

Building in Victoria

a historical review



INTRODUCTION

Building in Victoria has been subjected to many influences since the first permanent European settlement located at Portland where the Hentys settled in 1834. The availability of materials, labour, skills, social values, economic activity, climate, geography, government and fashion each played a part, varying in importance at different times. This article looks at Building in Victoria over the last one hundred and sixty years from the perspective of those influences as they have shaped what has happened and what is in existence now.

Please note that all monetary values have been converted to present day currency.

Settlement and early development (1834 - 1851)

Compared to other permanent European settlements in Australia, that of Victoria was privately inspired and initiated and Government activity followed later. In the very early days, buildings had to be erected from imported materials, or improvised using local ones and the labour and skills locally available. In 1836, one year after settlement, George Stewart, the Police Magistrate from Goulburn, reported that "the town Bearbrass (later Melbourne) is on the left hand of the Yarra Yarra . . . (and) consists of thirteen buildings, viz. 3 weatherboard, 2 slab and 8 turf huts and also 12 to 15 tents." Four years later Garryowen wrote of Melbourne "a *settlement* in groups pitched here and there, with houses, sheds and tents in clusters or scattered in ones and twos . . . there were several brick built houses, and a few weatherboard cottages . . . but the majority of the business and residential tenements were made up of colonial wattle-and-daub, roofed with sheets of bark or coarse shingles."



This early use of slabs was widespread in Victoria and lasted for some time as the population grew and dispersed well ahead of the ability to import manufactured materials or develop local ones and distribute them. Ironbark and stringybark were plentiful and these were sawn or split into slabs, erected vertically (horizontally in more "important" buildings) and the gaps filled with mud, plaster and timber strips. Sod was a less common use of local materials for the construction of buildings. Those built from it were often faced with bark as the material was damp and deteriorated easily in the weather. Roofing was of bark and rush, but because of fire risks these soon gave way to handmade shingles. Most early dwellings were small. The Census of 1857 recorded that over 60 per cent of all dwellings had only one or two rooms.

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Importing materials was expensive and there were early attempts to find alternatives. Governor Bourke had noted early that there was good brick-making earth readily available, stone (though not of good quality), plenty of timber close and limestone near Pt Nepean. However, there were problems. Brick making started early but the bricks were of poor quality. The timber was hard to work as it was heavy and had twisted grain. There was Mountain Ash in the Dandenongs, but access, milling and transport made it very expensive to exploit.

Despite the problems with using local materials, it was during these early years that bluestone, one of the enduring themes of Victorian Building, was first quarried. This stone was difficult to work and so its use was limited, mainly to foundations. Some little houses in Williamstown and early warehouses in Flinders Lane were, however, made from bluestone.

Not only were materials scarce; labour and building skills were also in short supply. The more substantial buildings erected were generally of simple design, easily executed by the semi-skilled labour available. St James Cathedral was begun in 1839 and built in local freestone. It has a straight forward plan, rectangular and of simple regency classic design. It was built on the corner of William and Collins Street, but moved in 1914 to its present site in King Street, opposite Flagstaff Gardens. Other churches built during this early period were frequently of simple gothic design, and the knowledge and skills required to erect them were fairly elementary.

One alternative to the lack of local manufactured goods and skilled labour to erect imported materials was the use of prefabricated buildings. A steady stream of immigrants, including early Government officials such as Captain Lonsdale and Lieutenant-Governor LaTrobe, brought prefabricated wooden houses with them. Latrobe's cottage is now located in the Domain near Government House.

Outside Melbourne the same conditions applied, even more so. Early buildings in Portland were constructed of imported or local rough materials. The Hentys brought bricks and sawn timber with them from Tasmania. Victoria's economy was mainly pastoral as the rich grazing land was rapidly taken over by settlers arriving through the infant ports such as Melbourne, Geelong and Portland, or overland from the earlier settlements in New South Wales. Homesteads were mostly made of local materials. Emu Bottom, at Sunbury, was built of local mudstone set in local mud mortar, adzed beams and posts, hardwood shingles and had floors of rammed earth and ox-blood.

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Later in this period, as the colony started to prosper from the rapid development of the pastoral industry and the importation of capital, more substantial houses of brick and stone were erected. Many of these were in the country, such as Banyule in Heidelberg and Smeaton House at Smeaton, while Toorak House, though on a large estate, was close enough to the city to later become the official residence of the Governor for a number of years.

There was little control exercised on building activity. Robert Hoddle, the first surveyor, came with Lieutenant-Governor Bourke and laid out Melbourne in 1837. The first lots were sold on 1 June that year and purchasers had to erect a house worth \$100 within a year. Government surveyors were also sent to lay out a number of country towns, notably the ports for pastoralists, such as Geelong, Portland and Port Albert. Surveys gave secure title, which encouraged the erection of more substantial buildings.

Gold (1851-61)

The discovery of gold and the subsequent economic and social upheavals had a profound effect on building in Victoria. Prior to gold, building developed steadily using simple materials with a colonial tradition of good proportions and the right way of doing things. The immediate impact of the gold discoveries was to halt building contracts under way as most workers went to the gold fields. Building of a substantial kind almost ceased for several years. Apart from the loss of labour for building, the colony also had to deal with a large population increase. Between March 1851 and April 1854 the population trebled from around 77,000 to 237,000. In housing these people, recourse was had to previous means, tents and primitive structures made from local materials, and pre-fabricated buildings.

The earlier gold rush in California had stimulated the development of industries overseas, especially in the United Kingdom, specialising in prefabricated iron and wooden buildings. In 1853 these were able to supply \$223,000 worth of iron and \$503,000 worth of timber prefabricated buildings to Victoria. Prices could be as low as \$50 for a two room house, landed, while a more generous five room house could be landed for \$310. However, imports, of iron houses especially, soon dropped with the doubling of the price of iron during the Crimean war, and the development of local manufacturers.

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After a minor recession in 1854, as output from the early finds declined, economic conditions improved with the discovery of more gold. Building once again became buoyant. Many of those who had sought gold now turned to more regular pursuits. Among them were now a significant number of the skilled tradesmen, especially bricklayers and masons, that the colony had lacked. The increase in population and wealth encouraged the erection during the 1850's of substantial buildings that are still standing and show the skills of these tradesmen. Designs were still based on a fairly solid tradition respecting the right use of materials and the correct proportions and detailing of windows, chimneys and fireplaces. The improved masonry in this period can still be seen in a variety of locations in Melbourne and provincial areas such as Ballarat.

"... The increase in population and wealth encouraged the erection during the 1850s of substantial buildings..."

One significant feature of this period was the beginning of simple row and terrace housing to accommodate the increasing population, especially in Melbourne. These were not limited to cheap housing for workers; wealthy graziers had town houses built in the terrace style. Royal Terrace in Nicholson Street is a fine example that has been through several stages of decay and refurbishment as its use changed. Many terraces were built as speculation, so costs were contained by party walls and standardised components, decorative features and finishes. The average terrace house was built of brick and bisected by a passage from front to back. In the front were dining and drawing rooms, followed by bedrooms and then the kitchen and scullery, with a bathroom or wash-house out the back under a lean-to.

There were some large houses built, such as "Bishopsgate" in East Melbourne and "the Hawthorns" in Hawthorn, but the majority of houses were small and of wood, including slabs and bark. The 1857 census on 29 March recorded 102,000 dwellings (including 45,000 tents and dwellings with canvas roofs), of which only 9,500 had more than four rooms. Three quarters of the 57,000 dwellings other than tents were of wood, slabs and bark (43,000).

It was during this period that many public buildings were commenced or built. Victoria had gained separation from NSW in 1851 and self rule in 1856. The Public Library and University of Melbourne were started in 1854, the Geelong Town Hall in 1855, the Treasury Building in 1856 and the Customs House in 1858. Most were designed by English trained architects. In provincial centres the early primitive structures were being replaced with more substantial ones. Ballarat is a good example and still has many notable buildings which were erected in this period. Government Buildings were designed by the official architect in Melbourne, and were most often of brick, stuccoed and painted, but there were also many examples in stone.

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There was still little control exercised on building activity. The rapid growth of many country cities and towns outstripped the capacity of the Government to lay them out. Services such as stores, banks, bakers, butchers and hotels were initially housed in tents and normally gathered together to form a main street. Government surveys came later and were no longer able to alter the initial layouts. A good example is Ballarat where part of the main street, Victoria Street, is narrow and curved and contrasts strongly with the remainder, the broad straight Sturt Street. In Melbourne there were many jerry built dwellings crammed together, while a "tent city" was sited on the swampy land of Emerald Hill, now South Melbourne, to accommodate the rapid population increase.

Consolidation (1861-1871)

After the initial growth of population and wealth caused by the discovery of alluvial gold, Victoria continued to prosper and grow in the succeeding three decades. While population growth never reached the extent of the gold decade (an increase of 463,000 from 1851 to 1861) it maintained a high rate. The censuses of 1871, 1881 and 1891 showed increases of 191,000, 131,000 and 278,000 respectively. The key elements in this were the development of quartz mining, the erection of tariff barriers and the expansion of agriculture after the Land Acts were passed to encourage selectors to acquire small holdings.

Many of the selectors erected primitive dwellings on their blocks such as those of 20 or 30 years before, of slabs, bark and mud and more commonly than in the earlier years, of stone, pise and adobe. Rather than a shortage of materials and labour as in earlier years, one of the main causes now was the lack of capital. Despite the increase in these types of primitive dwelling, overall temporary type dwellings declined substantially. In 1861 nearly 9,300 dwellings were of "slabs, bark mud etc" and 42,750 of "canvas, linen, calico etc." These two categories made up 39 per cent of all dwellings enumerated. By 1871 the number in the first category mentioned had grown to 16,500, while the latter had declined to 4,660. The two categories now totalled only 13 per cent of all dwellings enumerated. The "canvas, linen, calico etc" counted in 1861 were mainly on the goldfields and they frequently had timber frames. By 1871 these were often converted to cottages by replacing the cloth with timber.

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Among the thousands of immigrants that arrived during the 1850s were a number of British trained architects. Some of these contributed much to the stock of Victorian buildings that has lasted from the nineteenth century. As the colony's wealth developed from gold and wool, finance became more readily available to build larger structures such as government, religious and commercial buildings. These provided employment for the immigrant architects, many of whom were influenced by their training in the design of Gothic Revival churches. William Wardell designed St Patrick's cathedral, which was started in 1858 and ready for services in 1859. It was finally completed in 1939 after the three spires were added. Wardell also designed St John's in Toorak and many other churches such as those at Wangaratta, Geelong, Daylesford, Hamilton and Warrambool. This gothic influence showed up in many other buildings, such as the, now, ANZ bank at the corner of Queen and Collins Streets, which is basically gothic with fifteenth century windows and a Venetian flavour.



Another architect who had a lot of influence was John Reed. He won a competition to design the Public Library in 1853 and subsequently was responsible for a steady stream of important buildings. He designed the Geelong Town Hall in 1855 and later, in partnership with Frederick Barnes, his work included the Melbourne Town Hall (1867-1928), St Judes in Carlton (1866-71), the Trades Hall (1873), the Exhibition Building (1880), Ormond College at Melbourne University (1887) and the Scotch and Independent (now Uniting) churches opposite each other on the corners of Collins and Russell Streets.

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Reed toured Northern Italy in the 1860s where he was greatly impressed by the beauty of the brickwork in coloured patterns. This influence showed up in some of his later work such as Ripponlea (1868-87) where he made use of the increasing variety of bricks available, dark Hawthorns and pressed creams and reds from Northcote. Many buildings, especially churches and houses of the later part of the nineteenth century, show this influence. St Paul's Cathedral incorporates both the key influences of gothic revival and multi-coloured brickwork. It was designed by William Butler, a key figure in English church architecture. However, as he never came to Australia it was supervised by Charles Webb (who designed the gothic Melbourne Grammar School in bluestone, and other Melbourne landmarks such as Tasma Terrace and Mac's hotel in Franklin Street). St Paul's can be regarded as the culmination of gothic revival in Victoria and shows the influence of patterned brickwork in some of its facade. It was completed in 1871, minus its three spires which, like St Patrick's, were added in the 1930s. Gothic revival continued into the twentieth century, but slowly merged with other styles and eventually petered out before World War II.

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The Mechanics Institute movement also left its mark on the architecture and building scene of Victoria. The movement was founded in Great Britain in the 1820s and aimed to promote the idea of education for all, as learning, culture and knowledge were seen as the basis of developing the ideal society. It soon spread through the English-speaking world. One was founded in Melbourne in 1839, and the first country one at Benalla in 1852. But it was after the 1850s that the movement spread rapidly, there being 35 by 1860, 80 by 1870 and 240 by 1880. By the turn of the century most suburbs and towns had a Mechanics Institute, usually containing at least a meeting hall and stage. There are good examples of the many that survive in Prahran, Brunswick, Ballarat and Ararat.

The development of railways in Victoria, with the first being opened in 1855, provided another strong influence in Victoria's building history. Early railways were privately owned and developed, but gradually the Government took them over as they failed to make a profit and from 1878 the government built all new railways. Railway stations were mostly standard patterns and so did not need private architects. Most suburbs gained a grand hotel, near the main road, and railway station. Usually a two or three storey brick structure, examples can be seen in the Palace Hotel in Camberwell Road, the Doutta Galla in Newmarket and the Tower in Alphington.

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Control of building was still limited, but the Local Government Act (1874) regularised the variety of local administration, such as municipalities and roads boards, then in existence. Among other things, municipalities had responsibility for building and health standards, although little was done in regard to the former.

Affluence and Boom (1881-91)

Rising affluence and technological developments manifested themselves in a number of ways. The period between the 1881 and 1891 censuses showed an extremely strong growth in the population and building activity in Victoria. The population increased by 278,000 to 1,140,000 and the number of dwellings reached 242,000, an increase of 62,000 of which 48,000 (77 per cent) were recorded in Melbourne.

"... Speculation pushed land prices ever upwards..."

Houses were being built on time payment as there was a rapid increase in the number of building societies. These, first set up in the late 1840s, gave working men the opportunity to own property and had contributed to earlier building activity. The boom in housing and the opportunity to speculate in land saw building societies increase in number to such an extent that over half of the houses built in the 1880s were financed by them. Terrace houses reached a peak of popularity (few houses were built after the depression of the early 1890s) before the demand for a completely detached house in suburbia became the Australian norm at about the turn of the century.

Many new materials were also becoming available. By 1890 roofing tiles, pressed metal ceilings and asbestos cement sheeting were being manufactured. The growth of railways and tramways led to much land being subdivided along their routes. A feeling of optimism gripped the colony after a long period of steady development and increasing prosperity. Speculation pushed land prices ever upwards as credit was supplied by building societies and land banks on unrealistic valuations. Building boomed.

It was not only sheer numbers but also style that marked this optimistic and affluent period. Wealthy merchants and land speculators built many large houses and mansions that reflected a more florid approach. Up until the mid 1870s most of the large houses built were still simple and colonial. After Government House with its square tower was built in 1872, towers became a more common design feature. Brighton alone has many examples from this period. Arcaded verandahs took over from simple post and beam and leadlights filled the fanlights. The light, double-hung colonial window gave way to the taller window glazed with larger panes of glass. Hipped roofs were often hidden behind ornate parapets decorated with statues and urns. Inside, cornices were broad and heavily moulded, gas lamps hung from rosettes and architraves and skirtings were richly moulded. In fact so strong was this influence that many existing houses were remodelled in the new style, with the original, simple colonial structure still discernible behind the new facade. Often this was an ostentatious, Italianate one, erected using imported materials and labour.



The introduction of the hydraulic passenger lift in 1885 and the use of iron frames allowed a great increase in the height of office buildings in the city. The twelve storied Australia Building (1888-89) on the corner of Elizabeth Street and Flinders Lane remained the tallest building in Australia for many years. It has since been demolished.

Early on the new heights now possible posed problems for fire safety. Two examples of buildings from this era where the facades at least are still intact are the Oldfleet and Rialto (now the Meridien Hotel) in Collins Street. The latter was built in 1889-90 and incorporated significant advances in fire resistant design. One year later the first exposed ceiling hung sprinkler system in Melbourne was installed.

Despite the new technologies, traditionally trained architects were reluctant to exploit them fully. They concentrated on styles, and as a result of an emphasis on the elevational treatment of their buildings, Melbourne streetscapes showed a lot of variety. The commercial buildings were done in whatever style was fashionable, and external load bearing walls were brickwork, which allowed for an easy inclusion of stone facings.

The 1880s saw the development of a strong temperance movement, and one way this manifested itself was in the building of "temperance hotels" or "coffee palaces". The Royal East Melbourne Coffee Palace was built in 1886 in Hotham Street and the Windsor Hotel was once the Grand Coffee Palace.

Bust to Federation (1891 -1901)

"... the depression mostly brought an end to the building of large, servant run mansions ..."

Along with many other countries, Australia experienced a depression in the 1890's. It was especially severe in Victoria due to the collapse of the land and building boom of the 1880s and a steep fall in the price of wool. The collapse of the Premier Building Society in 1889 saw the beginning of the closure of many of the building societies that had enabled so many to purchase their own homes in the 1880s. As well, many banks and land companies also went bust as prices of land tumbled and dwellings could not be rented. Building, especially of dwellings, almost ceased. While the decade 1881-91 saw an increase of nearly 62,000 in the number of dwellings in Victoria, only 8,000 were built during the next decade. The depression had raised the price of gold, so much of the building that did occur, did so in the gold towns. Bendigo, for example, built its Italianate Law Courts and the Shamrock Hotel was made splendid with a new facade, extensions, marble floors, hot and cold water in the rooms and electric lighting.

Public works, which had been buoyant before the depression, almost ceased. Very few big houses were built, Stonington (1892) in Malvern being one exception, as the depression mostly brought an end to the building of large, servant run mansions. Many existing ones were converted to other uses and became boarding houses, flats and schools. Almost all the private schools in the inner Eastern suburbs were founded on large residences acquired from this period on.

As the economy started to recover, building recommenced. However the prominent position that building societies had in financing building activity was not restored. Although banks had also crashed in the depression, government assistance helped them recover. The few building societies that remained were on a small scale as they were unable to convince the public of their financial integrity.

In building fashion, the overseas style known as "Queen Anne" became common. This featured red brickwork and white painted woodwork. It was characterised by an irregularity of plan, broken gables and more steeply pitched roofs of terra cotta tiles with roof ridges terminating in terra cotta decorations. Bay windows were common and return verandahs featured turned posts and arched fretwork, frequently painted white. This new style went up all over, and many areas still boast whole streets of large, elaborate versions, such as "the Broadway" in Camberwell.

Federation (1901-1914)

"... This period saw the steady development of Melbourne and its expansion into new suburbs where new dwellings were mostly fully detached houses on their own block of land..."

This period saw the steady development of Melbourne and its expansion into new suburbs where new dwellings were mostly fully detached houses on their own block of land. Victorians, along with other Australians, very early developed a desire for their own detached dwelling. This probably developed from a variety of social and economic factors, such as the status of owning land, its easy availability in a new country, little need for defence, open patterns of settlement allowed by mild to hot climates, and the desire for views which stretched early settlements along sea shores and rivers. The better public transport system allowed for growth outwards and the more expansive use of land. The older, inner suburbs such as Melbourne, Richmond, South Melbourne, Essendon and Collingwood lost population, often due to the expansion of manufacturing and warehousing establishments out of the inner city into the closer residential areas.

There were some interesting developments during this period as individuals sought to make improvements and take advantage of new materials. Harold Desbrowe Annear lived in Alphington from 1902 to 1911 and developed building styles designed to suit the suburbs. These incorporated such features as windows sliding into wall cavities, the use of timber and roughcast concrete and decorative features such as stepped chimneys. At the same time the use of concrete technology was emerging. The first large building using reinforced concrete was started in 1910. John Monash had designed the Morell Bridge (1899) in reinforced concrete and in 1912 built a concrete house in Bay street, Brighton. Walter Burley Griffin, who had come to Australia after winning the competition for the design of the new Commonwealth Capital, wanted a simple, economic way for any man to build a house. He developed a modular concept using slender concrete blocks with built in pillars that he called Knitlock. It was a pioneering attempt to make use of the new structural material, but few houses were built of Knitlock and only a couple survive.

By now some residential areas of Melbourne had been in existence for 60 to 70 years. Many dwellings had been erected as cheaply and quickly as possible to meet the demands of the rapid population growth of the 1850s. A 1913 Parliamentary enquiry found that in all inner suburbs and parts of Brunswick, Hawthorn and Kew, there were many crowded dwellings that were damp and badly drained. The enquiry concluded that some minimum housing standards should be made compulsory, especially the basic dimensions of rooms, and the proper provision for water or pan sewerage and at least one waste water sink.

"... The First World War interrupted the slow but steady growth that had been occurring ..."

The First World War interrupted the slow but steady growth that had been occurring since the later 1890s. Imports of building materials dropped and alternatives were sought. Up until then, most timber had been imported as Victoria lacked adequate softwoods and the hardwoods had always been deemed unsuitable for most purposes. Plantations of introduced softwoods were planted and kiln drying and reconditioning techniques were developed so that hardwoods became acceptable for most purposes. Plaster and cement production increased greatly and gradually production of other items such as glass and hardware developed.

Outside the Metropolitan area a number of changes were occurring. Most of the gold towns, including substantial ones like Ballarat, Bendigo and Castlemaine, lost population despite the development of local industries to replace gold mining. Building was more likely to occur in agriculturally based towns such as Mildura, Horsham and Hamilton. These were given a boost by closer settlement activities. There was large scale development of irrigation and many large holdings were resumed and cut up into smaller blocks suitable for a family. Such closer settlement schemes led to an increase in rural dwellings. Most were modest timber framed weatherboard homes with narrow verandahs and iron roofs, pitched over the four main rooms and a lean-to style over the back.

**Post war and
Depression (1919-
1933)**

As is usual after a period of pent up demand caused by continuing population growth, but little building activity, there was a rapid expansion of building, especially house building, after the War. The outer fringe of suburbs pushed out rapidly to Box Hill, Heidelberg, Sandringham, Mordialloc, Coburg, Malvern and Caulfield. Home ownership was encouraged by assistance to returned soldiers and generous loans by the State Bank that were affordable by those on the basic wage. By putting conditions on the loans the State Bank ensured that houses were soundly constructed, although with a tendency to uniform styling that influenced other builders. Building regulations also had an influence on uniformity as they set minimum standards for the dimension of rooms, arrangement of facilities and construction methods. New styles emerged with the Californian Bungalow being the most popular but others, such as the Spanish Mission, English Tudor and Georgian, also having their vogue. For the less affluent, the weatherboard construction of the Edwardian days continued to be built.

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There was growing concern about health problems caused by inadequate housing and this led to some standardised health and building regulations being progressively adopted. However, each municipality decided what it required in terms of Building regulations. These had to be approved by the Minister for Public Works who was then responsible for Local Government, but there was no obligation to have any. In fact most Shires had no regulations and relied on the Shire Engineer to issue any permits required.

The Garden City movement, with its emphasis on planning an integrated environment, had developed in England pre-war. As these ideas were absorbed there was a growing agitation for more town planning in Victoria, but little was done outside some isolated examples. The eminent engineer, Sir John Monash, was appointed to run the SEC when it was established to produce electricity from the extensive brown coal deposits in the LaTrobe Valley. He was responsible for developing the town of Yallourn to house the SEC workers and it incorporated many of the concepts of the "garden city" movement. Yallourn was a well laid out community with most facilities. It presented an integrated appearance with small cottages with high pitched roofs and a suggestion of half timbering. In East St Kilda, just off Dandenong Road, the village of Ardoch was developed in the 1920s and 1930s. It was designed as an integrated area of large, well appointed flats in separate blocks within a garden environment and all set around a central grassed area.

This period saw the realisation that flats were a profitable form of investment. Although only a small proportion of total dwellings, a growing number of flats were built, ranging from substantial apartments in Georgian and Tudor style, as along St Kilda Road, to small "working man's" flats in inner areas such as St Kilda, South Yarra and Hawthorn. The most common blocks contained four flats in buildings of two stories, two up and two down.

In 1929 the Town Planning Board produced a report on planning proposals for Melbourne. In the city the height of buildings was limited to 132 feet (around 11 stories). Most buildings were of this height giving a uniform look to the streetscapes. Buildings were erected using structural steel frameworks, but often these were screened with stone for the more dignified buildings such as the Shell Building on the corner of Bourke and William Streets. Some other notable buildings were erected in this period, including the T&G building (1928), which was recently renovated, the Myer Lonsdale Street Store (built in 1925-26 and extended in 1929-30) and the Manchester Unity building, which, when opened in 1932, had Melbourne's first escalator and a cooled air circulation system.

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The growing popularity of movies saw most suburbs and towns acquire a picture theatre. This trend also was responsible for the development of some large, ornate (often baroque) "Picture Palaces". The Palais in St Kilda opened in 1926, the State (now the Forum/Rapallo Revival Centre) in 1928 and the Regent in 1929.



**Post depression
and War (1934-45)**

The depression almost halted house building and severely curtailed other building activity. After 1934, as the economy slowly recovered the outer suburbs continued to develop with houses again being built. The increase in motor vehicles contributed to these developments since those who could afford a vehicle were not tied to the public transport routes.

"... as the economy slowly recovered the outer suburbs continued to develop..."

Two developments occurred that were to grow into more substantial importance after the Second World War. In 1938 the Housing Commission of Victoria was set up for the abolition of slums and the provision of new housing of an acceptable minimum suburban standard. The other was the development of a "total housing package" which enabled a home buyer to simplify the process to one transaction. In Ormond 20 lots were developed on which were built modern homes. This was quickly followed by the larger Beauville Estate in Murrumbeena. The homes were brick, with tiled roofs and fibrous plaster, rather than lath and plaster ceilings. Each was equipped with stoves, gas, rather than wood, fuelled hot water systems, stainless steel, rather than wooden, topped sinks, with a bathroom and front porch.

The use of concrete became more acceptable visually as building recommenced and its possibilities were demonstrated in the clean, horizontal lines of the balconies on the major hospitals built in the 1930s. Some examples are The Royal Melbourne Hospital which was rebuilt on its present Parkville site, where the horse market used to be, and the Homeopathic in St Kilda Road which was renamed Prince Henry's Hospital and substantially extended.

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Some parts of the city were also being redeveloped. North of Collins Street, some of the thick walled masonry buildings of the 1850s were demolished and replaced by the taller, slender walled buildings made possible by the newer techniques of structural steel and concrete. The elaborate facade of one, the 1858 Bank of New South Wales, was saved and used on a new cream brick building at Melbourne University. Many banks and insurance offices renewed their premises in similar style. The English, Scottish and Australian Royal Bank (now the ANZ) on the corner of Collins and Elizabeth streets was built in 1938 and was the first airconditioned building in Melbourne.

There was also a lot of activity by the retail sector. The increased mobility and dispersal of the population contributed to the emerging dominance of retailing by the Central Business District (CBD) as the major suburban centres such as Smith Street, Collingwood, and Chapel Street, Prahran, declined. Myer raised its Bourke Street stores to five stories and unified their facade, while Foy & Gibson on the corner of Bourke and Swanston streets was completed in 1936.

Once again the advent of a World War saw building slow down enormously, but not stop completely. The Housing Commission built 2,000 homes before the war ended. Factories for producing war materials that could not be imported were given precedence in an economy more stringently regulated than ever before.

"... the advent of a World War saw building slow down... but not stop completely..."

Victoria, especially Melbourne, was a major contributor and centre for the administration and direction of the war effort, with several key organisations based there. These organisations were involved in directing, among other things, the main construction activities for the war effort. Chief among these were munitions factories, camps (military and internment), airfield buildings, military hospitals, war worker housing and warehouses. Most were done by on-site construction, especially by the Allied Works Council, but some were pre-fabricated.

Post war Recovery and growth (1945- 72)

The end of the war meant that Victoria (along with the rest of Australia) was confronted by the effort to house the returning defence forces' personnel and to switch from a war to a peace time economy. Adding to the housing problem that demobilisation posed was a backlog of housing (estimated at 80,000 dwellings) caused by the slow down in construction during the war. The re-adjustments required by the building industry to these demands took place against a background of political tensions, heightened by such issues as the nationalisation of the banks and a high level of industrial unrest as different groups fought for control of the Trade Unions. These tensions led to strikes which, along with a continuing shortage of materials such as bricks, glass, steel, soft woods and petrol, created problems in the erection of buildings on time and to scheduled costs.

In these conditions, the demand for commercial and other space was cautious. For many years there was little commercial building, a little more industrial construction and a rapidly growing volume of housing. The material and labour problems led to some restrictions in size - a maximum area was enforced and ceiling heights were lowered below 3 metres - and methods of construction. The latter were influenced by a number of innovations.

Under the Commonwealth-State Housing Agreement of 1945, methods of construction were examined and a strong swing from solid brick to brick-veneer was established and pre-fabricated wall panel systems were tested. The Housing Commission tried three processes, the development of the Fowler system of concrete house construction, importation of pre-fabricated houses, and the local manufacture of pre-fabricated timber houses.

"... Adding to the housing problem that demobilisation posed was a backlog of housing..."

The Fowler system used moulds for a whole wall, including doors, windows and service ducts into which concrete was poured on-site. When set, these were moved and erected on prepared foundations. After the Commission took control of the Holmesglen site in 1946, this system was improved and a factory approach was adopted. The finished panels were transported from the factory for speedy erection on the site. Pre-fabricated wooden houses were briefly imported, starting in 1950. The largest group were erected at Norlane to house the Geelong Ford Factory workers. There were also four local companies making pre-fabricated timber houses for the Commission. They were made on an assembly line in two pieces which were then joined together on-site.

"... changes in housing design and techniques became more common..."

As the material and labour shortages eased and the rate of house building picked up in the 1950s, other changes in housing design and techniques became more common. Windows began to increase in size from the normal double hung and casement types and soon nearly entire walls were glazed. Roofs, once invariably hipped or gabled, became skillioned or flat. The latter were made possible using new steel roofing materials originally imported from the USA as concrete formwork. Concrete slabs, which were laid directly on the ground, became acceptable flooring. House designs became more varied as wings were added to the traditional rectangular shapes. Another alteration was the roof line being followed by the ceiling, often with exposed beams, echoing the primitive methods of the 19th century bark roofed structures.

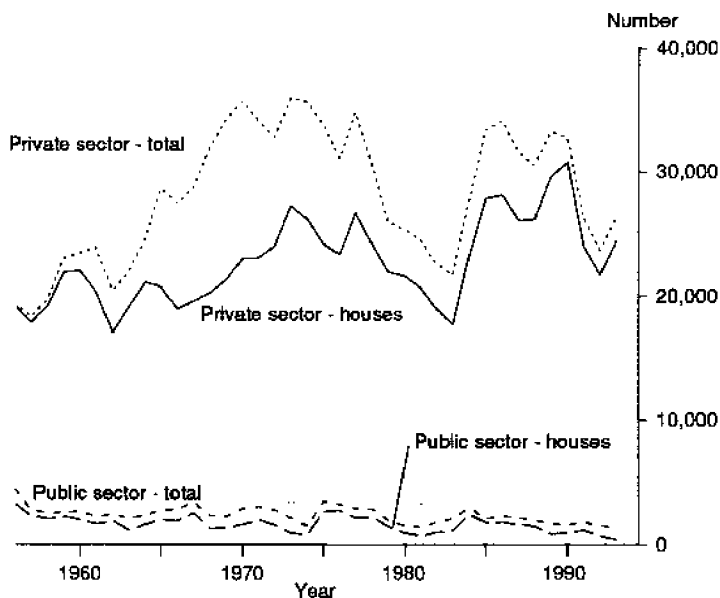
During the 1950s, pressure was maintained on the building industry to house the large number of migrants that flowed in from 1948 onwards. In nine of the 13 years from then until 1960, apparent net migration exceeded, or was close to, the natural increase in population. All the migrants had to be housed. Initially this occurred more by displacement, as a majority of migrants first settled in established suburbs and the new areas were settled by those they displaced.

Flats started to become more important, especially when changes were made to allow individual ownership, first by purchasing shares in a block of flats and then by creating a title for each flat. By 1960 around eight per cent of the dwelling units completed were flats, compared to less than two per cent ten years earlier. Over the next decade the rate went up even more dramatically and peaked at 38 per cent of all dwelling units completed for the year ended June 1969, although the absolute peak was next year when nearly 14,000 units were completed. Flats were rarely built outside the Metropolitan area and were concentrated in St Kilda, Elwood, South Yarra, Caulfield, Carlton, Northcote and Hawthorn, close to public transport.

"... pressure was maintained on the building industry to house the large number of migrants ..."

Flats built for private ownership or rental were normally in small blocks up to three stories high. Government-owned flats were mainly built by the Housing Commission and went through several phases. The Commission had been concentrating on building houses in newly developed areas, but in the later 1950s turned its attention to its other main purpose, slum clearance. A Royal Commission on housing had recommended slum clearance and redevelopment in inner areas at a rate of over 40 hectares a year. After clearing some designated slum areas, the Commission first redeveloped some with one and two storey flats built by traditional methods. It soon switched to three storey blocks built from pre-fabricated concrete panels. These walk-up flats were built in estates in Flemington, South Melbourne, Richmond, Carlton and Collingwood.

NUMBER OF NEW RESIDENTIAL BUILDINGS COMPLETED BY OWNERSHIP, VICTORIA



Outside the Metropolitan area, some towns were attempting to attract industries. They set about improving services such as the water supply and roads and this led to the development of new dwellings and buildings. This often meant the replacement of red bricks with cream, wire cut ones in new public buildings. Hospitals, churches, halls and private schools attracted tax deductible gifts if designated as war memorials, so extensions and rebuilding contributed to the disappearance of earlier styles of building. The new styles reflected the unadorned, functional designs common in the period and more specifications by bureaucracies led to a certain sameness, especially in public buildings. At the same time existing buildings which had become decrepit were demolished and others modernised with peg boarding, slanted glass, fluorescent lights, vinyl floors and neon signs. Many towns began to require the removal of propped balconies and verandahs. Banks often led the way in alterations, but after the later 1950s, motels, drive through service stations and self service grocers were the most modern buildings in towns. At the same time the uniformity of suburban housing slowly crept over towns to complement the changes taking place in business premises.

Affluence and Conservation (1973 - 1993)

The last two decades have been characterised by rising affluence, increasing environmental concern and more direct community involvement in decision making. Over this period, despite some disruptive economic events, the Australian economy has grown 76 per cent, while the population has only grown by 31 per cent. Rapid increases in manufacturing technology and productivity have seen the price of consumer goods fall markedly while at the same time many new items have been developed. In conjunction with this trend there has been a large increase in the contribution of service industries, such as tourism, to economic output. Accompanying these trends was an increasing concern about environmental factors as they influence the health and well being of the population, as research and the activities of various groups raised awareness of the connections. A strong conservation movement developed in response to this and as local communities campaigned on such issues they became aware of how to influence decision making.

"... the formation of the National Trust in 1956 with the charter to identify and protect that (Victorian) heritage..."

These trends had important affects on building. The involvement of local communities and prominent people led to an awareness that Victoria had a rich heritage in buildings that were being lost in the name of progress. The genesis of this was the formation of the National Trust in 1956 with the charter to identify and protect that heritage. During its first decade of existence the Trust classified over 1,400 building by its Survey and Identification Committee, owned millions of dollars of assets, such as Como, published "Historic Buildings of Victoria" and classified Maldon as a "notable" town. During the late 1960s the Trust fought against the redevelopment of the "Rialto precinct" in Collins Street which contained some very fine Victorian Gothic facades. It later led a strong movement to preserve the CBA banking chamber in Collins Street which was threatened by demolition in the early 1970s.

These activities and mounting public support led to the passing of the Historic Buildings Act in 1974, an attempt to preserve historically important buildings. It set up a Register of Historic Buildings, and their owners could not alter or demolish those on the list without the Historic Building Council's approval. In some areas, such as the Rialto precinct and No 1 Collins Street, compromises were at length reached and some of the historic facades have been kept, but little else. Other buildings have been recycled for a variety of uses, such as many of the bluestone warehouses in the west of the city which are now restaurants, bars and nightclubs.

The other main response to affluence, conservation and community activism, was the move to control the growth of Melbourne, which by 1974 held 71.5 per cent of Victoria's population. The 1971 Metropolitan Planning Scheme proposed that Melbourne be developed along corridors each side of the main railway lines and these would be separated by "green wedges" of open space, mainly the natural waterways. As well, sensitive areas on Melbourne's fringe such as the Dandenongs, Mount Macedon and the Yarra Valley would have their environment protected. At the same time the Commonwealth Government promised financial assistance for urban and regional activities. As a consequence, impetus was given to the development of growth centres such as Albury-Wodonga. The Commonwealth reduced its involvement in these after 1975 and later it was deemed necessary to make amendments to the Metropolitan Scheme in 1981 when the policy of "incremental growth" was introduced. This was to balance inner urban growth, by maintaining the CBD as the prime focus, achieving increased density and diversity of housing, with the growth of 14 regional centres which had good transport and locational facilities.

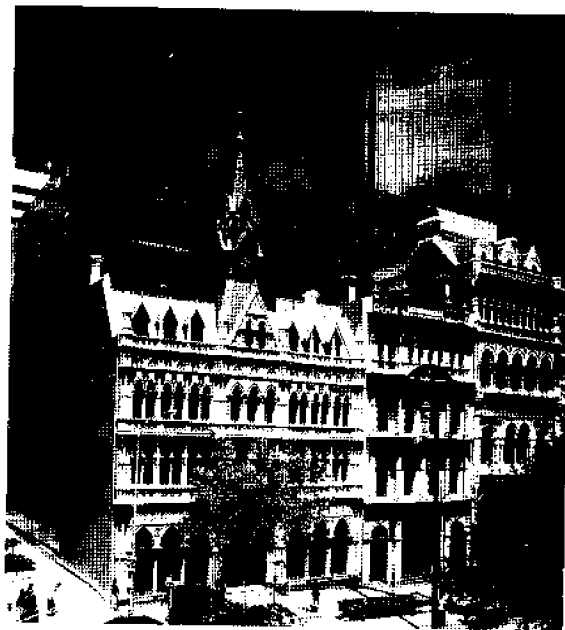
" . . . The most common house remained the brick veneer . . . "

Several trends were occurring in housing density that led to this re-emphasis. Flats, which had been so important in the late 1960s, steadily declined as a proportion of total dwellings completed each year. Local pressure groups had had a big impact on this, often by having candidates elected to local government councils. There were several responses to this. "Villa units", several one-store dwellings erected on the site once occupied by a house, became more popular. These were first mainly built in the suburbs developed after the First World War, but there was a market in some of the newer suburbs and they were later built there. In 1989 regulations were amended to permit "dual occupancy" whereby two dwellings could be built on a housing allotment. Since then some 15 per cent of new dwellings have been built under this provision. The latest development is the growing number of inner urban apartment developments. Most are being built in, or planned for, the CBD and its near fringe. They are basically recycling existing buildings whose previous use is no longer viable, or sites that were once used for other things, such as schools and factories. Some apartments are constructed by conversion of existing buildings, while in other cases the site is cleared and new dwellings erected, typically using pre-cast concrete panels.

The other approach was to build high rise flats of pre-fabricated concrete wall panels in blocks of 12 to 20 storeys. The first was in South Melbourne in 1962 and others followed in inner areas such as Flemington, Carlton and Collingwood. The technology used was recently developed and based on concrete panels pre-cast to very small tolerances at Holmesglen. The largest block the Commission built was completed in South Melbourne in 1969. It contained 299 units in a 30 storey tower built using a slip cast technique.

"... procedures to ensure that urban areas could be rehabilitated..."

Criticism of these high rise buildings mounted, however, as it became apparent that there were problems with this approach. Insufficient infrastructure and services, difficulties in supervising small children in the communal playgrounds and the destruction of streetscapes were all seen as drawbacks. As well, many inhabitants of declared sium areas formed local action groups to challenge such assessments and protest at being housed in high rise dwellings. Despite the advanced technology and cheapness derived from their mass production techniques, the Commission first deferred and then abandoned this approach. It replaced it with one of building low rise flats again, dispersing them among normal housing, following the Urban Renewal Act of 1970. This Act provided for procedures to ensure that urban areas could be rehabilitated through a system of co-ordinated research and consultation which joined the skills and interests of the inhabitants, Councils and relevant State Authorities.



A lifting of the height limit on buildings in the city led to renewed interest in office buildings. Apart from the "retail precinct", the area bounded by Bourke, Elizabeth, Flinders and Swanston streets, the height of buildings was allowed to rise if adequate public space and forecourt areas were provided at street level. One of the first notable buildings to take advantage of these changes was the ICI Building in East Melbourne (1957). It was soon followed in 1958 with three tall towers on the Western rise of the city.

These new buildings hid their structural skeletons behind curtain walls of glass and metal panels, which concentrated sunlight and necessitated expensive air conditioning to make them habitable. The 1960s saw more towers built, especially in the West of the city and down St Kilda Road, as the burgeoning insurance industry saw them as profitable investments. The major change from the earlier towers was the development of sunscreening techniques, such as tinted glass, screens and concrete ridging, in order to reduce air conditioning costs.

With the population spreading rapidly out from the city and an even more rapid increase in the number of motor vehicles, retailing adapted to meet the new needs and possibilities. As had already occurred in the USA, a number of large regional shopping centres were built in the 1960s. These typically had a department and discount store, a supermarket and a range of specialty shops, all surrounded by large parking areas. Suburbanites now had no reason to go to the distant city centre for their shopping needs. The pioneering centre was opened at Chadstone in 1961 and, with its success, the later 1960s saw such centres developed in all directions.

The rapid increase in the number of motor vehicles also encouraged the introduction of other ideas from the USA. Motels rapidly spread throughout Victoria from 1957 onwards as the increasing numbers of car travellers found them preferable to older style accommodation because of the convenient parking and range of other facilities. In the city, traffic congestion led to parking restrictions. As more and more people found it preferable to drive to the city for work and business, large multi-story car parks were developed to cater for them. Golden Square in Lonsdale Street was opened in 1954 and many more were built during the 1960s.

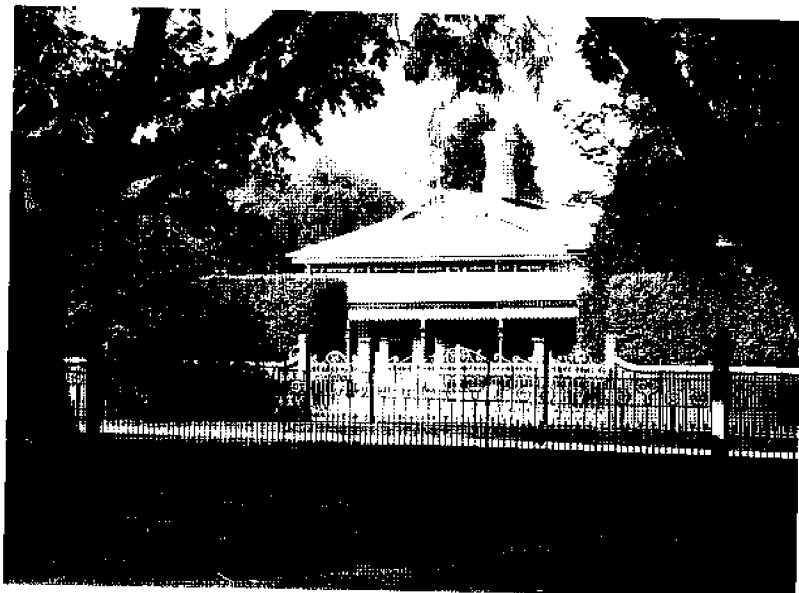
"... The increase in road transport, the availability of cheap, zoned land... and the growth of population there, saw many industries locate to the fringe of the city..."

The decentralisation of industry was a key concept during and after the war. The increase in road transport, the availability of large amounts of cheap, zoned land in the outer areas and the growth of population there, saw many industries locate at the fringe of the city. The main areas of development were along the railway lines, from Oakleigh to Dandenong in the South East, from Box Hill to beyond Ringwood in the East, Broadmeadows and Campbellfield in the North, and West along Ballarat Road to Deer Park. The earlier developments were often simply constructed and little more than large sheds. Later they were more substantial with attached office blocks and were set in landscaped surrounds.

Houses went through some changes, but despite advances in technology in many areas, including building techniques for large buildings, little changed in basic house construction technology. The most common house remained the brick veneer, wooden framed, tiled roofed dwelling of previous decades. Changes occurred inside, such as the addition of extra toilet facilities (normally off the master bedroom) and a family or "rumpus" room to cater for the increased emphasis on leisure activities. The majority were chosen from a menu of standard designs from building firms. The most common bricks and tiles became brown. The awareness of history produced colonial styles, while a noticeable impact, as migrants moved to the outer suburbs, was the appearance of colonnaded porches, pillared balconies and A-frame dwellings. These developments spread to towns as well. New suburbs in Ballarat look like new suburbs in Knox.

" . . . In the older, inner areas many...houses were purchased by people reacting against suburbia . . . "

The last two decades also saw a boom in alterations and additions to existing houses. In the older, inner areas many terrace, Victorian and Edwardian houses were purchased by people reacting against "suburbia" for a variety of reasons. Long travel times to work, the lack of sophisticated entertainment and architectural and neighbourhood character has led to the inner suburbs being progressively colonised by an articulate and affluent middle class. The houses they purchased were often in need of extensive refitting of electricity and plumbing and were extended and remodelled to accommodate changed living conditions. Similar pressures led to many families extending their existing houses to add extra living spaces and bedrooms to match the lifestyle offered by the new houses being built for the more affluent society.



An over-supply of office space and a general tightening of credit slowed city building for a time in the early 1970s. However, from that time some much taller buildings were being built and these have completely altered the city skyline. BHP House, at over 150 metres was the tallest building in Melbourne when completed in 1972. It was eclipsed by Nauru House in 1979 and Collins Place in 1981 which were both another 30 odd metres higher. These buildings made use of new pre-stressed concrete technologies that allowed them to be erected floor by floor without the need for external scaffolding.

"... The 1980's saw a new generation of even taller buildings..."

The 1980s saw a new generation of even taller buildings, with the South tower of the Rialto (1987) being the tallest. It still is. Other tall buildings completed since have included Bourke Place and Melbourne Central. The latter, which comprises several levels of specialty shops, also incorporates a new department store. This is in contrast to the trend since the 1950s of most of the inner city department stores closing down as the regional centres were completed. One feature of these new buildings was the incorporation of extensive car parking in the large basements which were necessary to provide stability. These mainly replaced the building of the dedicated off-street parking that had proliferated in the 1960s as the means of providing more parking space in the city.

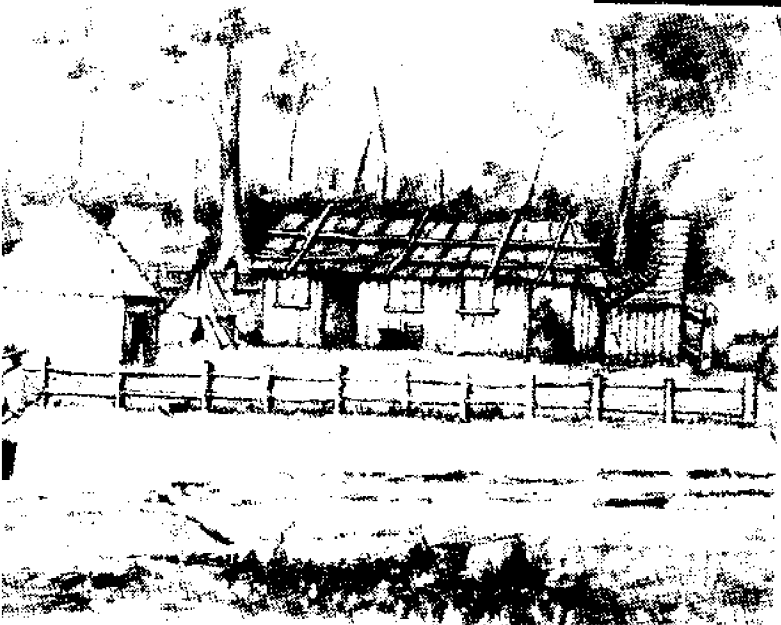
Rising affluence has seen an increasing proportion of economic activity generated by service industries, especially those relating to leisure activities. This has led to some significant developments in building. There has been a cultural precinct created along St Kilda Road, starting with the Art Gallery in 1968 and the completion of the Concert Hall and Theatre complex in the 1980s. Melbourne has long produced large sporting crowds and recently the development of the National Tennis Centre and the Great Southern Stand at the Melbourne Cricket Ground has acknowledged this. Tourism is one service industry that is having a big impact. Melbourne now has seven 5-star hotels, most of which have been built since 1980. Complementing this increase in high quality accommodation has been the developments along the Yarra, especially South Gate, which are making the river an integral part of the city. In the country one notable development has been the creation of theme parks following the success of Sovereign Hill at Ballarat and the Swan Hill Folk Museum.

BUILDING IN VICTORIA

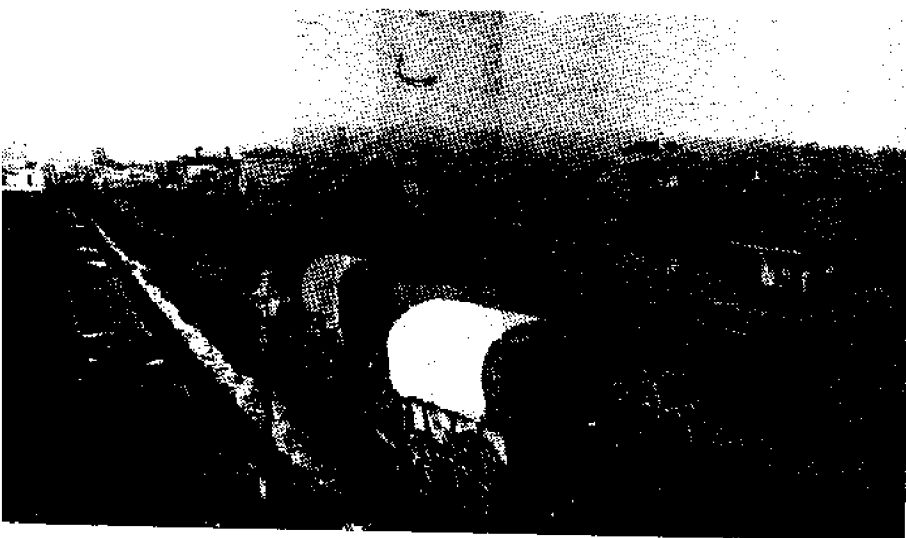
*A pictorial glimpse at
Victoria's past*



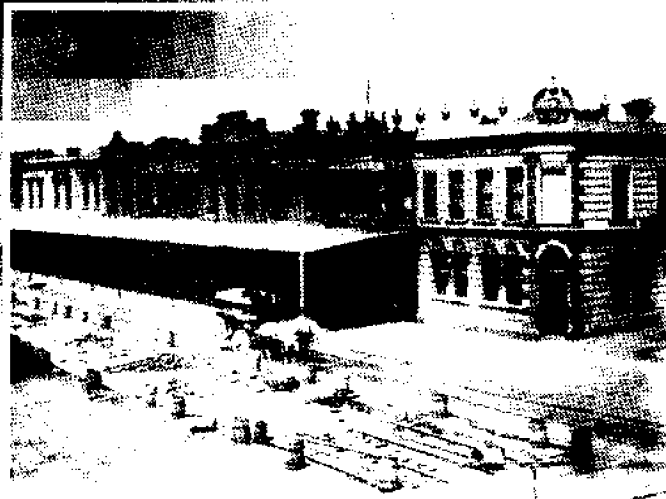
Above:
Housing at Eaglehawk in 1894 -
tents



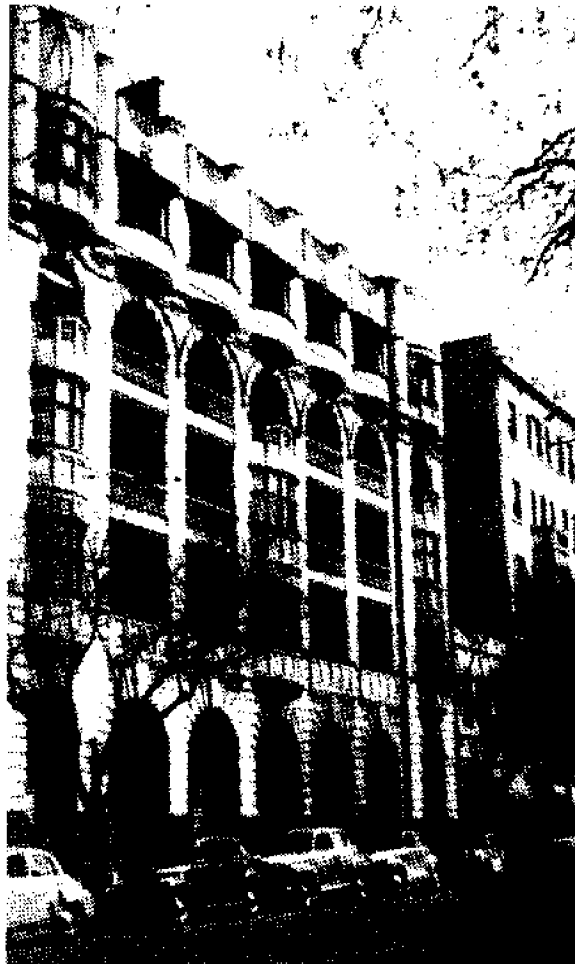
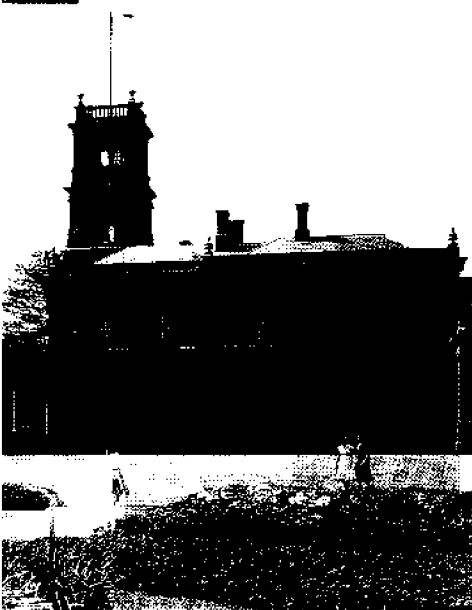
Left:
Vertical slab walls and bark roofing,
an Australian innovation, can be
seen in this picture of a superior
Ballarat house of the 1850s (*Royal
Historical Society of Victoria*)



Below:
An early photograph of the main
street of Colac, shows the kind of
style adopted for the first generation
of town houses (*Royal Historical
Society of Victoria*)



Left:
Latrobe's Cottage in its present
site in Domain Gardens.
Victoria's oldest surviving
prefabricated house made of
panels, each 2400 x 900mm,
the windows are of iron and the
roof of timber shingles (*National
Trust of Victoria*)





Above:

Slum clearance involved the demolition of every building on the site, irrespective of merit or condition
(Department of Planning and Development)

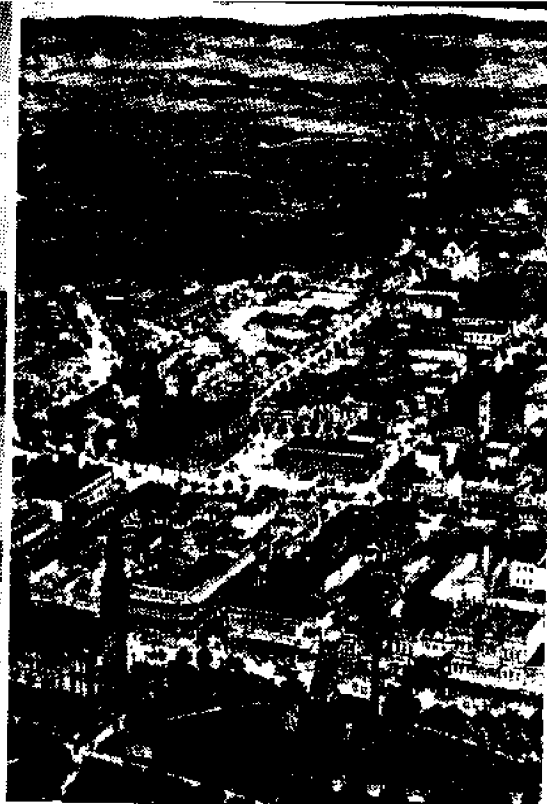
Right:

Newburn Flats, South Melbourne (1941) - international style, flat roof and white off-form concrete walls

Below:

Triple-fronted brick veneer (1950-60s) (Department of Planning and Development)





Clockwise from top left:

A prefabricated two-storey iron house at South Melbourne - demolished in 1956 (*National Trust of Victoria*)

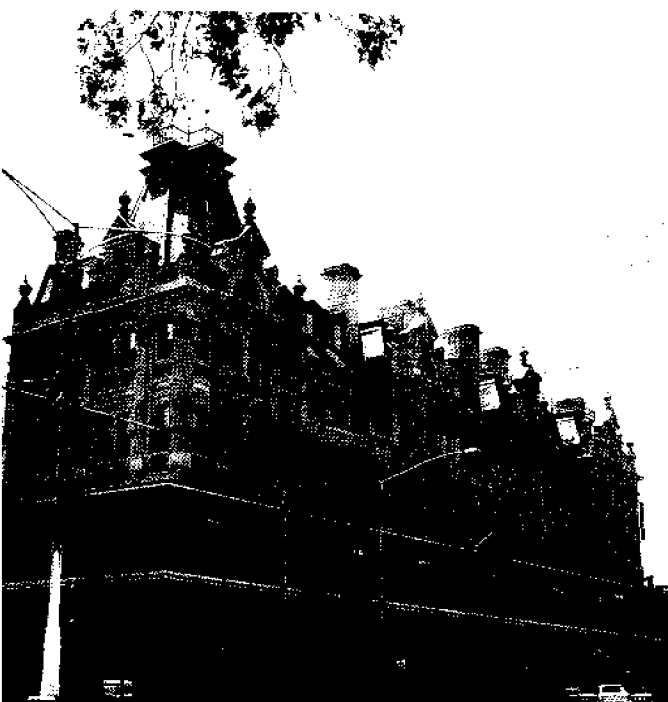
Sandhurst (Bendigo) in the 1880s, showing evidence of secondary and tertiary industry independent of mines

Emerald Hill (South Melbourne) in the 1880s, with the cable trams being installed (*Department of Planning and Development*)

Melbourne Mansions, the first (1906) major block of flats in Victoria

Werribee Park Mansion, completed in 1877 by two Scottish squatters to create the world they left behind - Italianate style (*Tourism Victoria*)

Shamrock Hotel in Bendigo, built in 1897 (*Tourism Victoria*)



Conclusion

The level of building activity has always closely reflected economic activity. One of the first casualties of an economic downturn, building is normally one of the main beneficiaries of an economic upturn. This article has covered in broad terms that relationship as it has occurred in Victoria from the first permanent European settlement. Overall, building activity has shown long periods of reasonably steady growth, which have been occasionally interrupted by periods of rapid growth, such as after the first gold rushes and the 1880s boom, and stagnation, such as in the severe depressions of the 1890s and 1930s. Since World War II economic fluctuations have been much less marked and so have those in building as a whole. In fact, this period has seen the housing stock nearly treble from the 550,000 recorded at the first post war Census in 1947 to 1,640,000 at the 1991 Census. In that time the population only doubled.

The trend to fewer people per dwelling is having an impact on building and will continue to do so for some time. As family size declines the existing suburbs are losing population and this could only be halted by an increase in the number of dwellings in these suburbs or the re-emergence of larger families. As the latter is unlikely, Melbourne will continue to grow outwards to cater for population growth unless many more dwellings can be created in existing suburbs. Several things are happening to encourage this, such as "dual occupancy" provisions and the increase in apartment buildings in inner areas. Other responses are being developed, such as Local Government Reform coupled with population targets and the easing of planning restrictions, and these are likely to have an impact in the near future.

In the one hundred and sixty years of European settlement the face of Victoria has been changed by many activities, perhaps most by building activity and as wealth, technology and human and material resources develop further these will continue to affect Victoria's buildings.

TOTAL RESIDENT POPULATION COMPARED TO DWELLINGS BY BUILDING MATERIALS USED

