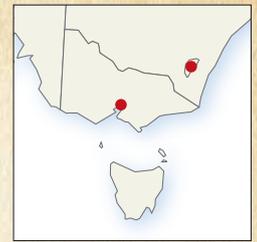


20th Century Architecture

AUSTRALIAN CAPITAL TERRITORY AND VICTORIA



Architecture has contributed to Australia's cultural identity since colonial times.

The nation's fashions in architecture and engineering have been influenced by overseas trends since 1788, a pattern reflected in the 20th century in both private and government sectors.

At the international level, traditional architectural boundaries were challenged in the 20th century and new ways of doing things explored with enthusiasm.

Twentieth century architecture, both in Australia and overseas, bears testament to this time of experimentation.

Architects, engineers and planners in the capital cities were among the first to challenge the norms in late 20th century Australia and to find and introduce innovative architectural ways of expressing community, corporate and business optimism. This transformation gained momentum in the capital cities, including the nation's capital Canberra, as Australia emerged from a crushing Depression and two World Wars.

For Australia, 20th century architecture's most celebrated technical and creative innovation is the Sydney Opera House, completed in 1973 following an international competition in 1956. Its unconventional and inspiring form pushed the bounds of contemporary engineering know-how. Today it is Australia's most widely-recognised building, both nationally and internationally. Other outstanding examples of this period of architectural and engineering achievement include the following places.

Newman College

Walter Burley Griffin's sculpted college

Newman College, in the grounds of Melbourne University, is considered to be one of the best buildings ever designed by Chicago architect Walter Burley Griffin. Griffin, who once worked for the internationally renowned architect Frank Lloyd Wright, was a notable exponent of Chicago's Prairie architectural style. He came to Australia in 1914 after winning an international competition to design Australia's new capital city, Canberra.

He went on to design whole suburbs, such as Castlecrag in Sydney, as well as individual buildings, before leaving Australia for India in 1935. Newman College, which was built between 1916 and 1918, is an outstanding example of Griffin's distinctive sculptural style. Its strong geometric form, which includes a dining hall and residential wings, was built using an innovative mix of rough stone base with smooth masses of concrete above. Griffin enhanced



Newman College

the impact of his creation by extending his design through every aspect of the building—its fixtures, fittings and furniture. The building sits harmoniously in park-like grounds thanks to the landscape design of his wife, Marion Mahony.

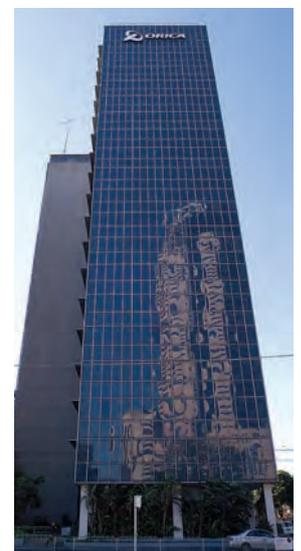
Perhaps the most striking and innovative feature of Newman College is the domed refectory made from reinforced concrete. When built, it was one of the earliest and largest domes in Australia. This remarkable building has continued to be lived and worked in by staff and students since 1918.

ICI Building (former)/Orica House

Formerly Australia's tallest building

Once Australia's tallest building, the former ICI Building in East Melbourne, now Orica House, was at the forefront of the high-rise boom in Australia's cities in the second half of the 20th century. Its design followed the international trend for multi-storey buildings which was particularly evident in the United States. The move from low to high-rise office buildings changed the profile, shape and landscape of Australia's major urban centres forever.

Built between 1955 and 1958 the ICI Building was one of 22 major new multi-storey office buildings



ICI Building



Australian Academy of Science Building



Sidney Myer Music Bowl

which sprang up in Melbourne in the second half of the 1950s. Its 21 storeys broke through the previous legal limit of 11 to 12 storeys, resulting in Melbourne becoming the first Australian city to change its height limits. It was not until 1962 that the first tall building was completed in Sydney.

In earlier times most Australian office buildings occupied their entire blocks. However, the modern free-standing high-rise and its surrounding landscaped gardens and car park introduced the idea of creating a balance between a building's height and public amenities.

Australian Academy of Science Building

Modernist dome—an architectural landmark

The low-slung copper dome of the Australian Academy of Science near the centre of Canberra created a milestone in the Australian construction industry when it was built in 1959. Its seemingly weightless shape provided a striking contrast to the heavy concrete buildings of the same period and has become a landmark in the national capital.

The dome's innovative structure, designed by one of the most prominent Australian architects of the time, Sir Roy Grounds, reflects the bold modernism of the period. When constructed, it was large by world standards and larger than any dome in Australia. Its weight is anchored by the surrounding water-filled moat making it an extremely stable structure. The selection of materials and the design and finish of its interior contribute to the impact and importance of this award-winning building.

The building is believed to be the only true example in Australia of Geometric Structuralism—an architectural movement which used tension to maximise the function of the structure. When constructed, the dome made a confident statement about the post Second World War development of Australia's scientific community. This community included such luminaries as the distinguished scientist, Sir Marcus Oliphant, veterinary scientist, Dr Ian Clunies Ross, and explorer, Sir Douglas Mawson.

Sidney Myer Music Bowl

A magnificent sound and architecture experiment

Almost floating above the ground as if weightless, the Sidney Myer Music Bowl is one of Melbourne's best-known and most visited landmarks. When it was built in the late 1950s this entertainment venue was a world first, an engineering experiment that stretched the bounds of what was thought possible. The technical and creative achievement of this construction lies in the structural system that suspends the large, wave-like roof above the stage.

Architect Barry Patten, a member of the leading Australian architectural firm, Yuncken Freeman Brothers, Griffiths and Simpson, is responsible for creating this excellent example of the late 20th century style. This style is characterised by its large-scale, free, sculptural curved spaces which float above the site. The design and structural achievement of the Sidney Myer Music Bowl was nearly 10 years ahead of similar work by German architect/engineer, Frei Otto, and his experiments in using lightweight tensile and membrane structures.

To make the soundshell both watertight and aerodynamically stable and flexible, new construction techniques were developed.

Aluminium-covered plywood panels were suspended between a framework of steel wire ropes. An enormous main cable was stretched between the two masts to support 27 cables before being buried deep in the ground on either side. It supported a 4055m² acoustically accurate canopy. When built, it was one of a small number of structures in Australia to combine a tensile structural system with a free-form roof and was the most important of these in terms of scale, sophistication and structural expression.

The music bowl was named after its benefactor, Sidney Myer, a Russian immigrant who arrived in Victoria in 1899, he went on to establish one of Australia's largest retail businesses and to become one of the nation's most significant philanthropists. Prime Minister Robert Menzies opened the venue in February 1959. Since then, Melbourne's first major purpose-built, live outdoor cultural venue has been drawing both artists and crowds of up to 200 000 patrons.

National Heritage List: 21 September 2005