

Architectural Heritage: RAIA REPORT FORMAT

This report is to be the outcome from the data entry.

This report follows the UIA format with some additional fields and full details that will be referred to from UIA.

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|-------------------------|------------------------------------------------------------------------------------|
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| Date: | 18 August 2000 |
| Latest Update: | 25 September 2000 |
| Status: | |
| Project ID: | Australia Square |
| Image: |  |

AUSTRALIA SQUARE

NOTE:

This document presents details of heritage buildings developed for Internet searches. An indexing form on the internet allows the on-line submission of this information. This document is intended to let anyone who is willing to participate forward the RAIA information about buildings to be added to the system without using the Web.

Importance of the criteria column lets you to point at the particularly importance of one or several elements of description of the building. You can here indicate (decreasing order A,B,C,D,E, ie International, National, State, Regional, Local) whether an element of description appears to you as decisive in its selection for the index.

| Name of the Criteria | Importance of the criteria | Your Building |
|----------------------|----------------------------|---------------|
|----------------------|----------------------------|---------------|

| Name of the Criteria | Importance of the criteria | Your Building |
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TABLE n° 1 : DESCRIPTION OF BUILDING / SITE

| MODULE 1 : IDENTITY OF THE BUILDING / SITE | | |
|---------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Current name | | Australia Square |
| Previous or other name(s) | | Australia Square |
| Present owner | | General Property Trust |
| Status of the owner | | Private |
| Materials and techniques | | Reinforced lightweight concrete |
| Description | | <p>The 50-storey circular tower with revolving restaurant at the top occupies only 25 per cent of the site, with a total floor space of 12 times the site area.</p> <p>A six storey rectangular building encloses the eastern end of the site. The remainder of the city block was given over to the public for outdoor space, with trees, a sculpture, fountain and outdoor restaurants.</p> <p>Curved screen walls separate the space visually and physically from traffic and parked cars in the surrounding streets.</p> <p>It is an area for people to linger and relax, and attracts large lunchtime crowds.</p> <p>Each office floor of the tower is identical except that the projecting quartz faced precast columns diminish in size as the building rises.</p> |
| Year of project design | | 1961 – 1962 |
| Year of beginning of construction | | 1965 |
| Year of end of construction | | 1967 |
| Initial Design (if differs from description) | | |
| Changes to initial changes | | --- |
| Documentation and References | | <p>Original drawings and specifications are held by Harry Seidler and Associates</p> <p>Blake, Peter <i>Architecture for the New World</i>, Horwitz Aust 1973 ISBN 0 7255 0232 0</p> <p>Frampton, Kenneth and Philip Drew, <i>Four Decades of Architecture</i>, Thames and Hudson 1992, ISBN 0 500 97838 7</p> <p>Sharp, Dennis <i>Harry Seidler – The Master Architect Series III</i>, Images Publishing 1997, ISBN 1 875498 75 3</p> |

| MODULE 2 : BUILDING / SITE LOCALISATION | | |
|------------------------------------------------|---|---------------------------|
| Postal Address: street, n° | | 247 – 278 George Street |
| Postal Address: town/suburb | | Sydney |
| Postal Address: Postal code | | NSW 2000 |
| Urban centre/city | | Sydney |
| Local Government area | | Sydney |
| Region (State) | | NSW |
| Country | | Australia |
| Regional Context (eg Coastal, urban, rural) | | Centra Sydney |
| Urban context (ex: Port, new town, etc...) | B | Central Business District |

| MODULE 3 : AUTHORS | | |
|---------------------------------------------------|---|-------------------------------------------------------------------------------|
| Project Design: | | |
| Name, first name, (dates), job, country of origin | A | Harry Seidler Seidler, Harry – born Austria |
| Information on the author / the team | | |
| Engineering: | | |
| Name, first name, (dates), job, country of origin | C | Nervi, Pier Luigi, Italy in conjunction with Civil and Civic (Owner Builders) |
| Information on the author / the team | | |
| Construction: | | |
| Name, first name, (dates), job, country of origin | | |
| Information on the author / the team | | |
| Contracting Authority: | | |
| Name, first name, (dates), job, country of origin | C | Civil and Civic Pty Ptd (Owner Builders) |
| Information on the author / the team | | |

| MODULE 4 : TYPOLOGY | | |
|--------------------------------|---|--------------------------------------|
| Type (single building/complex) | | Single tower building and city block |
| Initial use | | Offices |
| Present use | | Offices |
| Planned use) | | |
| Architectural Style | B | Mid twentieth century international |

| MODULE 5 : EVALUATION (Analysis of significance) | | |
|---------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Background | B | <p>Replacing a city block of 30 properties, this is one of Sydney's earliest tall office tower built due to the foresight and energetic enterprise of the Dutch immigrant developer G J Dusseldorp.</p> <p>The total site was designed as an integrated public space.</p> <p>Structurally, the circular form of the tower is most efficient in resisting horizontal wind loads. This configuration lends itself ideally to speedy, repetitive and mechanised component construction.</p> <p>Every elevator shaft, radial beam and column is identical. The projecting columns diminish in size as the building rises. Each floor was erected in five working days, and the resulting gross-to-net floor space ratio is 80:20.</p> |
| Technical | | |
| Comments | | <p>The circular form of the tower is an efficient structural shape for a tall building.</p> <p>The whole tower structure is built of light-weight concrete, except for the columns.</p> <p>The circular structure allowed great speed and systematisation in erection of form-work and pouring of concrete.</p> <p>The lift shaft cells were formed by steel boxes made of two wedge-shaped halves, easily pulled up vertically after concrete around them had been poured.</p> <p>The ferro-cement for the two ribbed floors which had to carry high imposed loads were designed by Professor Pier Luigi Nervi and manufactured on the site.</p> <p>The building includes extensive parking under it which also heralded the trend that is still followed.</p> |
| Social | | |
| Comments | B | <p>Socially the two buildings were among the first to create public outdoor space on private land associated with a building development.</p> <p>The integrated use of artwork in the public spaces was innovative and part of the overall design. This included the Le Corbusier Tapestries and the Calder Sculpture.</p> <p>The overall design was one of comfortable open space.</p> |
| Aesthetic | | |
| Comments | A | <p>The tower building was a landmark and handsome building that was to illustrate the fact that from a</p> |

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|--------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p>rational and aesthetic viewpoint modern architecture can only begin to express itself in the free standing building.</p> <p>It was designed by one of Australia's and the world's leading architects, Harry Seidler.</p> |
| Contextual | | |
| Comments | C | <p>Australia Square established new trends and ideals in modern office buildings in the circular form, the creation of public open space and a free standing building that stood apart from rather than in the older smaller urban context that existed at the time. (<i>Jennifer Taylor, <u>Australian Architecture since 1960</u>, p 21</i>)</p> <p>The use of a podium level above street level creates the plaza which then steps through the site. The use of the smaller 13 storey office building on the eastern side of the site provided a termination and foil for the office tower.</p> |
| Historical | | |
| Comments | B | <p>Australia Square Tower is at the forefront of modern international office towers in Australia which were to change the inner areas of Australian Cities from the 1960s. It lead the way in enabling the construction industry to break frontiers in both design and performance. Concrete became the favoured material. The first tall building in Australia was the AMP Building at Circular Quay (completed 1961). While many of its contemporaries, Shell House (Melbourne), AMP Building (Sydney), demonstrated little concern for life on the streets, Australia Square created the public open space. (<i>JT, p19</i>)</p> |
| Originality | | |
| Comments | | <p>Australia Square Project was instrumental in advancing structural design with concrete. The tower is constructed with a central, poured in place, concrete core with precast units serving as both formwork and finish for the surrounding concrete frame. The co-operation of Pier Luigi Nervi (an engineer of world renown, known especially for his 1960s Rome Olympic Buildings) saw creative use of patterned ribbing and tapering exterior columns which express structural logic.</p> |

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| AWARDS FOR EXCELLENCE | | |
| | | <p>Royal Australian Institute of Architects (NSW Chapter) Sulman Medal 1967 Civic Design Award 1967</p> |

TABLE n° 2: STATE OF BUILDING / SITE

| MODULE 1 : ANALYSIS OF CURRENT STATE | | |
|---------------------------------------------------|---|-------|
| Building Condition | | Sound |
| Evaluation of danger (decreasing order A,B,C,D,E) | E | |
| Nature of danger | | |
| Comments | | |

| MODULE 2 : PROTECTION | | |
|-----------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------|
| Current Heritage Listing | | Sydney City Council Heritage Register |
| Administrative level of protection (Statutory or Non-Statutory) | | Statutory |
| Authority / Institution providing listing | | Central Sydney Local Environment Plan, Schedule 1 – 1999 |
| Registration Reference | | |
| Planned restoration | | NIL |
| Current Heritage Listing | | Royal Australian Institute of Architects National Register of Significant 20 th Century Architecture |
| Administrative level of protection (Statutory or Non-Statutory) | | Non-Statutory |
| Authority / Institution providing listing | | RAIA |
| Registration Reference | | (TBA) |
| Planned restoration | | NIL |

**TABLE n° 3 : CHARACTERISATION OF THE BUILDING / SITE
(Significance of the building under the Stated Criteria)**

| Categories of Criteria | | |
|---------------------------------------------------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MODULE 1 : PERIOD OF DESIGN / CONSTRUCTION | | |
| Outstanding national importance in demonstrating the principal characteristics of a particular class or period of design. | A | Australia Square Tower was one of the earliest modern international style office towers in Australia and broke frontiers in both design and performance of the construction industry. |
| MODULE 2 : FORMAL ARCHITECTURAL VALUE | | |
| Outstanding national importance in exhibiting particular aesthetic characteristics. | A | The tower building is a landmark building of outstanding elegance which has maintained its iconic quality against buildings built before and since its construction even after 33 years. The use of tapered columns was adopted for structural reasons as well as to emphasise the elegance of the tower and make it appear taller. |
| MODULE 3 : RELATION TO THE LOCATION | | |
| Outstanding national importance in establishing a high degree of creative achievement. | B | While other contemporary and later buildings largely ignored civic amenity and life on the street, Australia Square developed a public plaza. This was made possible by a low site coverage of 25%. Australia Square set new trends in this regard which has not often been equalled in Australian CBDs. Many of the buildings that have a civic amenity have been designed by Harry Seidler, eg MLC Tower – Sydney, Riverside Plaza – Brisbane, Shell Building – Melbourne, QVII Building – Perth. |
| MODULE 4 : MONUMENTAL OR SYMBOLICAL SIGNIFICANCE | | |
| Having outstanding monumental and symbolic importance to the development of architecture and the history of architecture. | A | Australia Square Tower is a iconic building of its time. |
| MODULE 5 : ATYPICITY | | |
| Having a special association with the life or works of an architect of outstanding importance to our history. | A | The building has many outstanding features which demonstrate originality and innovation. These include the circular structural form and its efficiency, mechanised component construction, speed of erection, exposed structural system which was developed with the cooperation of Pier Luigi Nervi. Its small site coverage and development of public open space was also innovative for its time. Australia Square is by one of the 20 th Centuries leading architects, Harry Seidler who worked with one of the world's leading engineers, Pier Luigi Nervi in developing the structural design. Harry Seidler was awarded the Royal Australian Institute of Architects Gold Medallion in 1976 and the Royal Institute of British Architects Gold Medal in 1996. |

| MODULE 6 : CONSTRUCTION / STRUCTURE | | |
|------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Outstanding national importance in demonstrating a high degree of technical achievement of a particular period.</p> | <p>A</p> | <p>The circular form of the tower is an efficient structural shape for a tall building. The inner core with its two connected rings of concrete forming the lift wells, takes about half of any wind load applied to the building. To determine fully the interaction between core, radial and spandrel beams as well as columns, a structural stress analysis model was built (at 1/30 scale) and subjected to simulated static wind loads. Some 7000 readings were taken by electronic strain gauges. The final structural design of all members was checked against the results of this test which was carried out at the University of New South Wales.</p> <p>The whole tower structure is built of light-weight concrete, except for the load bearing columns, supporting walls of the foundations and the Nervi floors. This makes Australia Square the highest light-weight concrete structure in the world at the time of its completion in 1968. Substantial economies were achieved by the use of this material. through the reduction of dead load and consequent smaller size of supporting members.</p> <p>The circular structure allowed great speed and systematisation in erection of form-work and pouring of concrete. There is only one structural condition throughout, all beams and slabs being identical. Repeated usage of specially made steel forms for floor beams allowed rapid dismantling and re-erection so that the tower structure proceeded at the average rate of one floor per week.</p> <p>The lift shaft cells were formed by steel boxes made of two wedge-shaped halves, easily pulled up vertically after concrete around them had been poured.</p> <p>The ferro-cement pans for the two ribbed floors were designed by Professor Pier Luigi Nervi and manufactured on the site in the sequences illustrated.</p> |

| STATEMENT OF SIGNIFICANCE | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p>Australia Square is one of the first modern international styled office towers in Australia by one of Australia's and the world's leading architects, Harry Seidler.</p> <p>Harry Seidler was awarded the Royal Australian Institute of Architects Gold Medal in 1976 and the Royal Institute of British Architects Gold Medal in 1996.</p> <p>It established new principles in design and construction through its distinctive circular form and the creation of a large public open space at ground level.</p> <p>The public space is established by a plaza that is set above street level and steps down throughout the site and defined on the east by a 6 storey rectangular building acting as a foil to the circular</p> | |

tower. The public areas include cafés, fountains, artwork (Le Corbusier tapestries, Calder Sculpture) and as one of the earliest examples of the development of comfortable public open space on private land.

The structural system was developed with one of the world's leading engineers, Pier Luigi Nervi, and features technological advances of the time such as patterned ribbing and tapering exterior columns in quartz faced pre cast concrete as permanent formwork. The tapering columns add emphasis to the height of the tower further emphasising its elegance. At the time it was built in 1961 – 1967 the tower was the world's tallest light weight concrete building.

The circular form was structurally extremely efficient and the consistency of floor plan, the use of precast façade and in situ core lead to floors being erected in 5 working days which set new standards in office tower construction.

Australia Square Tower is an elegant building which has maintained its aesthetic appeal and is still regarded as a landmark building in Sydney and an icon of Australian architecture.

Image:



Australia Square, Sydney
from *Sydney Architecture*, 1997
The Watermark Press, Page 169

