

FORMER AUSTRALIAN ROAD RESEARCH BOARD

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|-----------------------|--------------------------------------|---------------------------|-----------------------------|
| Building type: | Office & Laboratories | HO No: | HO23 |
| Address: | 490-500 Burwood Hwy Vermont South | Melway Map Ref: | 62 G/H8 |
| Place Type: | Commercial/Industrial | Construction Date: | 1971-72 |
| Architect: | Mockridge, Stahle & Mitchell | Builder: | Leighton Contractors |
| Integrity: | High | Extent of Overlay: | To current title boundaries |

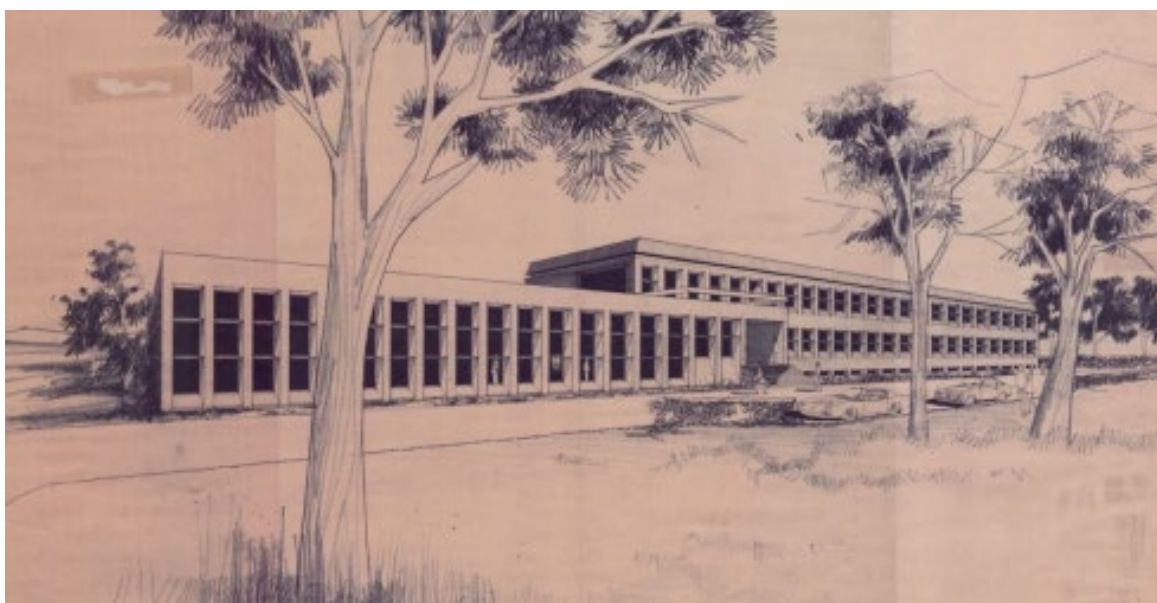


Figure 1. Perspective drawing of the ARRB Administration Building by Mockridge Stahle & Mitchell architects c1970. (Note: fascia detail is not as constructed). Source ARRB.

Preamble

This document supersedes the existing citation for the property in the *City of Whitehorse Heritage Review, 1999*, by Allom Lovell & Associates. The significance of the heritage place has been established and the former Australian Road Research Board site is included in the Heritage Overlay of the Whitehorse Planning Scheme. The intent of this document therefore is to more clearly define the significance of the component parts of the former ARRB site, and to update the Statement of Significance in accordance with Planning Practice Note 1: Applying the Heritage Overlay, August 2018.

The history and descriptions of the buildings and the site in this document, have been drawn from the original citation and the *Conservation Management Plan for the Former Australian Road Research Board, 500 Burwood Highway, Vermont South*, prepared by Bryce Raworth & Associates, February 2021.

Statement of Significance

What is significant?

The former Australian Road Research Board (ARRB) complex at 490-500 Burwood Highway, Vermont South, constructed in 1971-72 to the designs of architects Mockridge, Stahle & Mitchell.

Elements of Primary Significance include:

- The Administration Building,
- The landscaped setting around the Administration Building, including the open space and surviving trees to the north and west in the front setback, and the courtyards between the Administration Building and Research Wing 1, and the Administration Building and Research Wing 2.

Elements of Secondary Significance include:

- The West Wing
- The planning concept using building modules (Research Wings R1 and R2) separated by courtyards and connected by a main pedestrian spine.
- The broader landscaped setting, particularly the surviving mature native plantings on the western boundary and the remnant *Eucalyptus melliodora* east of Research Wing R2.

Elements that do not contribute to the significance of the place include:

- Research Wing R3 and the Truck Bay
- The former tennis court, now parking area
- The Garden Maintenance Shed
- The Store
- The RMS Garage
- The Concrete Laboratory/HV Workshop
- The Shed located south of Research Wing R2
- The open land to the south of Research Wing R3

How is it significant?

The former Australian Road Research Board complex is of historical, representative (architectural) and aesthetic significance to the City of Whitehorse.

Why is it significant?

The former Australian Road Research Board represents the move of institutions and organisations from the inner suburbs Melbourne in the post-war period, taking advantage of undeveloped rural land in the outer fringe of Melbourne. [Criterion A]

Constructed in 1971-72 to a design by Mockridge Stahle & Mitchell, the Administration Building of the former Australian Roads Research Board complex is a fine and highly intact representative example of a Post-war Modernist commercial building. Through its simple massing and composition, particularly the repetitive fenestration and assured use of face brickwork, the building is a confident example of the type of building which typified institutional, and to a lesser extent commercial, architecture in the late 1960s and early 1970s. The Administration Building demonstrates typical characteristics of later post-war structures including the rhythmic façade of regularly spaced, deep set windows with distinctive, sloping brick sills, and a strong horizontal emphasis. [Criterion D]

The site planning of the ARRB complex is an accomplished example of modular design allowing for flexibility and expansion that was in keeping with established principles of modernist architecture. The 'finger plan' layout provided the potential to expand the

complex to the south and the courtyards separating the research laboratory 'modules' allow for light into the buildings on three sides, and an outlook into the landscaped spaces for the occupants. [Criterion D]

The former Australian Road Research Board complex is enhanced by the large, landscaped front setback and the landscaped courtyards separating the research wings, designed by noted landscape architect Beryl Mann. Although partially compromised by the loss of the eastern part of the site in the 1990s, the combination of open, grassed spaces, the retention of pre-existing eucalypts within the site, and the now-mature native perimeter planting to the northern and western boundaries, demonstrate the movement in the late 1960s and early 1970s to incorporate native trees and plants in landscape design for institutional complexes. [Criterion E]

Historical Themes

The former Australian Road Research Board site is associated with the following themes as defined in the *City of Whitehorse Post-1945 Heritage Study: Thematic Environmental History*.

3.0 Connecting Victorians by transport and communications

3.4 *Linking Victorians by road in the twentieth century*

5.0 Building Victoria's industries and workforce

5.8 *Working*

History

The Australian Road Research Board (ARRB) was established in 1958, when the Conference of State Road Authorities agreed to establish a national road research body modelled on the US Highway Research Board. The ARRB's prime purpose was to co-ordinate, publish and promote the results of road research, including research into road planning, design, safety, materials, construction, maintenance, and financing. The Board was also tasked with distributing grants for research and organising conferences and symposiums to provide opportunities for the presentation and discussion of the results of road research.¹

Staff were initially housed in the Victorian Country Roads Board headquarters in Kew, but in the mid-1960s, it became apparent that the ARRB required a permanent headquarters. For this purpose, a former apple orchard and adjoining farmland totalling 6.5 hectares, on Burwood Highway, Vermont South, was acquired in the late 1960s and architects Mockridge, Stahle and Mitchell were commissioned to design the new facility.²

The architects proposed a building of '*simplicity and dignity*' to attract new staff whilst also providing a '*good background for public relations to visitors and representatives of other interested bodies who in turn attract money to the cost of the functions of the board.*'³

The design for the new complex was approved in 1970 and Leighton Contractors were awarded the \$1 million construction project in May 1971.⁴ The new headquarters for the

¹ Australian Road Research Board 'The First 50 Years' Report on Activities from Foundation, p.14

² Australian Road Research Board 'The First 50 Years' Report on Activities from Foundation, p.6

³ Australian Road Research Board, *Head Office and Research Centre, Burwood Highway, Nunawading, Melbourne. Narrative Brief*. Unpublished typescript, 5 November 1969, p.16, Mockridge Stahle & Mitchell Archive, Australian Manuscripts Collection, SLV.

⁴ ARRB Report of Activities 1971

ARRB was officially opened by the Governor of Victoria Sir Rohan Delacombe on 27 November 1972.

As originally designed, the ARRB complex had a three and two storey administration building fronting Burwood Highway, providing executive offices, a board room, technical library, a double-height lecture room and adjoining dining area with kitchen facilities. To the rear of the Administration Building was a single-storey publications room and two research wings arranged alternately either side of a covered two-level walkway. Generous landscaped courtyards separated the rear wings (Fig. 2).

The buildings were designed for maximum flexibility and to allow for future expansion. The structure of the administration building was apparently designed so that an additional storey could be added later if required, and the non-structural brick infill panels of external walls allowed for the simple insertion of new doorways if required.⁵ The original plan allowed for a future theatre to the south-east of the Administration Building (Fig. 3) and the original architects brief anticipated that the courtyards could be enclosed if required.⁶

As described below, the complex was intended to be a workplace in a generous landscaped setting:

Set 200 yards back from the road, the new centre will be surrounded by attractive trees, shrubs and lawn to harmonise with the environment. Although the building has been designed to allow for future expansion, at no stage will it ever occupy more than two-thirds of the section. This means that at least 5 acres of land will always be landscaped to blend in with surrounding areas.⁷

The surrounding grounds were designed by noted landscape architect Beryl Mann. Mann's landscape planning for the site included the retention of several remnant eucalypts on the eastern portion of the property and most of the existing apple trees at the rear of former orchard on the western portion of the property (Figure 4). The side boundaries were to be planted with dense stands of native trees to act as windbreaks and to screen the site from anticipated future residential development. The Burwood Highway frontage was to have a 'more carefully developed main entrance treatment' while the internal landscaping was generally to maintain an 'open character' with lawns and tree groups.⁸

Later additions and alterations to the complex included the extension of Research Wing R2 eastwards in 1974 to accommodate machinery for bitumen testing⁹, the construction of the tennis court west of the administration building in the same year¹⁰, and the extension of Research Wing R1 to the west in about 1975.¹¹ A tilt deck for testing articulated vehicles was

⁵ Australian Road Research Board, *Head Office and Research Centre, Burwood Highway, Nunawading, Melbourne. Narrative Brief*. Unpublished typescript, 5 November 1969, p.17, Mockridge Stahle & Mitchell Archive, Australian Manuscripts Collection, SLV.

⁶ Australian Road Research Board, *Head Office and Research Centre, Burwood Highway, Nunawading, Melbourne. Narrative Brief*. Unpublished typescript, 5 November 1969, p.17, Mockridge Stahle & Mitchell Archive, Australian Manuscripts Collection, SLV.

⁷ ARRB Brochure, 1973. Unpaginated

⁸ Australian Road Research Board, *Head Office and Research Centre, Burwood Highway, Nunawading, Melbourne. Narrative Brief*. Unpublished typescript, 5 November 1969, p.14, Mockridge Stahle & Mitchell Archive, Australian Manuscripts Collection, SLV.

⁹ ARRB *Report on Activities*, 1974, p.7.

¹⁰ ARRB *Report on Activities*, 1974, p.7.

¹¹ From aerial photograph, 1975, from Whitehorse Maps, City of Whitehorse website.

installed in 1984 and in 1986 a new Research Wing R3 was opened.¹² A concrete testing laboratory was constructed to the south-west of the existing complex following the establishment of a concrete testing technology division in 1997.¹³

During the late 1990s, 4 hectares of land to the east and south of the complex, was sold to fund the operation of the ARRB.¹⁴ The ARRB retained approximately 2.6 hectares of land (Refer to Figs. 12 & 13 for comparison of the original and current property size). In about 2004, land at the front of the site was excised for the construction of an electrical substation to service the Burwood Highway tram extension.

In 2017, the ARRB sold the Vermont South site and relocated its headquarters to new offices in Port Melbourne.

The architects

Mockridge, Stahle and Mitchell was established in 1948 by John Mockridge (1916-1994), Ross Stahle (1917-2010) and George Mitchell (1916-2006). Mockridge trained at the Gordon Institute of Technology, Geelong (now Deakin University), gaining a Bachelor of Architecture in 1942. After serving in the Royal Australian Air Force during World War Two, he worked for architects Buchan Laird & Buchan before establishing the partnership with Stahle and Mitchell, who had both studied at RMIT. The early work of the practice was mostly residential, but the firm came to be strongly defined by projects for institutional clients including universities, colleges, and schools. Among their institutional works, the Bromby Building at Melbourne Grammar School (1954, demolished), the Camberwell Civic Centre (1967-69) and the Social Sciences Building at La Trobe University (1970), are examples of their work that compare directly with the Administration Building at the former ARRB facility.

The landscape architect

Like John Mockridge, Mann had studied architecture at Gordon Institute in Geelong in the 1930s, but later turned to landscaping, completing a course in horticulture at Burnley College in 1939. She joined Mockridge Stahle & Mitchell when it was founded in 1948 and worked both as an architect and a landscape designer. She became an associate of the firm in 1961 and retired in 1976.¹⁵

¹² ARRB: *The First Fifty Years*, p.51 & 62.

¹³ *Conservation Management Plan for the Former Australian Road Research Board, 500 Burwood Highway, Vermont South*, prepared by Bryce Raworth & Associates, February 2021, p.13.

¹⁴ ARRB: *The First Fifty Years*, p.106

¹⁵ Ruth Sanderson. 'Beryl Mann: Her Contribution to Landscape Architecture in Australia'. *Landscape Australia* VI, 4 (November 1984), pp304.

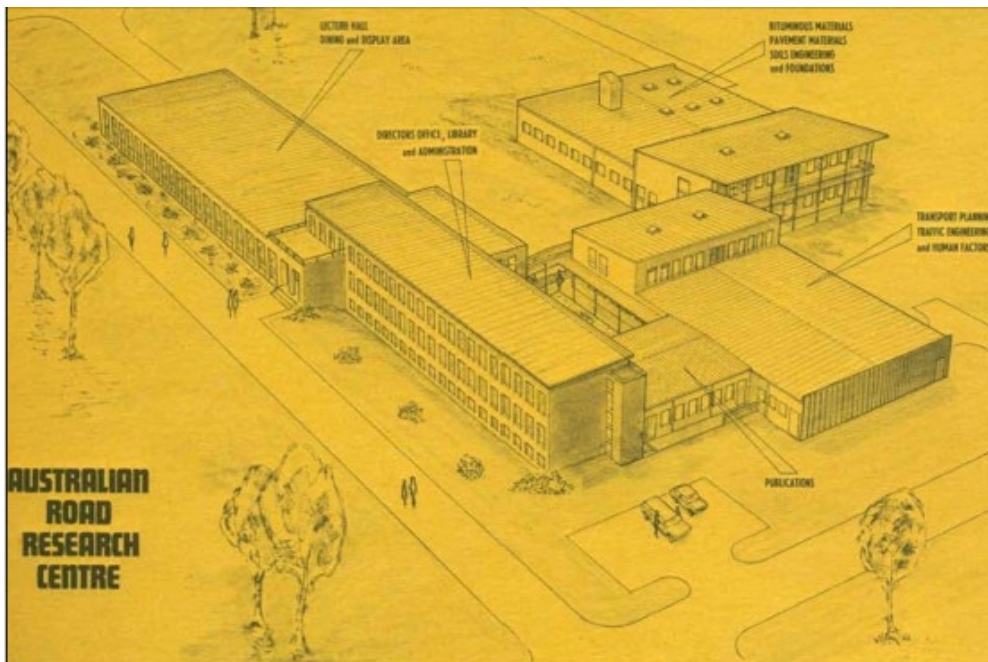


Figure 2. 1972 illustration of the ARRB complex. Source: 'Next Five Years: Australian Road Research Board

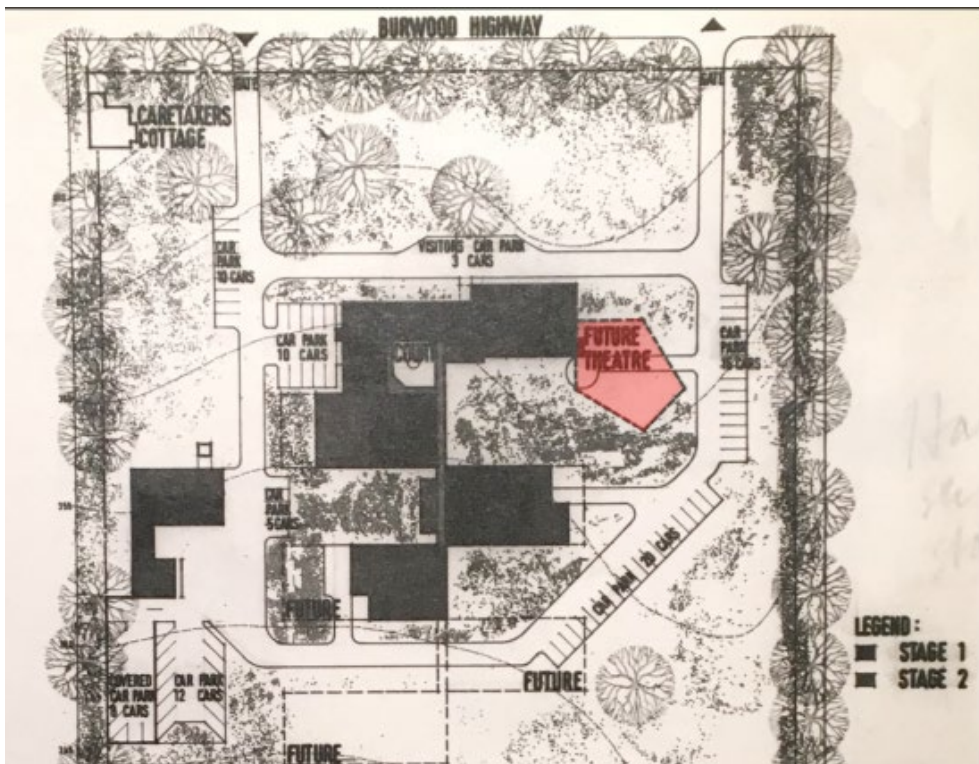


Figure 3. 1970 site plan for the ARRB complex showing the building layout and projected future development. Source: State Library of Victoria Manuscripts Collection.



Figure 4. 1976 aerial photograph showing the full extent of the ARRB site. The current site is shown dashed. Note the surviving apple trees in the south end of the site. Source: ARRB and CMP by Bryce Raworth Pty Ltd.

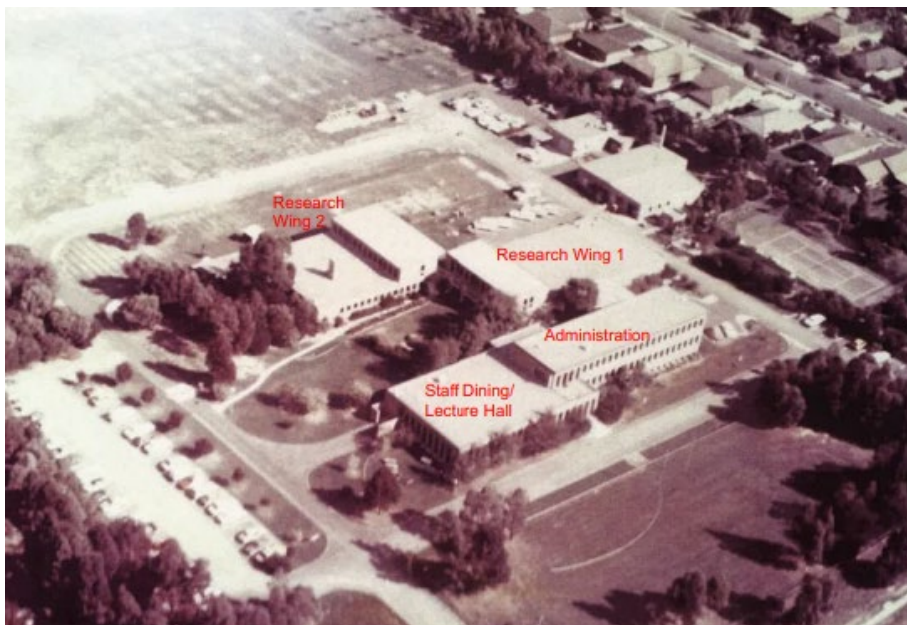


Figure 5. 1975 aerial photo of the ARRB site. Source: ARRB.



Figure 6. 2021 aerial photo of the ARRB site showing location of buildings. Source: CMP by Bryce Raworth Pty Ltd.

Description

The former ARRB complex occupies approximately 2.5 hectares of land on the south side of Burwood Highway, 1.3kms east of Springvale Road. The Administration Building fronts the complex, set approximately 150 metres back from Burwood Highway. A two-level walkway with three research wings placed alternately to each side with landscaped courtyards between is located behind the administration building. Various ancillary structures are located to the west side and to the rear of the site, including a store, garden maintenance shed, garage and Concrete Lab/HV Workshop.

The site planning and architectural hierarchy of the ARRB complex represents elements of both industrial and institutional projects of the period. There are no similar examples in the City of Whitehorse, but the administration building at the BHP refinery, Crib Point, by architect Don Hendry Fulton (1965), and the former BHP Research Laboratories, Wellington Road, Mulgrave by architects Eggleston McDonald & Secombe (1969) exhibit similar characteristics of a refined corporate design against a backdrop of industrial or ancillary structures.

The building layout of the original complex utilising a 2-level circulation spine with modules arranged along its length to allow for flexibility and expansion, was a well-established

principle at the time, with similarities to the 'finger plan' schools conceived in the 1930s by Californian architect Ernest Kump. In Australia, examples of modular planning included Michael Dysart's designs for high schools in New South Wales conceived in 1958, which employed planning strategies based on cloisters and quadrangles, the masterplan for La Trobe University by Roy Simpson (1964-67) and Cameron Offices in Canberra by architect John Andrews (1969).

The 'spine and module' layout provided the potential to expand the complex to the south and the courtyards separating the research laboratory 'modules' allow for light into the buildings on three sides, and an outlook into the landscaped spaces for the occupants.

The front setback to the Administration Building is generally open with carparking across the front of the building and informal plantings of native trees planted as part of the original development along the highway frontage (Figures 12 & 13). The main access to the site is at the west end of the frontage and the internal road runs past the west side of the main buildings. A secondary access road enters the site in the north-east corner. Perimeter plantings of native trees planned by Beryl Mann survive along the western boundary, as do several large trees within the site (Figures 12 & 13). Most of the remnant trees on the eastern part of the original site have either been removed or are located in the land at 502-514 Burwood Highway, sold by the ARRB in the 1990s. The large eucalyptus *melliodora* (Yellow Box) adjacent to the eastern elevation of Research Wing R2 appears to be the only surviving tree on the current site that predates the construction of the complex (Figures 12 & 13).

The Administration Building has a long rectangular plan form orientated on an east-west axis. It comprises a three-level office wing with a partial basement level to the west, and a single-level wing containing the main entry, display and staff dining area and kitchen to the east. The building is concrete framed with a flat, steel deck roof, and non-loadbearing external walls of light brown coloured brick and anodised aluminium window frames. The front elevation is of a 'late twentieth century stripped classical style'¹⁶ composed of narrow, regularly spaced, deep set window openings with splayed brick sills, and is capped by a timber fascia and recessed, timber-lined eaves, that provide a strong horizontal element to the upper façade.

¹⁶ Richard Apperly et al. *A Pictorial Guide to Identifying Australian Architecture: Styles and Terms from 1788 to the Present*. 1989.



Figure 7. Front (north) elevation of Administration Building.
Source: Conservation Management Plan, Bryce Raworth & Associates Pty Ltd, Feb 2021.



Figure 8. Detail of north elevation showing deep window reveals and recessed eaves.
Source: Conservation Management Plan, Bryce Raworth & Associates Pty Ltd, Feb 2021.

Internally, the building is mostly partitioned office space, apart from the double-height staff dining room at the east end of the relatively small entry, the library located in the semi-basement, and the board room in the top floor that opens onto the roof terrace. The major area of aesthetic interest in the interior is the elliptical main stairwell in the west wing, its wood panelled walls, and circular skylight.



Figure 9. Main stair in Administration Building before March 2021 fire. Source: CMP

The West Wing projecting to the south of the west end of the Administration Building, is a flat-roofed, single-storey structure that originally housed the publications section of the ARRB. Constructed of matching brickwork as the main building, the wing is more simply detailed.

The two-level walkway linking the Administration Building with the Research Wings, is an open structure with concrete floors, supported on steel columns. The upper level has a simple steel balustrade with vertical balusters and the roof is unlined steel decking.

Forming part of the original development, Research Wings R1 and R2 have simply detailed light brown brick walls and flat metal deck roofs with no eaves. They are predominately single-storey, with narrow double-storey sections containing offices abutting the walkway.



Figure 10. North elevation of Research Wing R1.



Figure 1. West Elevation of Research Wing R2.

The east end of Research Wing R3, constructed in 1986, is similar to the earlier wings in external form and appearance, whereas the west end is a double-height, metal-clad structure housing the Truck Bay.

The small courtyard between the Administration Building/West Wing and Research Wing R1, has brick paving and a timber deck, with planting to the south side. The larger courtyard between the Administration Building and Research Wing R2 is an open, largely grassed area, with mature trees and shrubs to the north and south sides and is open to the east. The courtyard between Research Wings R1 and R3 has a smaller grassed area with large trees in the centre, and a paved parking area at the west end.

Ancillary structures including the double-height Truck Bay and single-storey Concrete Laboratory/HV Workshop, are utilitarian, metal clad buildings, while the Store is a plain, single-storey structure of brick construction.

Intactness/Integrity

The original buildings and landscape of the former ARRB complex retain a high degree of integrity to their original construction in 1971-72, particularly the Administration Building (notwithstanding serious damage to the roof and interiors in a fire in March 2021), the two-level walkway, and Research Wings R1 and R2.

While the original site has been much reduced in extent following the sale of land to the east and south in the late 1990s, the areas immediately surrounding the original buildings largely reflect the original design intent and layout. A major access road that originally entered the site at the east end of the Burwood Highway frontage, the carparking area that was located to the east of the access road and the perimeter plantings of native trees to the eastern

boundary (Fig. 12) were demolished after the land on which they were located, was sold in the late 1990s. The main frontage has also been partially impacted by the construction of an electrical substation to service the Burwood Highway tramline. Trees in the landscaped courtyards have matured, as have the perimeter plantings of native trees to the western boundary.

The west end of Research Wing R1 has been impacted by the c1975 additions and the east end of Research Wing R2 by the 1974 additions. The original store was extended to the north in the 1980s and the tennis court converted to a carpark in the early 2000s.¹⁷



Figure 12. 1975 aerial photo. Source: City of Whitehorse



Figure 13. 2020 aerial photo. Source: City of Whitehorse

Comparative Analysis

As the significance of the place has already been determined, and the ARRB complex is included in the Heritage Overlay of the Whitehorse Planning Scheme, a comparative analysis is not required in this document.

Assessment Against Criteria

¹⁷ More extensive analysis of the extent of original fabric and later additions/new construction is outlined in the Conservation Management Plan for The Former Australian Road Research Board, prepared by Bryce Raworth Pty Ltd, February 2021.

Following is an assessment of the place against the recognised heritage criteria set out in *Planning Practice Note 1: Applying the Heritage Overlay* (January 2018).

Criterion A: *Importance to the course or pattern of our cultural or natural history (historical significance).*

The former Australian Road Research Board represents the move of institutions and organisations from the inner suburbs Melbourne in the post-war period, taking advantage of undeveloped rural land in the outer fringe of Melbourne.

Criterion D: *Importance in demonstrating the principal characteristics of a class of cultural or natural places or environments (representativeness).*

Constructed in 1971-72 to a design by Mockridge Stahle & Mitchell, the Administration Building of the former Australian Roads Research Board complex is a fine and highly intact representative example of a Post-war Modernist commercial building. Through its simple massing and composition, particularly the repetitive fenestration and assured use of face brickwork, the building is a confident example of the type of building which typified institutional, and to a lesser extent commercial, architecture in the late 1960s and early 1970s. The Administration Building demonstrates typical characteristics of later post-war structures including the rhythmic façade of regularly spaced, deep set windows with distinctive, sloping brick sills, and a strong horizontal emphasis.

The site planning of the ARRB complex is an accomplished example of modular design allowing for flexibility and expansion that was in keeping with established principles of modernist architecture. The 'finger plan' layout provided the potential to expand the complex to the south and the courtyards separating the research laboratory 'modules' allow for light into the buildings on three sides, and an outlook into the landscaped spaces for the occupants.

Criterion E: *Importance in exhibiting particular aesthetic characteristics (aesthetic significance).*

The former Australian Road Research Board complex is enhanced by the large, landscaped front setback and the landscaped courtyards separating the research wings, designed by noted landscape architect Beryl Mann. Although partially compromised by the loss of the eastern part of the site in the 1990s, the combination of open, grassed spaces, the retention of pre-existing eucalypts within the site, and the now-mature native perimeter planting to the northern and western boundaries, demonstrate the movement in the late 1960s and early 1970s to incorporate native trees and plants in landscape design for institutional complexes.

Recommendations

The following amendments are recommended for the Schedule to the Heritage Overlay (Clause 43.01) in the Whitehorse Planning Scheme:

| | <i>Current</i> | <i>Proposed</i> |
|---|----------------|-----------------|
| External Paint Controls? | No | No |
| Internal Alteration Controls? | No | No |
| Tree Controls? | No | No |
| Outbuildings or Fences not exempt under Clause 43.01-3? | No | No |

| | | |
|--|----|----|
| Included in the Victorian Heritage Register? | No | No |
| Prohibited Uses Permitted? | No | No |
| Incorporated Plan? | | |
| Aboriginal Heritage Place? | No | No |

Recommended Extent of Heritage Overlay

To continue to be to the current property title boundaries as currently shown on the Heritage Overlay map of the Whitehorse Planning Scheme to enable ongoing management of future development in the vicinity of the elements on the site that contribute to its significance (Fig. 14).



Figure 14. Extract from Heritage Overlay Map of Whitehorse Planning Scheme showing extent of HO23 that applies to the former ARRB site.

Sources and References

Australian Road Research Board 'The First 50 Years' Report on Activities from Foundation,

ARRB Report of Activities, Various

ARRB Brochure, 1973.

City of Whitehorse GIS images.

City of Whitehorse Heritage Review, 1999, by Allom Lovell & Associates.

Conservation Management Plan for the Former Australian Road Research Board, 500 Burwood Highway, Vermont South, prepared by Bryce Raworth & Associates, February 2021.

Mockridge Stahle & Mitchell Archive, Australian Manuscripts Collection, SLV.

Ruth Sanderson. 'Beryl Mann: Her Contribution to Landscape Architecture in Australia'. *Landscape Australia* VI, 4 (November 1984).