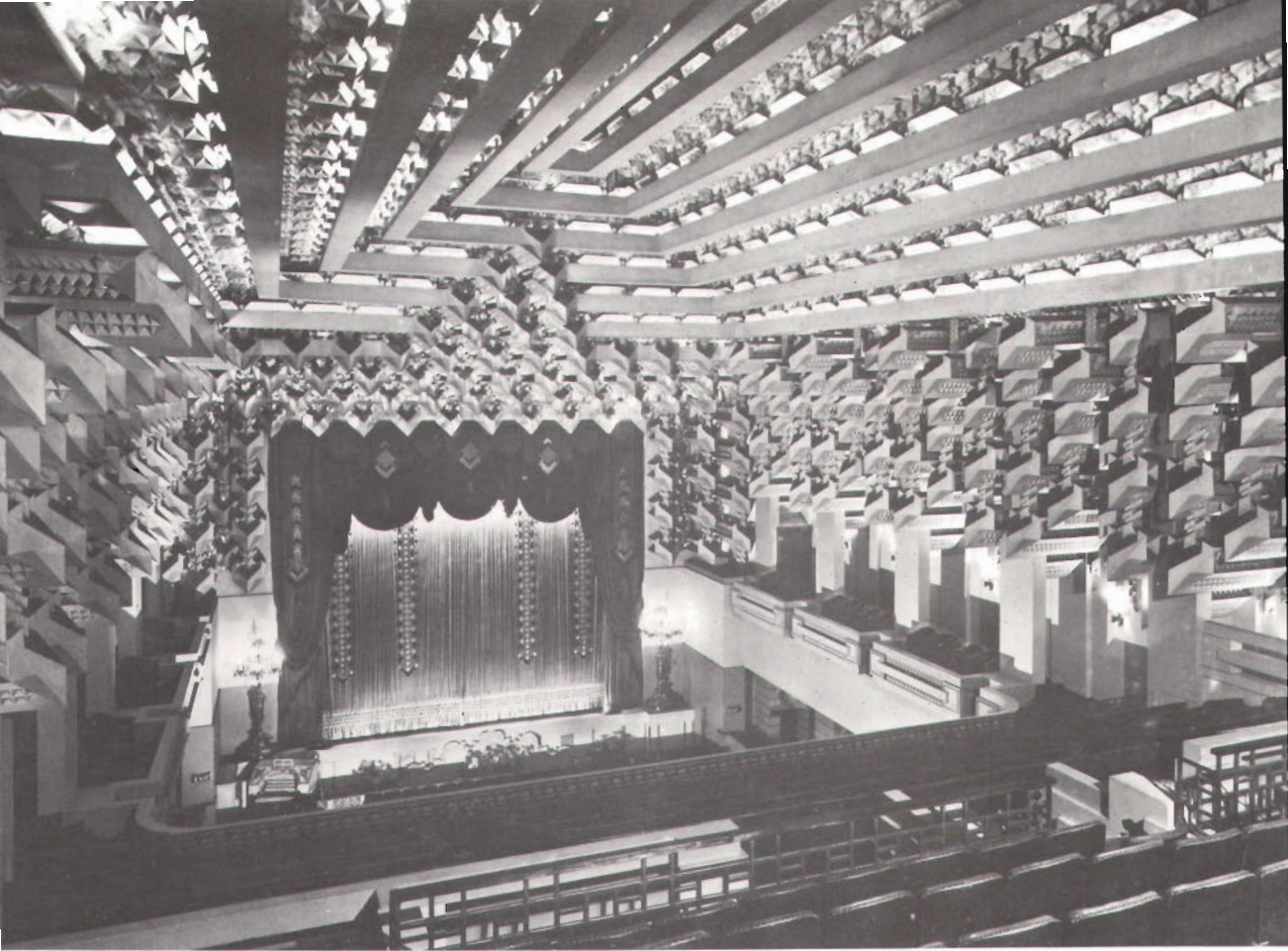
The view across Balwyn and Box Hill to the Dandenong Ranges from Beckett Park, Balwyn. The area in the foreground was first subdivided in the 1920s. Houses here are a mixture of 1920s and 1930s styles.

Camberwell-Waverley Regional Library

The Victorian Ministry of Housing undertakes the design and construction of low-rise high density family accommodation such as this development in Raglan Street, South Melbourne, which was completed in 1973.

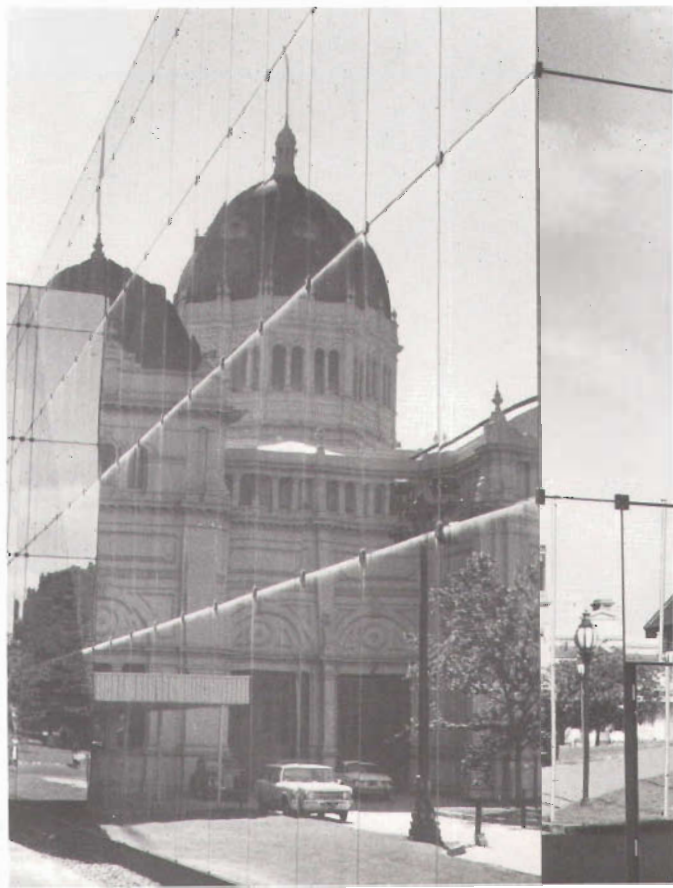
Ministry of Housing





The interior of the Capitol Theatre, Melbourne, built in the mid-1920s. It was designed by Walter Burley Griffin.

National Trust of Australia (Victoria)



One hundred years of architectural styles: the mirror-clad exterior of Centennial Hall, opened in 1980, reflects the original Exhibition Building completed one hundred years earlier.

Margaret A. Buck

its course of construction, demolition, or removal complies with the Act, regulations, and the plans and specifications originally approved.

PLANNING

The history of planning since 1934 has been deeply affected by a continuing conflict between land owners and statutory planning measures, as well as by gradually increasing support in Parliament for the concept of planning as a function of public administration.

The pioneer of twentieth century planning in Victoria was Dr James Barrett, a medical practitioner, who convened a meeting of citizens in Melbourne in 1914. This led to the formation of the body now known as the Town and Country Planning Association of Victoria. Barrett, as president, considered that extensive tramway and railway extensions, which had been activated at that time by land speculation, were the main obstacles to effective planning. He urged public acquisition of tracts of land to facilitate town planning.

At the time the Melbourne City Council took up Barrett's call for action. Then the Victorian Parliament itself responded, with some caution. In 1922 Parliament passed an Act to create the Melbourne Metropolitan Planning Commission. The Commission completed its work and submitted its report in 1929. Stressing the need for legislation the Report included a draft of a Bill for the whole State.

Late in 1930 a State Planning Bill was introduced and debated in Parliament. Enacted, it would have allowed consideration of the Commission's report and approval of a plan for Melbourne. It provided for betterment and for the control of subdivision of land throughout the State to be exercised by a Town Planning Board. Members expressed fears that such a provision might weaken the powers of local government. The debate was adjourned, not to be resumed.

This first period of planning in Victoria was not entirely without physical achievement. In 1921 Yallourn was established. That it was founded with comparative ease, according to Dr Barrett's prescription, seemed to go unnoticed. Due to the vision of Sir John Monash, the same prescription was to facilitate the town's removal, for the winning of coal, half a century later.

Parliament did not consider the orderly settlement in urban and rural Victoria again until the closing stages of the Second World War. Barrett, supported by local government, had kept up his representations, but the Government was probably also inspired by a nation wide interest in post-war reconstruction. In 1944 the Town and Country Planning Bill was approved and set up the Town and Country Planning Board.

The new legislation, together with an amendment approved five years later, was to set the stage for planning in Victoria for the next twenty years. Through the actions of the Town and Country Planning Board and the Melbourne and Metropolitan Board of Works, land-use controls made their first impact in key areas. Planning legislation in this period did not include the measure for State control of land sub-division proposed in 1930. Although the Town and Country Planning Association continued to condemn land speculation, it was rampant throughout the period.

The Town and Country Planning Association ambitiously proposed a Town, Country and Resources Planning Act. However, there was no clear concept at the time of the functions of resources management, land-use planning, and development promotion, and the Government ignored the Association's proposal in setting up the Central Planning Authority to implement the proposals of the State Regional Boundaries Committee. Within two years of the inception of official planning, the State had two State planning authorities—one to study regional resources under the Premier, the other to administer land-planning under the Minister for Works. In 1949, legislation empowered the Melbourne and Metropolitan Board of Works to prepare a planning scheme for a defined Melbourne metropolitan area of some 1,800 square kilometres.

The scheme was exhibited in 1954 and was intended to provide for a future population of 2.5 million. It introduced a system of urban zones, reservations for public purposes, and a peripheral rural zone intended to provide for further urban expansion as required. Policy proposals related to the Central Business District, suburban centres, inner area redevelopment, industry, recreation, and transport. Interim control began in 1955 and continued until the amended scheme was approved in 1968.

Nevertheless, the outlook for planning in Victoria in the 1950s was promising, for the State at long last had a comprehensive planning system. By 1954 planning action could be initiated anywhere in the State; Melbourne had a plan and an assurance that it would be implemented; the training of planners had been undertaken by the University of Melbourne; and a professional society had brought practitioners together. The Town and Country Planning Association continued to flourish.

In the 1960s soon after planning had become ministerially linked with Local Government instead of Public Works, planning administration was to experience a significant reform. In introducing a Bill to amend the Town and Country Planning Act, the Minister announced in 1968 that the new legislation was to provide for strategic planning at the State level and for regional and local planning. To implement this system there would be Statements of Planning Policy bearing the imprimatur of the Victorian Government, a State Planning Council for co-ordination and consultation between government authorities concerned with planning, and regional planning authorities for key areas throughout the State.

With its new functions the Town and Country Planning Board gave its attention to the Dandenong Ranges and other countryside areas in the shadow of Melbourne's continuing expansion. Thus it became government policy to protect the environments of the Mornington Peninsula, the Dandenongs, Mount Macedon, and the Yarra Valley. Soon the whole of the principal urban area of the State embracing Melbourne, Geelong, and Western Port was under regional planning.

Following the State Government's call for a revision of planning policies, the Melbourne and Metropolitan Board of Works in 1967 recommended an urban corridor/green wedge form for future growth within an expanded metropolitan planning area and limited redirection of growth to the north and west of Melbourne. In 1971, the Board submitted policies and exhibited two amending schemes giving statutory recognition to the Government's adopted corridor/wedge policy, zoned additional urban land, and provided for staged outward development, permanent non-urban zones, and a series of metropolitan parks.

At the beginning of the 1970s, Victoria's expansion was covered by planning schemes for almost the entire eastern and central areas of the State. The decade proved to be the most eventful period in the State's history of planning; however, many unexpected events prevented it from achieving all its objectives.

One major unexpected event was a stirring in the community conscience over the condition of the physical environment. Responding to widespread reaction, Parliament approved the formation of such bodies as the Environment Protection Authority and the Land Conservation Council. These new circumstances made it essential that the inter-related functions of environment assessment, resource management, land-use planning (itself just strengthened by far-reaching measures approved by Parliament), and development promotion should all be closely linked administratively. The legislation introduced under the conservation banner did not acknowledge any land-use planning relationship. Indeed, in some respects it was almost identical with previous planning legislation. Two additional consultative councils, similar in composition to the State Planning Council, were established.

Another unexpected event after 1972 was the Commonwealth Government's promise of financial assistance for urban and regional activities. As a consequence impetus was given to the concept of growth centres including Albury-Wodonga and, closer to Melbourne, Geelong, Melton, and Sunbury. Also, a Commonwealth financed Urban Land Council charged with the responsibility of developing residential land in competition with the private sector was established and considerable effort was made to improve conditions in the capital cities themselves, and to protect the national estate.

The projects for growth centres and the national estate both highlighted, to a degree previously unknown, the historic conflict between land-use planning and the land owner. Both Albury-Wodonga and Geelong were classic areas in which to pursue the principle espoused 50 years earlier by Barrett and practised on a small scale at Yallourn.

A notable feature of the late 1970s was the attempt by the Victorian Housing Commission, under the instruction of the Victorian Government, to embark on a land acquisition programme, which eventually attracted charges of extravagance and even impropriety in administration. In 1977 the Government appointed a Board of Inquiry to report on certain

land purchases by the Housing Commission. Its findings were critical and this discouraged further attempts at public land purchases.

By the time the Commonwealth Government decreased its involvement in urban and regional planning and development after 1975, a Victorian Ministry of Planning had been created. Although conceived as a means of lifting the status of planning, the portfolio nevertheless held a relatively junior place in the Ministry, jointly with the Ministry of Local Government. The Ministry for Conservation, established in 1972, and the Department of State Development, which looked after Victoria's interests in Albury-Wodonga and Geelong, set up their own planning offices.

As though to match the external administrative overlapping of functions, State planning administration had developed into a tripartite system consisting of the Town and Country Planning Board, the Ministry of Planning, and the Town Planning Appeals Tribunal. The latter had been given powers to make land-use determinations. In 1975 the Government replaced the State Planning Council with the State Co-ordination Council, directly responsible to the Premier.

In an effort to rationalise the administrative overlap, a single Department of Planning was established in 1981 through the amalgamation of the Town and Country Planning Board and the Ministry of Planning. The Town Planning Appeals Tribunal was merged with other similar tribunals, including the Environment Protection Appeals Tribunal and the Drainage Board, into a single Planning Appeals Board.

By 1979, in the Melbourne metropolitan area, changed economic, demographic, and social circumstances suggested the desirability of moving to a less dispersed, more contained metropolitan Melbourne. In a report to Government in 1980, the Board recommended an "incremental growth" strategy for Melbourne aimed at balanced development, maintaining the Central Business District as a prime focus, some increased density and diversity of housing, growth of centres with transport and locational advantages, co-ordinated provision of services, and community facilities and other measures. A major amendment to the Metropolitan Scheme to implement the strategy was initiated. Concurrently, legislation was passed which aimed to ensure that henceforth the Board would concentrate on strategic planning with local planning being managed at the municipal level.

During 1981 the Department worked closely with the Melbourne City Council and the Melbourne and Metropolitan Board of Works to prepare the first detailed local planning controls for the Central Business District. It also approved a planning scheme amendment providing specific controls over Melbourne's inner boulevards, including St Kilda Road and Victoria Parade, and protecting areas surrounding Melbourne's inner park networks from inappropriate redevelopment.

PLANNING AND THE CITY OF MELBOURNE

The 1954 Metropolitan Planning Scheme proposed by the Melbourne and Metropolitan Board of Works (MMBW) zoned, by means of a set of coloured maps, the metropolitan area broadly according to the existing land-use.

The City of Melbourne, as the focal point of the metropolitan area, and the State, was analysed in the Scheme, and a Central Business Area defined as the area bounded by Flinders, Spencer, Franklin, Victoria, and Lansdowne Streets, although it was also recognised that some central area activities extended into North and South Melbourne. This was the main area within which retailing, entertainment, cultural, business, and government activities were contained, although decentralisation of certain activities of the central business area was also recommended as part of the Scheme.

The Scheme concluded that existing site development regulations provided by the Uniform Building Regulations were deemed sufficient for the time being. These controls provided that, subject to the angle of light and other specified matters, any property owner in the central area of Melbourne could develop a site abutting on any of the main streets to a maximum height of 40.2 metres.

Thus the 1954 Planning Scheme did not drastically alter the control systems of development or redevelopment of city properties, nor did it set out detailed goals, policies, or objectives for the future of the city. Planning at this stage was purely physical land-use planning expressed through statutory documents. However, the MMBW considered that detailed

planning for the City of Melbourne was more appropriately the province of the Melbourne City Council.

In 1961, the Council resolved to prepare a Planning Scheme for the area bounded by the Yarra River, Spencer Street, Dudley Street, Peel Street, Victoria Street, Spring Street and the prolongation of the western building line of Spring Street until it meets the Yarra River. A planning scheme was submitted to the Council in 1964.

The principle of applying "plot ratios" (referred to in the 1954 Scheme as "bulk zoning") was then introduced. This new development control, unlike the Uniform Building Regulations, took into account distances that buildings were placed from the boundaries and their configuration at street level. Through the design and placement of a building it was possible to increase given plot ratios and so the height limit was no longer relevant.

Pedestrian thoroughfares were created, various areas of open space were designated, and particularly in the area between Flinders Street and the Yarra River, it was provided that no buildings be erected within a certain distance of Swanston Street to preserve the opportunity of creating an open area at the entrance to the city from the south. The Scheme also encouraged residential use on the upper floors of commercial buildings, in addition to existing flats and apartments.

The 1950s were a period of expansion following the war years. The availability of motor cars greatly increased mobility and encouraged growth beyond and between the existing railway network. Melbourne itself saw taller structures appearing because of the easing in height limit restrictions. A new practice of building taller structures on less of the site area gave more light to office dwellers and more open space to pedestrians.

In the 1960s high rise development continued in the city and spread to the St Kilda Road area. As the urban sprawl continued, serviced by modern urban shopping centres, freeways were built to cope with increased traffic volumes generated by the peripheral growth. The importance of the city as a retail centre declined markedly.

The 1970s saw an increasing awareness of the environment which led to public disenchantment with high rise buildings and the windswept spaces they created at ground level. At the same time road systems became clogged with traffic and access to the city increasingly difficult. Also, a major cause of the decline in building during the 1970s was the industrial disputes which caused buildings scheduled for 18 months completion to take three years and more, with costs more than doubling. This trend in the late 1970s eventually resulted in a shortage of city office space and a dearth of investors. As the economic prosperity of the previous decade came to an end large scale development was thus considerably reduced. Certain groups of people, such as academics and professionals, began to move back to the inner areas and rejuvenate old housing stock. Increases in the cost of labour and building materials saw recycling of commercial as well as private buildings, and the construction of high rise buildings declined markedly as a result of a world wide trend to nostalgia and a renewed appreciation of historical building.

In the period between the 1950s and early 1970s the City of Melbourne felt the effects of increasing decentralisation of central area activities, declining use of public transport as a result of the increased use of the motor car, and a declining residential population. In 1971, the Council resolved to appoint private consultants to prepare a strategy plan.

The Melbourne Strategy Plan of 1973 was concerned with the whole of the area of the City of Melbourne, comprising the Central Business District and parts of Kensington, Parkville, North Carlton, Princes Hill, Carlton, North Melbourne, West Melbourne, East Melbourne, Jolimont, and South Yarra. It sought to guide the activities within the City of Melbourne towards new goals by implementing Action Plans in specific areas. This new approach provided greater flexibility in making decisions and took into account not only physical but social and economic factors. The final plan was based on continuing high density employment within a short walking distance of present and future suburban railway stations in the Central Business District of Melbourne.

Greater reliance on public transport and restriction on the use of cars for commuting was recommended, together with the maintenance and enhancement of shopping, entertainment, cultural and historic areas in the Central Business District. The Plan recommended the provision of an area adjacent to the Central Business District where a mix of uses (including residential) could exist. It also recommended that the Council encourage the development of housing programmes that cater for a full range of income, age group and

family types as well as the development of compact neighbourhood shopping and community centres.

The Strategy Plan was adopted by the Melbourne City Council with the support of the State Government and the general public, but it lacked the legislative amendments to some of the authority previously vested in the MMBW, the Town and Country Planning Board, and some inner suburban councils. The Council's building codes were not enforced nor was agreement obtained by negotiation over a period of five years with the other controlling bodies. In 1980, the Victorian Government decided to impose its own controls to enable the Strategy Plan to be implemented.

HOUSING COMMISSION

During 1952-53, the capital cost of the Housing Commission's work was \$9.5m, and its responsibilities included organising and supervising the importation of pre-fabricated houses from England, Austria, Holland, and France, and providing on-site inspections of fabrication in the countries of origin. At the time, the Commission's construction activities were divided into three sections of somewhat different character, namely, the construction of houses and flats of traditional construction, i.e., brick, brick veneer, or timber; the "Transfab" houses of timber which were pre-fabricated and transported in sections to their final location; and the pre-cast concrete houses produced at the Commission's factory at Holmesglen.

Up to thirty timber "Transfab" houses per week were produced at five depots around Melbourne and, by 1954, the Holmesglen factory was producing 1,150 pre-cast concrete dwellings per year consisting of two or three bedroom houses and two bedroom flats.

The Commission's programme of construction and distribution throughout the State was approximately 50 per cent in areas of Melbourne. The country work covered many centres and small estates, and houses were often required in very small numbers, sometimes even in single units.

At one time, construction was distributed over 22 estates in Melbourne and Geelong, and 44 estates in country areas. Included in the main estates being developed in 1954 were the Olympic Village, the Heidelberg and Maidstone Estates, and the Broadmeadows project. The creation of centres such as Heidelberg and Broadmeadows was an initial step in an attempt to control the spread of Melbourne.

The Olympic Village consisted of 700 dwellings to serve some thousands of athletes temporarily, and ultimately to serve as a permanent section of the Heidelberg Estate. The area selected had few roads and was unserviced, and the Village consisted of groupings of one, two, and three bedroom houses, two and three storey flats, and a variety of row houses.

The Heidelberg Estate was typical of a number of housing estates developed by the Commission in the Melbourne metropolitan area. Planning had commenced in 1944 on an eight year project for the completion of over 4,000 dwellings in an area by-passed by commercial development, but suitable as a residential area servicing the northern business area of Melbourne. The plan provided for the total requirements of a community, including landscaping, open spaces, schools, post office, banks, churches, and a major shopping centre.

The largest project undertaken by the Commission commenced in 1951 with the development of 15.5 square kilometres of open country at Broadmeadows. This project was to provide housing and all associated facilities for a total environment of 45,000 persons.

In 1956, a Committee of Inquiry was appointed to make recommendations on the future role of the Housing Commission. Its recommendations were not adopted and the Commission, with its panel of architects, was disbanded. A Royal Commission on housing recommended a comprehensive slum clearance and redevelopment plan, to include the demolition of slum areas at the rate of between 41 and 81 hectares per year. A newly reconstituted Housing Commission initiated a slum reclamation programme with some success in some areas, and constructed high rise flats in the 1960s, to replace the slums. High rise buildings were erected in South Melbourne, Richmond, Carlton, Fitzroy, and North Melbourne. These buildings altered the skyline near the city and were built in

concrete with manufactured components. Also, after the ratification of the Commonwealth-State Housing Agreement in 1956, subsequently extended, the Commission encouraged its occupiers to purchase their homes.

However, when some slum reclamation areas were declared in South Melbourne, Fitzroy, and Carlton, the occupants of the buildings described as slums expressed strong critical views against the policy of being rehoused in high rise flats. In addition, the owner occupants of houses in these areas formed action groups to make outspoken objection to their houses being declared slums. These resident action groups were finally successful in having the policy of demolition and rehousing in high rise accommodation deferred, and, finally abandoned.

The *Urban Renewal Act 1970* has provided for renewal procedures designed to ensure that urban areas could be rehabilitated through a system of co-ordinated research and consultation, which joins the interest and skills of the persons of the area, the councils, and the relevant State authorities.

The Commission thus in recent years had laid greater stress on quality and variety in housing such as lone persons' and elderly persons' units and, to this end had included in its building programmes different forms of housing, house and land "packages", and contracts for houses to be built to contractors' individual designs on Commission land. Greater emphasis had also been directed towards the provision, in collaboration with the local municipalities, and other government departments, of community facilities including schools and pre-schools. After 1973 the Commission purchased tracts of private land for housing development, but this led to irregularities eventually investigated by a Board of Inquiry in 1977 and 1978. Its findings were critical of the administration.

The Commission took cognisance of the desire to encourage home ownership until the late 1970s. Of 88,695 dwellings completed to 30 June 1979, the Commission had sold 48,386. However, this policy came to be criticised by some social welfare agencies such as the Brotherhood of St Laurence on the grounds that the sale of houses would automatically decrease the stock of housing available for rental. The Commission ceased to sell its houses in 1981.

Over the years, special projects have been developed for the housing of the aged. In addition to the normal types of accommodation provided for elderly persons, the Commission in 1976 introduced the "Granny Flat" designed to be erected in the householder's backyard for occupancy by pensioner parents.

Social effects of Housing Commission policies

The slums in the inner Melbourne metropolitan areas caused considerable concern in the 1930s and the establishment of the Housing Commission was mainly prompted by wishes for their removal. The Second World War delayed the attainment of this objective, but when they were finally removed and replaced by high rise flats in the 1960s, many social questions came to be asked about the effectiveness of this policy. For all the very serious physical shortcomings which made the removal of the slums inevitable, the families who lived in them did seem to share in a web of personal relationships which was never made possible by high rise flats. Also, the complete destruction of "streetscapes" which had been landmarks for many years caused concern and this in fact was the main factor which led to the creation of the Urban Renewal Advisory Committee in 1971 as part of the Housing Commission. By the end of that decade, the emergence of many social problems in the flats as well as in some isolated suburbs gave considerable concern to social workers and town planners.

REGIONAL AUTHORITIES

The Town and Country Planning Board established in 1944 was responsible for urban and regional planning throughout the State before the Department of Planning took over in 1979. Legislation to enable the establishment of regional planning authorities was passed in 1968. The initial authorities established under this Act were for the Geelong and Westernport regions, with the MMBW already performing the functions of a regional planning authority for Melbourne.

Part of the Town and Country Planning Board's work was to ensure that growth and

development were properly planned and managed so that the needs for housing, work, transport and recreation were met and natural resources preserved.

A practical example of local support and participation occurred in north-western Victoria, where the Loddon Campaspe Regional Planning Authority was established in 1973. The Albury-Wodonga Agreement Act of 1973, passed with the co-operation of the New South Wales and Victorian Governments, sought to establish a new growth area based on sound planning concepts. The next regional authority to be established was for Geelong and the surrounding districts. For many years prior to the passing of this Act, the municipal councils within the Greater Geelong area had co-operated to plan the region under statutes and ordinances provided by the Town and Country Planning Act; the new regional authority was designed to help the accelerated growth of the area. The Westernport Planning Authority, incorporating portions of the Shires of Flinders, Hastings, Bass, Cranbourne, and Phillip Island was established to assist in the development of a new port for the State, and to emphasise conservation throughout the region. Central and East Gippsland also established their own Regional Planning Authorities.

A different form of regional development occurred under the Soldier Settlement Act of 1945, which, between 1952 and 1974, established new farms in the west of the State (Hamilton), in the north-east (Cudgewa and Tallangatta), and the north-west (Murray River Irrigation System at Robinvale). Known as the Heytesbury Development Project, the most intensive development occurred in the south-west near Cobden and Timboon, where 40,671 hectares of virgin Crown land was taken over to establish 385 dairy farms for selected young settlers. As a result, Victoria obtained in the twenty year period 655 farms from this and two smaller projects in the Goulburn-Campaspe River area.

Under the direction of the Town and Country Planning Board, a number of regional planning offices were established throughout Victoria, including Traralgon, Warrnambool, and Bendigo to bring planning close to the people. The Board has also issued Planning Policy statements on Coastal Environments, the Gippsland Lakes, the Macedon Ranges, the Dandenongs, and the Upper Yarra River.

In addition to the work of the Rural Planning Authorities, the Town and Country Planning Board established a programme of regional studies.

PRESERVATION

Many years before the Historic Buildings Act of 1974 there was a growing awareness of the fragility of Victoria's heritage in buildings and the need to conserve it. Lady Casey, with the assistance of several colleagues, produced a book *Early Melbourne Architecture* which was first published in 1953. It was a collection of quality photographs of, and notes on, early Melbourne buildings with the preface by the late Sir Owen Dixon in which he said, "For notwithstanding the growth of general interest in our history, there is not any noticeable solicitude for the preservation of old buildings of architectural or historical significance".

The impact of the book drew attention to the indiscriminate and alarming destruction of old Melbourne buildings accelerated in the post-war boom years. It was reprinted in 1954, the same year that the great domed mansion "Werndew" in Irving Road, Toorak, was demolished by developer interests despite concerted efforts to save it.

Lady Casey's book and the loss of "Werndew" were among the key factors in increasing public concern for historic buildings, which led to the formation of the National Trust in 1955, an achievement largely due to Sir Daryl Lindsay.

The National Trust of Australia (Victoria) set about the task of establishing a list of classified and recorded buildings throughout the State as one of its first commitments. Information about buildings was sought and the response from the community was spontaneous. The Trust, thus encouraged, was soon to extend its field of interest to the classification of groups of buildings, sites of industrial history, landscapes and townscapes of special distinction, and objects of interest. The fast expanding list included public buildings, cathedrals and churches, homesteads and houses, railway viaducts of stone, iron and timber trestles, lighthouses, a blast furnace, steam flour mills, a sailing ship, a Murray River paddle steamer, two Chinese joss houses, a cemetery, a milestone, and a cast iron drinking fountain.

In 1959 the National Trust acquired "Como" at South Yarra, a period residence in superb gardens overlooking the river. It was owned by the Armytage family and made over to the Trust under terms which amounted to a substantial gift. Headquarters of the Trust were set up at Como and remained there until moved to Tasma Terrace in Melbourne in 1979.

Membership of the National Trust increased steadily over the period. A number of preservation projects were undertaken and these included "Como", La Trobe's Cottage, Castlemaine Market, Henry Handel Richardson's home "Lakeview" at Chiltern, the "Nareeb" gates at the main entrance to the Royal Botanic Gardens, Melbourne, the Chinese Joss House at Emu Point, Bendigo, the sailing ship "Polly Woodside", the steam flour mill at Portarlington, and "Rippon Lea", Elsternwick, with its 5.4 hectares of fine gardens, waterfalls, lakes, and palmhouse, acquired in February 1974.

The granting of tax deductibility for donations made to National Trust sponsored appeals was of great importance and ensured the success of fund-raising for Trust projects. Of these, church restoration works have been prominent and include St John's Toorak, and the Lutheran Church, East Melbourne.

The Trust, as a private organisation with no statutory powers, could not enforce the preservation of its classified buildings if they were threatened with demolition or defacement. However, it obtained voluntary professional expertise and presented its case in the media, the press, and in its own journal "Trust Newsletter", a monthly bulletin of Trust activities. The threatened demolition in 1973-74 of the former CBA Banking Chamber in Collins Street, Melbourne, with its unique dome and lantern was probably the greatest challenge of strength to confront the National Trust since its formation. A campaign was organised to save the building, with the Trust taking to the streets and petitioning the public. The Victorian Government, strongly influenced by community support for this action, set up a Committee of Inquiry which found in favour of the case for preservation. This result enhanced the stature of the National Trust as guardian of the national heritage and its membership and influence increased.

For some time the Trust had been asking the Government to introduce preservation legislation for the protection of historic buildings. The CBA Banking Chamber issue weighed heavily in bringing about the *Historic Buildings Preservation Act 1974*. The Historic Buildings Preservation Council set up by this Act started work towards the end of 1974. There are ten members of the Council representing those interests concerned in the matters covered by the Act.

The Historic Buildings Preservation Council makes its recommendations to the Minister for Planning and forms part of that Ministry. As required by the Act, and soon after its commencement, an initial Register of Historic Buildings was gazetted. The National Trust's classification lists were used as the basis in compiling this Register which contained at first some 370 buildings in the various municipalities throughout Victoria. Government owned buildings were not included in the Register.

The functions of the Council have been to recommend to the Minister the buildings of architectural or historical importance which it considers should be added to the Register, and those buildings already designated which it considers should be removed. It must further recommend any alteration which it considers should be made to any item in the Register either upon its own initiative or upon a request from the Minister, and report as required.

The owner of a designated building is required to obtain a permit from the Council to alter the building in any way, or to demolish it. The Act provides for financial assistance to secure the preservation of designated buildings. However, the effectiveness of this measure is entirely dependent upon the adequacy or otherwise of funds made available by the Government from year to year for this purpose. The Council may also recommend the remission of rates and taxes after consultation with the rating authority or the Minister.

Since 1975 a strong trend has developed towards the conservation of buildings of architectural and historical importance throughout Victoria. Imaginative solutions in the adaptation of old buildings to new uses while preserving their essential character have shown a variety of interest and invention and have put pulse and sparkle into hitherto dreary areas—a redundant fine old church might become a theatre or library, a derelict factory a community centre, or a grand terrace the headquarters of a national organisation.

In Melbourne it is noticeable that some of the banks are moving their head offices to new buildings elsewhere in the city yet retaining their historic Collins Street buildings for their Melbourne offices. Such trends fulfil the aspirations of the National Trust and are encouraged and supported by the Historic Buildings Preservation Council.

PRIVATE SECTOR CONSTRUCTION

The fifty year period was notable for the construction of many private buildings, hotels, shopping centres, and sporting facilities.

During the 1930s, private sector construction was mainly confined to a few city buildings such as the Manchester Unity building, and private dwellings. After the war it took some years for new city buildings to appear and the Equitable building next to the Independent Church in Collins Street is usually regarded as the first major "post-war" building (1955). It was followed by the ICI building (1957), then considered a notable high rise structure. In 1962 it was followed by the CRA building at 95 Collins Street (replacing the old Melbourne Mansions) and then by many others. The Nauru House building (1979) and the Collins Place Towers (1981) have been the tallest city buildings constructed. Together the new high rise elevations completely altered Melbourne's skyline, from whatever direction the city is approached.

Another notable date in private sector constructions was 1961 when Melbourne's first regional shopping centre was opened at Chadstone. It was based on United States models and for the first time planned car parking as well as shopping diversification came under one project. It was later more or less copied in the southern, eastern, northern, and western suburbs of the Melbourne metropolitan area.

With Australian Rules football and other sports retaining their popularity in the post-war decades, the Victorian Football League built a new complex at Waverley—VFL Park. A new race track was also established at Sandown Park.

In the city itself apart from the Collins Place Towers (one tower of which has an international standard hotel), several large hotels appeared in the eastern part of the city. The earliest of these—the Southern Cross—was erected in the 1960s on the site of the old Eastern Market, a Melbourne landmark for many decades.

PUBLIC SECTOR CONSTRUCTION

During the 1930s there was very little public sector construction in Victoria because stringent State budgets did not allow for it. The major item of construction during this period was the Shrine of Remembrance, opened in 1934. Other projects completed for the Melbourne Centenary Celebrations were the Grange Road Bridge, the National Herbarium, and the MacRobertson Girls High School—the first school building in Victoria designed along functional rather than decorative concepts. In fact, the great volume of public sector construction after 1945 was not only a response to the needs of the post-war world, including the needs created by immigration, but also represented a significant amount of catching up of public works that were not undertaken in the 1930s. This applied especially to roads, schools, and hospitals.

One of the first new public buildings after the war was the Myer Music Bowl in the Domain which provided for various types of entertainment and performances. It was apparent at the end of the war that there was a demand for accommodating large audiences. The theatres, Wilson Hall at the University of Melbourne (rebuilt after the original gothic-style building was destroyed by fire in 1952), and the Town Hall had been the only places available for many decades and the latter was used regularly for symphony and choral concerts. Otherwise there was only the Stadium, renamed Festival Hall in the 1960s, which, however, was situated at West Melbourne. The Myer Music Bowl was situated among the fine trees in the Domain and was ready soon after the Olympic Games which had also stimulated the construction of an Olympic swimming pool in Batman Avenue, as well as the cycle track next to it—all situated either in the Domain or near the Domain and the Yarra River and accessible to the city.

The generally vigorous climate of economic activity from the 1950s on gave rise to extensive construction and improvements in the ports of Melbourne and Geelong and, to some extent, in Portland, where a breakwater was built to make the harbour accessible to

large ships. The various container terminals that were needed for this new form of sea transport and the roll-on roll-off ships meant that the port of Melbourne was extended by building on tracts of unused land; these extensions during the 1950s and 1960s were matched by the use of the old Dudley Flats between the Yarra and Maribyrnong Rivers for the erection of transport companies' Melbourne terminals. The growth of the Port of Melbourne during these decades coincided with the expansion of sea trade.

Transport in fact, was basic to many public works programmes in the 1950s and 1960s, as well as to the refinery complexes at Corio (1954), Altona (1955), and Western Port (1963). They were all built in areas not previously developed and formed the kernel of subsequent industrial development, especially after the discovery of gas and oil in Bass Strait in the 1960s. As the local motor car industry grew dramatically in these two decades and most people found themselves able to afford at least one car, the need for better roads and highways became greater than ever and the costs to meet them were partly met by Commonwealth Government grants to the Country Roads Board. Many of Melbourne's arterial roads were rebuilt and this was the beginning of by-pass roads on main highways. The South Eastern and Tullamarine freeways were built in the 1960s and the Eastern in the following decade. The construction of the Tullamarine freeway was a condition for the building of the Tullamarine airport, opened in 1970, a Commonwealth Government project which greatly helped Melbourne by enabling international flights to come here regularly. Although these two decades saw the growing supremacy of the motor car as a favoured form of transport the extension of rail services had to match the growing population and with this came the construction of new cuttings, bridges, level crossings and overpasses. There were also considerable upgrading of railway tracks and duplication of lines in areas which saw substantial suburban growth. Unlike the previous five decades, in the 1970s there was the first extension to a tram line—along Burwood Highway. This was of high significance as the retention of Melbourne trams was keenly debated in the 1960s but they were finally retained.

The Lower Yarra Crossing, later to be named the West Gate Bridge, was opened in 1978 after experiencing a tragic collapse during construction in 1970 with the loss of 34 lives. It provided the first direct land link between Melbourne and the south western metropolitan centres and the holiday areas south and west of Geelong. It also did away with the picturesque Williamstown ferry. However, the single largest public utility built since the Second World War has been the Underground Rail Loop, discussed in the 1950s and 1960s, begun in 1971, and opened for traffic in 1981. A major objective was its ability to smooth the flow of traffic and disperse suburban train travellers to various parts of the Central Business District instead of concentrating them around Flinders Street station.

The post-war decades, certainly until the 1970s, were notable for the high proportion of young people in the population and this demographic trend gave impetus to the widespread building of schools, universities, and colleges of advanced education. It also brought about other forms of public construction as it was confidently believed in the 1960s that Melbourne's population would rise to 5 million by the end of the century. The Borrie report on Australian population trends, published in 1975, removed this assumption. Public spending on capital works for education nevertheless had become one of the main items of State expenditure, first for primary schools, then secondary and later, post-secondary. Three new universities were opened between 1961 and 1980—a unique record in Victoria's history—and were major engineering and construction projects. The most extensive school building programme in the history of Victoria occurred in the 1950s and 1960s as a result of rising enrolments from the 1950s to the early 1970s.

The growth of population in the 1950s and 1960s also provided the necessity to build new hospitals and in some cases substantially extend old ones, a necessity also related to the establishment of a second medical school at Monash University. The most notable construction was that of the Royal Children's Hospital, opened by Her Majesty The Queen in 1963, and the large extension to the Preston and Northcote Community Hospital, and the Alfred and Austin Hospitals. New regional hospitals (for example, Dandenong, Maroondah, Caulfield, Geelong, Ballarat, and Wangaratta) were other new structures. There was also an increase in the workloads of the courts and a new high rise County Court was built opposite the old Supreme Court building.

In the arts, the most notable buildings were those of the Arts Centre complex; the

National Gallery was opened in 1968, the Concert Hall was opened in 1982, and the Theatre building was expected to be opened in 1984. Work on the Complex had proceeded from as long ago as 1961 and the latter presented some difficult problems of foundation structures, as well as of rising costs and industrial disputes. The complex is distinctive in its architectural features and gives a new atmosphere to the southern entrance to Melbourne.

The Commonwealth and State Governments built new offices in Melbourne and to some extent in the larger cities in the country such as Geelong and Ballarat. In Melbourne, the Commonwealth developed the site at the corner of Spring and La Trobe Streets, by erecting the first two of a planned four wing complex. The completion of the underground rail loop made these more accessible from the Parliament Underground Station. The major State Offices were built north and east of the old Treasury Building and were one of the happier post-war planning achievements, as they enabled the vista of the Treasury looking up from Collins Street to be maintained intact. Other large buildings for the State Government were erected in Bourke Street and Collins Street. Two places of special interest were the World Trade Centre near Spencer Street Bridge, and the new Centennial Hall of the Royal Exhibition Building extension; both projects bore witness to the importance of overseas trade in developing Victoria's economy.

The main energy, water, and sewerage developments of the period are described in chapters 12 and 13, respectively. Because engineering works involve a long lead time, these projects represented long range planning, again on the optimistic demographic assumptions prior to 1975, and involved a vast expenditure over the period. Besides being required by a growing population, they were also seen as contributing to a more productive agriculture, improved rural living conditions, and of course, further calls for industrial energy which were at first met by electricity and town gas, then by natural gas and oil, and latterly with the threat of oil scarcity, by even more electricity and the proposals to beneficiate brown coal for liquids and gas. The La Trobe Valley witnessed extensive construction developments: the Lurgi gas plant (opened in 1956 and closed in the early 1970s), the progressive dismantling of the Yallourn township in the 1970s with the relocation of its residents elsewhere in the valley, and the expansion of power generation at Churchill (in the 1960s) and Loy Yang in the 1970s and 1980s. During the early 1970s when natural gas replaced town gas, all domestic appliances in the metropolitan area were converted to its use and later the same happened in many country areas. The conversion also involved large scale pipe laying throughout Victoria. In the 1980s, the clamour for energy was highlighted by the completion of a new generating station at Newport and the construction of a new power grid across Victoria to Portland to service the proposed aluminium smelter, as well as the first stages of a proposed coal to oil beneficiation plant.

The most protracted saga of negotiation and counter negotiation occurred over the site of the City Square. It was finally opened by Her Majesty The Queen in 1980. The hope that Melbourne would have a mall one day was finally fulfilled in 1983. Its construction, too, had not been without some vicissitudes.