

Report to the Future Melbourne Committee**Agenda item 6.2****Melbourne Planning Scheme Amendment C463 – West Gate Service Stations Heritage Review****21 May 2024****Presenter:** Evan Counsel – General Manager Strategy, Planning and Climate Change**Purpose and Background**

1. The purpose of this report is to seek approval to commence Planning Scheme Amendment C463 (proposed amendment). The proposed amendment is required to implement the recommendations of the *West Gate Service Stations Heritage Review 2024*, GJM Heritage (the Review) (see Attachment 2 of report from management).
2. At the meeting on 20 April 2021, the Future Melbourne Committee (FMC) resolved that (inter alia):

“...management to commission a qualified heritage consultant to undertake a peer review of the Helen Lardner Conservation & Design (HLCD) citation for the West Gate Service Stations (North and South)”.
3. The *Fishermans Bend In-Depth Heritage Review 2021* (prepared by HLCD) recommended that four places be included in a Heritage Overlay. One of those places was the West Gate Service Stations (North and South at 1 and 2 West Gate Freeway, Port Melbourne) as the stations' canopies were identified as being of local significance.
4. A peer review by GJM Heritage in December 2021 (updated 2024) confirmed the stations' canopies are of local significance and recommended that a Heritage Overlay be applied to the sites (Attachment 2 of report from management).
5. The stations are owned by the Department of Transport and Planning (VicRoads) (DTP) and held in a long-term lease by United Petroleum on land zoned as Transport Zone 2.
6. The proposed amendment aligns with Council Plan 2021-25 Major Initiative 21 to protect and celebrate heritage in the municipality.

Key issues

7. The Review assessed the two service stations finding that the canopies meet the threshold for local significance and the sites are therefore recommended for inclusion within the Heritage Overlay in the Melbourne Planning Scheme. The stations' canopies are identified as being of local rarity, aesthetic and technical significance to the City of Melbourne for the unique design and engineering of the canopies' tensile membranes and structures.
8. The assessed heritage significance only applies to the canopies (tensile membranes and structures). An Incorporated Plan is proposed to be introduced into the Melbourne Planning Scheme to identify permit exemptions for the non-contributory elements such as; the shops, restaurants and bowsters. This will ensure that new development does not adversely affect the heritage significance of the canopies while recognising the operational requirements of the service station.
9. The permanent Heritage Overlay controls and associated Incorporated Plan for this place will be part of the proposed amendment which will require public exhibition, providing the landowners and public with the opportunity to make formal submissions and be heard by a Planning Panel if required.

Recommendation from management

10. That the Future Melbourne Committee:
 - 10.1. Approves the *West Gate Service Stations Heritage Review 2024* (GJM Heritage) at Attachment 2 of report from management and management's recommendations for permanent heritage controls under Planning Scheme Amendment C463 (Attachment 3 of report from management).
 - 10.2. Seeks authorisation from the Minister for Planning to prepare and exhibit Planning Scheme Amendment C463 (Attachment 3 of report from management) in accordance with the *Planning and Environment Act 1987* to insert one individual place identified in the Review into the Heritage Overlay.
 - 10.3. Authorises the General Manager Strategy, Planning and Climate Change to make any further minor editorial changes to Planning Scheme Amendment C463 prior to exhibition.

Attachments:

1. Supporting Attachment (page 3 of 172)
2. West Gate Service Stations Heritage Review (GJM Heritage 2024) (page 4 of 172)
3. Amendment C463 (Permanent controls) (page 55 of 172)

Supporting Attachment

Legal

1. Part 1 of the *Planning and Environment Act 1987* (the Act) sets out the objectives of planning in Victoria which includes:
 - (a) *to provide for the fair, orderly, economic and sustainable use, and development of land;*
 - (d) *to conserve and enhance those buildings, areas or other places which are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value;*
2. Part 3 of the Act sets out the procedure for a planning scheme amendments including exhibition and notification of proposed planning scheme amendments, the process for public submissions and the consideration of those submissions by the planning authority or appointed panel.

Finance

3. The cost for preparing and processing Planning Scheme Amendment C463 is included within the City Strategy Branch budget for FY23–24 and proposed for FY 24-25.

Conflict of interest

4. No member of Council staff, or other person engaged under a contract, involved in advising on or preparing this report has declared a material or general conflict of interest in relation to the matter of the report.

Stakeholder consultation

5. Management have engaged proactively with the landowner, Department of Transport and Planning (DTP) throughout the previous amendment: Fishermans Bend In-Depth Heritage Review Amendment C394.
6. Senior officers at DTP have also been advised of the current Review and proposed Amendment C463.

Relation to Council policy

7. The West Gate Service Stations Heritage Review and Amendment C463 assist in the implementation of the Heritage Strategy (2013), in particular action 2.2 which seeks to “*Progressively undertake a review of heritage in the high-growth and urban renewal areas and mixed use areas of the City*”.
8. The West Gate Service Stations Heritage Review also assists in the implementation of Clause 43.01 in the Melbourne Planning Scheme which seeks to “*Conserve and enhance heritage places of natural or cultural significance*”.
9. The *Fishermans Bend Framework*, released in October 2018 by the Victorian Government, references the importance of “the retention of the precinct’s industrial heritage and adaptive re-use of select existing buildings” to support economic transformation. It includes objectives around “protecting architectural and cultural heritage to strengthen the sense of place and identity” (Objective 3.9, p. 56) and recommends a “review of buildings of heritage significance and of heritage overlays” (Action 10).

Environmental sustainability

10. There are no environmental impacts likely to arise from the amendment.

WEST GATE SERVICE STATIONS
1 & 2 WEST GATE FREEWAY,
PORT MELBOURNE
HERITAGE REVIEW

METHODOLOGY REPORT



PREPARED FOR: City of Melbourne
DATE: 8 March 2024
FILE: 2021-024

PROJECT TEAM

Jim Gard'ner | Director

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The subject site forms part of the traditional lands of the Bunurong People, who are represented by the Bunurong Land Council Aboriginal Corporation. This report is limited in its scope to consideration of post-contact cultural heritage and does not provide advice on any Aboriginal cultural heritage significance. Nonetheless, we acknowledge the Bunurong People as the Traditional Owners of the land at this place and pay our respects to their Elders past and present. For more information on the Bunurong People, please visit <http://www.bunuronglc.org/>.

Cover page image: 1 West Gate Freeway, Port Melbourne (Source: GJM Heritage, August 2021).

DOCUMENT VERSIONS

Project No.	Version	Issued To	Date Issued
2021-024	DRAFT	Katherine Smart, Strategic Planner, City of Melbourne	8 February 2024
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1 OVERVIEW

In June 2021 GJM Heritage was engaged by the City of Melbourne (Council) to prepare a local heritage assessment of the pair of West Gate Service Stations at 1 and 2 West Gate Freeway, Port Melbourne (see Figure 1).

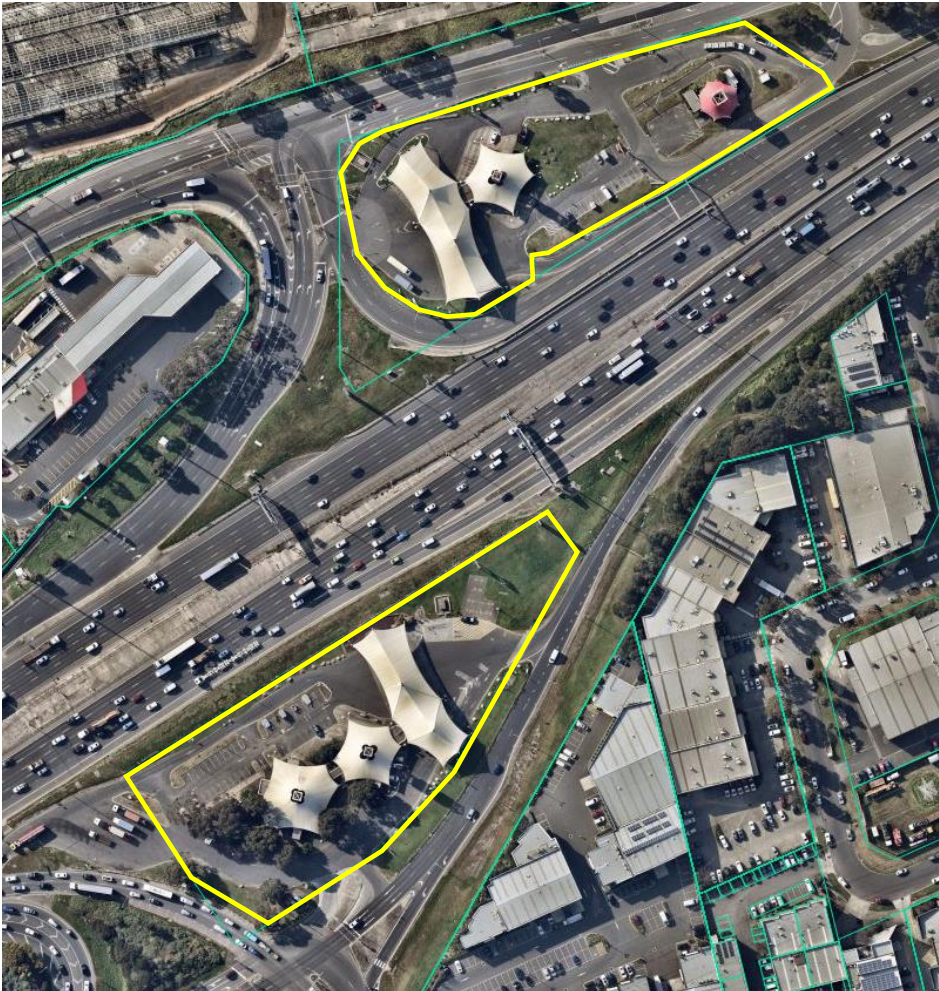


Figure 1. West Gate Service Stations, 2023. Property boundaries indicated in yellow. (Source: Nearmap, aerial photograph dated Sep 2023)

GJM Heritage's engagement followed the completion of a heritage assessment of the 'West Gate Service Stations North and South' prepared by Helen Lardner Conservation and Design (HLCD) Pty Ltd and Dr Peter Mills as part of the *Fishermans Bend In-Depth Heritage Review, 2021*. This assessment concluded that the place should be included in the Heritage Overlay of the Melbourne Planning Scheme, with the elements under 'What is Significant?' identified as follows:

West Gate Service Stations North and South, 1 and 2 West Gate Freeway Port Melbourne... On the south side, this includes the whole of the built structure, including the tensile membrane roofs to the bowlers, the shop and the restaurant buildings and associated walkways and canopies. On the north side, it includes the whole of the built structure, including the tensile membrane roofs to the bowlers and the shop with associated walkways and canopies. The restaurant which is located separately on the north side is not significant. For both service stations, the structural system, particularly the tensile membrane roofs and steel members, the built form and design is

significant rather than the actual building materials which may have been renewed.

GJM Heritage's role in undertaking a new heritage assessment was therefore to validate the findings of the HLCD and Mills assessment in relation to significance and the fabric which contributed to any identified significance.

Following a number of internal Council reviews on our draft assessment – which concluded that the tensile membrane canopies of the West Gate Service Stations at 1 and 2 West Gate Freeway were of local significance and warranted inclusion in the Heritage Overlay of the Melbourne Planning Scheme – a finalised assessment and Statement of Significance was issued in September 2022. The recommendation of our assessment did not progress to a Planning Scheme Amendment at this time.

Subsequently, in January 2024, Council engaged GJM Heritage to:

- Review and make any necessary updates to the 2022 assessment and Statement of Significance for the West Gate Service Station Canopies;
- Review an Incorporated Plan prepared pursuant to section 6(2)(j) of the *Planning and Environment Act 1987* by Council for the place and make recommendations for updates; and
- Prepare a brief report to outline the background to our involvement in the matter and the methodology applied to our 2021/22 assessment and 2024 review.

This report addresses the third dot point above and contains our reviewed and updated heritage assessment (Appendix 1), Statement of Significance (Appendix 2) and Incorporated Plan (Appendix 3).

Separately, it is noted that on 20 April 2021 the Future Melbourne Committee of Council considered a number of recommendations in relation to Amendments C393melb and C394melb following the completion of the *Fishermans Bend In-Depth Heritage Review*. This heritage review included a recommendation to Council that the West Gate Bridge be nominated to the Victorian Heritage Register (VHR). While we understand that a nomination of the West Gate Bridge to the VHR has been accepted by Heritage Victoria, the West Gate Bridge has not yet been considered for inclusion in the VHR by the Heritage Council of Victoria.

2 METHODOLOGY

2.1 2021/22: HERITAGE ASSESSMENT

The approach taken for our 2021/22 heritage assessment of the West Gate Service Stations was as follows:

2.1.1 Review of existing documentation

The existing Heritage Citation and Statement of Significance for the 'West Gate Service Stations North and South' prepared by HLCD and Mills in 2021 was reviewed. This documentation, particularly the contextual history, site history and description, informed our assessment.

Prior to 2021, the place was considered as part of the following surveys and studies:

Study	Recommendation
<i>The Motor Garage & Service Station in Victoria – a survey, 1997</i>	Identified as potentially of State significance
<i>Southbank and Fishermans Bend Heritage Review, 2017</i>	Identified for further assessment

2.1.2 Site visit

The two service station sites and their surrounding areas were inspected and photographed to enable the preparation of a physical description, and to gain an understanding of the level of intactness and integrity of the elements at each site.

2.1.3 Detailed historical research

The HLCD and Mills contextual history and site history formed the basis of the histories prepared for the GJM Heritage citation. We identified points that required clarification and further research and subsequently conducted comprehensive research into the site and the field of lightweight membrane architecture, and in particular, tensile membrane architecture.

The aim of the detailed historical research was to determine or confirm, where possible:

- The architects, engineers and manufacturers for the structures on the site, particularly the lightweight architectural elements
- The design and construction process of the lightweight architecture
- The current level of intactness compared to the original design
- The introduction and development of lightweight architecture in Australia
- Examples of lightweight architecture in Victoria generally, and Melbourne in particular.

An integral part of the historical research was the information and documentation provided by professionals who were involved with the project at the subject site, and in the field of lightweight architecture in the late twentieth century more broadly; including Rowan Murray, Dr Peter Kneen, David McCready and Dean Spencely. These professionals were members of the Membrane Structures Association of Australasia (MSAA) (Kneen and McCready being founding members),



now the Lightweight Structures Association of Australia (LSAA). From the 1980s the MSAA held seminars, workshops and conferences in the field of membrane structures and lightweight architecture. The LSAA remains a key depository of information for the field of lightweight architecture.

A comprehensive range of primary and secondary sources were consulted as part of the historical research into the subject site. Key sources reviewed included:

- HLCD and Mills assessment, 2021
- Documentation provided by the professionals identified above:
 - Papers presented at the Membrane Structures Association of Australasia (MSAA) conferences in the 1980s
 - Historical images for the site
 - Project-specific engineering study for the site
- Lightweight architecture publications
- Lightweight Structures Association of Australasia (LSAA) newsletters
- Lightweight Structures Association of Australasia (LSAA) website, <https://www.lsa.org/>
- E Picker & Vinzenz Sedlak, *Membrane Structures in Australia*, 1982.

The HLCD and Mills contextual history was refined and expanded to outline key international and Australian examples of lightweight architecture, focussing on the development of tensile membrane structures in the Victorian and – in particular – the City of Melbourne context.

The HLCD and Mills site history was expanded. The key additions being the historical imagery and information provided by the professionals who worked on the West Gate Service Stations project and in the field of lightweight architecture in the late twentieth century. The history of the service station canopies was considered in the context of *Victoria's Framework of Historical Themes* (Heritage Council of Victoria, 2010).

2.1.4 Physical Analysis

Informed by the site visit, a physical description was compiled for the two sites, noting the components of the lightweight structures, their current condition, intactness and integrity, and the associated built form of the service stations.

2.1.5 Comparative Analysis

A comparative analysis was undertaken for the place to establish its context within the municipality and its significance threshold. The place was compared in terms of its architectural type (tensile membrane architecture), period of construction, historic use and level of integrity. The Heritage Overlay of the Melbourne Planning Scheme was reviewed for comparable places.

It was determined that there are no other known extant examples of tensile membrane structures dating from the twentieth century included on the Heritage Overlay of the Melbourne Planning Scheme. The tensile membrane structures at the West Gate Service Station sites appear to have no other direct comparators of this period in the municipality.

2.1.6 Assessment Against Criteria

Drawing upon the historical research, physical analysis and comparative analysis, an assessment against the heritage criteria included in *Planning Practice Note 1: Applying the Heritage Overlay* (PPN1) (August 2018) (PPN1) was undertaken. The place was found to meet the threshold of local significance under Criterion B (rarity), E (aesthetic) and F (technical), and was recommended for inclusion in the Schedule to the Heritage Overlay of the Melbourne Planning Scheme.

2.1.7 Statement of Significance

A Statement of Significance was prepared in accordance with the guidance provided within PPN1, following the format of 'What is significant?', 'How is it significant?' and 'Why is it significant?'. The Statement of Significance clearly defines the heritage values of the place and identifies contributory fabric to guide future management.

In summary, the assessment completed by GJM determined that:

- The West Gate Service Station Canopies (the lightweight structures and associated systems at each site) are of local rarity, aesthetic and technical significance to the City of Melbourne; and
- The shop/restaurants, bowsters, signage and other service station elements are not significant.

2.1.8 Extent of Heritage Curtilage

A plan was prepared to indicate the recommended extent of the Heritage Overlay (heritage curtilage). The recommended heritage curtilages have been determined in accordance with the guidance provided in PPN1 and capture all elements that are considered to contribute to the significance of the place. To ensure that the mapped extent is clearly identifiable on site, the eastern boundary of the Heritage Overlay is taken to the kerb line of the slip road entry.

2.1.9 Schedule to the Heritage Overlay Triggers

Consideration was given to the following:

- Whether tree controls, paint controls or internal alteration controls should be triggered in the Schedule to the Heritage Overlay;
- Whether outbuildings and fences should be subject to the notice and review requirement of the *Planning and Environment Act 1987*; and
- Whether provisions for allowing prohibited uses should be made.

In accordance with the guidance provided in PPN1, it was determined that no specific triggers were warranted for the heritage place.

2.1.10 Citation

A Heritage Citation was prepared comprising:

- The documentation outlined above (contextual history, site history, physical description, analysis of intactness and integrity, comparative analysis and assessment against criteria);
- A plan showing the recommended extent for the Heritage Overlay; and
- Recommended triggers in the Schedule to the Heritage Overlay.

2.1.11 Council Review

A draft Citation and Statement of Significance was provided to Council in October 2021 for Council comment. Following feedback, minor edits (generally grammatical or changes necessary for clarification) were made to the draft documentation.

Final versions of the Citation and Statement of Significance were issued to Council officers in September 2022.

2.2 2024: UPDATED DOCUMENTATION

At Council's request, in January 2024, we reviewed and updated the 2021/22 GJM Citation and Statement of Significance for the place, and reviewed and updated the Incorporated Plan drafted by Council.

2.2.1 Citation and Statement of Significance

Given the passage of time GJM Heritage reviewed the Citation and Statement of Significance, to bring them up to date, noting in particular where comparative places within the City of Melbourne have since been demolished.

The Statement of Significance has also been updated to utilise the online template provided as part of PPN1 guidance.

The referencing system in the Citation has also been converted from footnotes to Harvard (author/date) referencing, at Council's request.

The 2024 updated final versions of the Citation and Statement of Significance are attached at Appendices 1 and 2.

2.2.2 Revised Incorporated Plan

In February 2021 Council prepared an Incorporated Plan pursuant to section 6(2)(j) of the *Planning and Environment Act 1987* to provide a suite of works that would be exempt from a permit under Clause 43.01-1 of the Melbourne Planning Scheme. This document was based on the heritage values and extent identified in the 2021 HLCD and Mills assessment. GJM Heritage reviewed and updated the Incorporated Plan in February 2024 to reflect the heritage values and extent identified in the 2021/22 assessment. This revised Incorporated Plan provides a larger suite of works that would be exempt from a permit under Clause 43.01-1 than was proposed in the February 2021 version.

The revised Incorporated Plan is provided at Appendix 3 to this report.

3 SUMMARY

It is our assessment that the West Gate Service Station Canopies meet heritage criteria B, E and F at the local level and warrant inclusion in the Schedule to the Heritage Overlay of the Melbourne Planning Scheme.

APPENDIX 1 - CITATION



HERITAGE CITATION

West Gate Service Stations

1 & 2 West Gate Freeway, Port Melbourne



Figure 1. North service station site, 1 West Gate Freeway, Port Melbourne (GJM Heritage, August 2021).



Figure 2. South service station site, 2 West Gate Freeway, Port Melbourne (GJM Heritage, August 2021).

DATE: 8 March 2024

WEST GATE SERVICE STATIONS , 1 & 2 WEST GATE FREEWAY, PORT MELBOURNE

Place Type: Lightweight architecture, service stations	Architect: Graeme Law & Associates
Construction Date: 1989	Structural Engineer: Connell Wagner
Recommendation: Include in the Heritage Overlay	Canopy Engineer: Connell Barrow McCready
Extent of Overlay: See Figure 70 & Figure 71	Manufacturers: Spacetech

Contextual History: Lightweight Architecture

[The following contextual history is informed by the 2021 citation for ‘West Gate Service Stations North and South’ prepared by HLCD & Dr Peter Mills as part of the ‘Fishermans Bend In-Depth Heritage Review’; with additional information as cited.]

Arising from the tradition of tent making, lightweight architecture developed from the 1950s in response to the development of new materials and technologies (LSAA, ‘Membrane Structures’). Major developments in the design and construction of membrane structures as well as in the manufacture of suitable materials in this initial phase, occurred almost exclusively in Europe (West Germany), with the likes of architect and engineer Frei Otto, as well as in the United States (Picker & Sedlak 1982:2).

Lightweight architecture encompasses various technologies and materials, allowing for versatility in application and the creation of unique forms. Innovation and experimentation in the industry led to the development of prestressed and non-prestressed membrane structures, early cable net structures, spaceframes, pneumatic (air supported) structures and tensile membrane structures, amongst others. They are lightweight, temporary or permanent solutions for protection from the elements.

This contextual history focusses on key international and Australian examples of lightweight architecture, and follows in more detail the development of tensile membrane structures, particularly in the Victorian context.

1950s

Early examples of tensile architecture were cable net structures, which featured a variety of infill panels. One of the most prominent structures constructed in Melbourne in the 1950s was the 1959 Sidney Myer Music Bowl, Melbourne (VHR H1772) (Figure 3), designed by Yuncken Freeman Griffith Bros & Simpson in collaboration with engineer Bill Irwin. It was among the earliest large-scale tensile cable net structures in the world.



Figure 3. The Sidney Myer Music Bowl structure in 1959 (Source: Mark Strizic, via Docomomo Australia).

1960s

The Australian lightweight architecture industry was inspired by the innovative works of international architects and engineers experimenting in the field, a prime example being Frei Otto. Otto was a Berlin-born architect and engineer, renowned for his development of lightweight structures in collaboration with European tent fabricators L Stromeier & Company in the 1950s and '60s. Commencing in practice in 1952, Otto gained prominence for his doubly-curved stressed tensile structures, producing inspiring and experimental 3D forms and long-span tensile structures (LSAA, 'The Legacy of Frei Otto'; McCready, pers. comm.).

Otto used cable net technology in his prominent designs of the 1960s and '70s, including the 1964 Institute for Lightweight Structures (IL) at the University of Stuttgart, a highly regarded and creative research centre which continues today. The West German Pavilion at Montreal 1967 Expo (Figure 4), for which he gained international attention, was a free form cable net roof structure with a tensioned fabric skin suspended below the cable net. It was one of the first tensile structures to use a PVC coated polyester membrane, which would become the industry norm. His design of the 1972 Munich Olympic Stadium structures (Figure 5) further developed the free formed stressed cable net structure, the cladding being large flat rectangular sheets of acrylic supported by flexible rubber pads above the cable net.



Figure 4. West German pavilion at Expo 1967 Montreal, designed by Frei Otto (Source: Peter Kneen collection via LSAA.org).



Figure 5. Munich Olympic Stadium cable net structures by Frei Otto (Source: Peter Kneen collection).

In New South Wales, Bert Bilsborough of B Bilsborough & Sons was a pioneer in the design and fabrication of membrane structures in Australia. He developed various lightweight structures in the 1960s, including prestressed and non-prestressed tent-type structures for various clients and purposes, such as transportable display marquees. His company also developed pneumatic structures, including the design and construction of Australia's first known 'air-house' in 1960, erected in Botany, New South Wales (Picker & Sedlak 1982: iv, 26).

1970s

Lightweight architecture technology primarily developed in Australia from the 1970s, with designers and fabricators experimenting with its application, with varying degrees of success. During this period a number of lightweight structures were fabricated in Australia for temporary and travelling projects, while small to large-scale permanent structures were constructed for a range of clients (Picker & Sedlak 1982: iv, 26).

Two early examples of permanent tensile membrane structures in Victoria featured tensile fabric roofs over more conventional wall structures – an 'Art House' at Ivanhoe Girls' Grammar (1978) and St Anne's Catholic Church at Seaford, Victoria (1978-82).

The 'Art House' at Ivanhoe Girls' Grammar School (1978; Figure 6) was the first tensile membrane structure constructed in Australia (as distinct from a cable net structure). The 'Art House' roof, constructed over an art studio, was built at the rear of a heritage home at 129 Marshall Street, Ivanhoe (MSAA No. 4, 1988; Mehler Technologies 2007; *Age* 1 Jun 1979:16). The roof structure was designed by architects Bryan R Dowling & Associates and fabricated by Geodome Space Frames (later Spacetech), with engineer Dr Peter Kneen, using PVC-coated polyester fabric on a steel support frame (Picker & Sedlak 1982:30).

St Anne's Catholic Church at Seaford, Victoria (1978-82; extant) was the first membrane structure in Australia classified as a permanent building, according to the local building regulations (Figure 7) (Picker & Sedlak 1982:40). The roof structure incorporates a Teflon-coated fibreglass membrane atop brick walls enclosing the church (*Sydney Morning Herald* 19 May 1982:18; Picker & Sedlak 1982:9). Council approval to build was obtained in 1978, with construction commencing in May 1981, and the first mass held in April 1982. The architects were Payne Pattendon and the engineers were B J O'Neill & Associates. The church was refurbished in 2007 (St Annes, 'Our History'). The design incorporated religious symbolism with 12 support masts and the whole structure literally hanging from the cross. The building featured on the front cover of a contemporary issue of *Engineers Australia*, where it was labelled 'a first for Victoria'.



Figure 6. The 'Art House' roof structure at Ivanhoe Girls' Grammar, 1982 (Source: Picker & Sedlak 1982:31).



Figure 7. St Anne's Church, Seaford, 2023 (Source: ACCH).

Amongst the group of early tensile fabric structures in Australia was the arch-supported roof structure over the Norlane Olympic Pool in North Geelong (1980; Figure 8), which comprises a modular steel space frame supporting an outer and inner membrane of PVC coated polyester (Picker & Sedlak 1982:36).

Interstate examples included a theatredome, erected at the 1979 Sydney Easter Show, and later at Luna Park (1979), designed by Seaman Buildings Systems (Picker & Sedlak 1982:32). In Queensland, the Dean Park Sound Shell roof in Townsville (demolished; Figure 9) was built in 1980, designed by Geodome Space Frames and engineer Dr Peter Kneen.



Figure 8. The Norlane Olympic Pool roof structure in 2015
(Source: Ausleisure).



Figure 9. Dean Park Sound Shell, South Townsville, c1980
(Source: Spacetech collection).

Professor Vinzenz Sedlak was at the forefront of lightweight architecture in Australia, having worked with Frei Otto at the Institute of Lightweight Structures at the University of Stuttgart, Germany. In 1976 Sedlak was appointed to a position at the University of New South Wales School of Architecture, where he established the Lightweight Structures Research Unit (LSRU) (Picker & Sedlak 1982: III).

In 1981 Sedlak was one of the founding members of the Membrane Structures Association of Australasia (MSAA), along with professionals in the field Dr Peter Kneen and David McCready, now the Lightweight Structures Association of Australasia (LSAA). The first Australian Seminar and Workshop on membrane structures was held in 1981. A crowning achievement of the association was the holding of the renowned International Conference in Sydney in 1986.

Sedlak produced a range of structures including tensioned membranes, inflated pillows (pneumatic structures), timber grid and the demountable stage structure used in Sydney's Domain each summer (LSAA, 'The Legacy of Frei Otto'). The demountable open-air stage with a tensile membrane canopy was installed at the Domain in 1983, featuring lattice-truss steel masts (Figure 10) (MSAA No. 1, 1986).

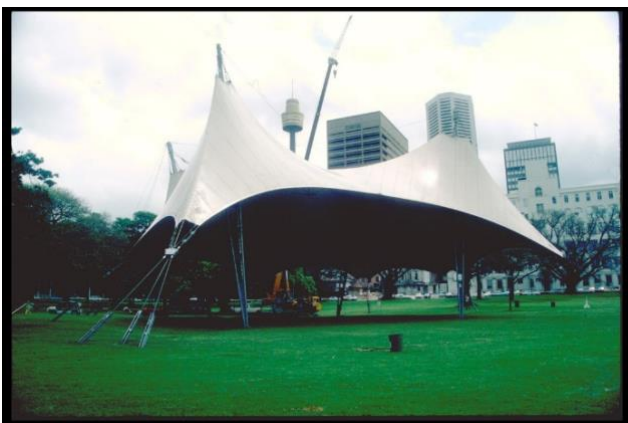


Figure 10. The canopy at Sydney's Domain
(Source: Peter Kneen collection).

1980s

The 1980s were a key period for the growth and development of the lightweight architecture industry in Victoria, and Australia as a whole, as public interest increased and technology advanced. The 1980 Australian lecture tour by expert Frei Otto and a travelling exhibition of his work contributed to the popularity of tensile architecture and influenced tensile structure building activity in Australia.

Newcastle architect Phillip Drew, who had written a book on Otto's work in 1976, designed an Otto-inspired temporary 'fishnet tent' structure to house Otto's travelling exhibition (demolished; Figure 11), which in Melbourne was located in the Queen Victoria Gardens opposite the Victorian Arts Centre in St Kilda Road (*Age* 15 Apr 1980:10).

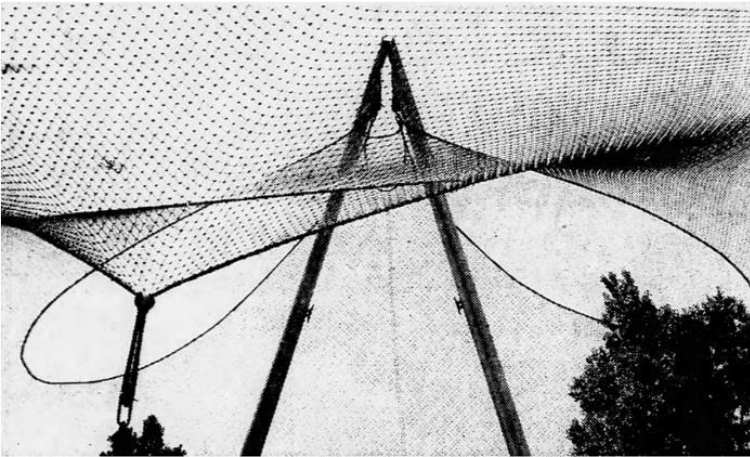


Figure 11. The demountable 'fishnet tent' to cover the 1980 exhibition of Frei Otto's work at Queen Victoria Gardens, Melbourne (Source: Age 15 April 1980:10).

The 1980s saw a large number of tensile membrane structures constructed throughout Australia. In 1982 a tensile membrane structure served as an amphitheatre roof, covering the audience space at Seven Creeks Run in Euroa (demolished; Figure 12). It was designed by Spacetech Pty Ltd and architects Roy Grounds & Partners (McCready 1989).



Figure 12. The structure over the audience space at Seven Creeks Run, Euroa (Source: Peter Kneen collection).

A series of hotels in the 1980s incorporated tensile membrane roof structures designed by Canberra architects Bryan Dowling and Associates, including the Canberra International Motor Inn (now The Pavilion), in Dickson, which comprised an entrance canopy and inner courtyard roof (1981; extant). Extensions in 1984 saw the replacement of the original membrane atrium roof, similar to the original (*Canberra Times* 16 Mar 1984:7).

The same architects designed The Pavilion Motor Inn in Wagga Wagga (1985) (*Age* 23 Sep 1985:45) and The Pavilion Hotel Forrest, Canberra (1984/5; extant) which featured a tensile membrane atrium structure

supplied by Space Structures Australia (*Canberra Times* 8 Apr 1984:10). The Airport International Motor Inn in Queanbeyan, NSW (Figure 13; extant), opened July 1985, was designed by Bryan Dowling and Associates with engineer Ray Franzi (*Canberra Times* 23 Jul 1985:7; 4 Aug 1985:11).



Figure 13. The Airport International Motor Inn, Queanbeyan, NSW (Source: Trivago).

One of the most celebrated uses of tensile structures of this period was at the 1984 Yulara Tourist Resort (Figure 14), which featured an array of single sail elements supported on cable-stayed tubular steel masts. Designed by architects Philip Cox and Partners, and Arup engineers, the resort won the Royal Australian Institute of Architect's Sir Zelman Cowan Award in 1985 (*Sydney Morning Herald* 2 Nov 1985:9).



Figure 14. Uluru (Yulara) Resort (Source: Spacetech collection).

Tensile membrane technology was highly suitable for projects in community and public spaces. Examples include the Port Lincoln Leisure Centre (1985; demolished), and the Glenorchy (Tolosa Park) Sound Shell roof in Hobart (1986; Figure 15). The Todd Street Mall structure in Alice Springs (1986; demolished; Figure 16) was the winner of the 'Small Structures' category in the 1988 Membrane Structures Association of Australasia Design Awards (Mehler Technologies 2007; MSAA, No. 5 1988). Other examples were located at Langtree Mall in Mildura, Pitt Street Mall in Sydney and Preston Market, Preston (discussed further below) (McCready 1988). A twin-conical tensile membrane roof was erected over the Mayfair Plaza in Sandy Bay, Hobart c1987 (MSAA, No. 4 1988:5). The roof membrane was renewed in 2015, and the plaza is now fully enclosed (*Mercury* 16 Sep 2015).

Other notable examples erected in the late 1980s include the Toowong Village atrium in Brisbane built in 1988, covered by a Teflon/glassfibre membrane wrapped over steeltube arches. The Roxby Downs Motel gained a 34m square conical PVC membrane roof in 1987. The Lake & Oceans Hotel Lake Macquarie, NSW was a twin conical structure completed by 1988. The Marina Mirage Roof Sails at Southport, Queensland (Figure 17) were completed by 1988 (MSAA, No. 2 1987; No. 3 1987; No. 5, 1988).

The 'Quadome recreational enclosure' designed by Brisbane firm Vesi Membrane Systems covered a pool at the Beaton Park Leisure Centre, Wollongong, in 1989 (Figure 18). The PVC coated membrane covered a large, high dome supported on a spider-like frame of triangular web tubular-steel trusses (MSAA, No. 7 1989).

Australian Bicentennial celebrations in 1988 produced two major temporary membrane structure projects. The series of tensile membrane sun sails at the World Expo 88 in Brisbane (Figure 19), was the largest tensile membrane project in Australia to date. It was designed by West German Harald Muhlberger and travelled Australia-wide. The smaller Expo Gateway, designed and made in Australia, was a simple cable stayed and edged structure (Figure 19). The sun sails of the World Expo 88, Brisbane, were the winner of the 'Large Structures' category in the 1988 Membrane Structures Association of Australasia Design Awards (MSAA, No.1, 1986; No. 2, 1987; No. 4, 1988; No. 5, 1988).



Figure 15. Tolosa Park Sound Shell, Glenorchy, Hobart (Source: Google Street View, image captured 2015).



Figure 16. Todd Street Mall, Alice Springs, c1987 (Source: Spacetech collection).

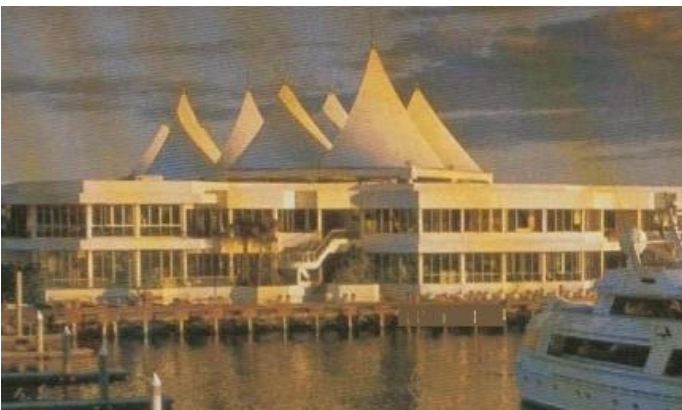


Figure 17. Marina Mirage sails at Southport Broadwater, Gold Coast, 1989 (Source: MSAA, No. 6 1989).



Figure 18. The 'Quadome recreational enclosure' at Beaton Park Leisure Centre, Wollongong, 1989
(Source: MSAA, No. 7 1989).



Figure 19. Expo 88 Brisbane structures, showing the main membrane structures in the background, and the Expo Gateway in the foreground (Source: Expo 88 website).

The temporary Australian Bicentennial Travelling Exhibition (Figure 20) was designed by architect Daryl Jackson, and engineers the Connell Group, and fabricated by Geodome Space Frames (later Spacetech). The transportable tension structures included one large conical main tent and a series of smaller double conical structures that were carried between 34 sites (*Architecture Australia*, Mar 1989).



Figure 20. A full-scale trial of the erection of the Bicentennial Travelling Exhibition in Ballarat, Victoria (Source: MSAA, No. 4 1988).

A small bicentennial structure in Canberra, the Bicentennial Sound Shell Stage 88 in Commonwealth Park (Figure 21), was designed by Philip Cox, Taylor & Partners and Ove Arup Engineers, and fabricated by Space Structures (Australia) Pty Ltd. The design featured two internal mushroom heads and a steel-web push-up arch, with catenary cable edges linked to masts and tie-downs (MSAA, No. 4 1988).





Figure 21. Stage 88, Commonwealth Park, Canberra (Source: Canberra Weekly, published 13 December 2018).

Victoria in the late 1980s

The late 1980s saw tensile membrane structures of various forms, size and application constructed across Victoria.

A prominent project was the structures erected for the Penguin Parade on Phillip Island, which opened on 14 November 1988, comprising an entrance structure and viewing shelter (demolished; Figure 22 - Figure 23) (Age 15 Nov 1988:3). The entrance structure was described in *Warp & Weft* as ‘two complexly curved, paired interactive structures’ (MSAA, No.6 1989). The architects were Daryl Jackson Pty Ltd, the engineers the Connell Group, and the contractors were Spacetech Pty Ltd. Two offset layers of blue-tinted membranes were suspended from a single square-section lattice mast in tubular steel. On the outside were catenary cables attached to tubular steel struts and tie down cables anchored to the ground. The overlapping membranes produced a layered effect. The independent lightweight structure served to shelter and shade the main entrance to the facilities buildings, which radiated out in a series of stepped skillions from the focus of the canopy and steel tower. The main structure was demolished in late 2019 as construction started on a new visitor centre.



Figure 22. The entrance structure at the Penguin Parade visitor centre (Source: Spacetech Collection).



Figure 23. Viewing shelter at the Phillip Island Penguin Parade (Source: Spacetech Collection).

At St Michael’s Grammar School, St Kilda, the courtyard roof (1988; Figure 24) enclosed an elongated court. Slender steel columns support segmental arch rafters with tensioned membrane between. The structure was built by B J O’Neill & Partners Pty Ltd (MSAA, No. 5 1988).



Figure 24. St Michael's Grammar School courtyard roof (Source: MSAA, No. 5 1988).

At Preston Market, the 1988 redevelopment included a series of 50 repetitive conical forms to the roof market arcades, designed by Spacotech Pty Ltd (Figure 25 - Figure 26) (MSAA, No. 5 1988; McCready 1988). The arcade roofs are supported by a steel frame, and sit above and overlap the buildings, providing ventilation through the resulting gap. While the roof of the market buildings themselves is formed by a spaceframe system. The design received an award from the Membrane Structures Association of Australia in 1988.



Figure 25. Structures to the arcades, Preston Market redevelopment (Source: Spacotech collection).



Figure 26. Top view of the Preston Market redevelopment membrane structures (Source: Spacotech collection).

In Port Melbourne, the Shell West Gate complex saw the implementation of numerous tensile membrane structures over twin service station sites on the Melbourne side of the West Gate Bridge (1989). The design was a collaboration between architects Graeme Law & Associates, canopy engineers Connell Barrow McCready Pty Ltd (comprising David McCready and Bob Barrow), structural engineers Connell Wagner, and contractors Spacotech Pty Ltd, as well as planners and landscape architects, Tract Consultants Australia (discussed in detail in the Site History).

The Golf City Driving Range at Keysborough Golf Course (Figure 27) was opened in 1990. A membrane roof structure was fabricated by Spacotech, the structural engineers were Connell Wagner, and the building was

designed by Millar Sainsbury Mulcair Architects (MSAA, No. 8 & 9 1990). The membrane structure has a linked twin cone form suspended from masts that enclose a large two-storey space. The masts have conical caps.



Figure 27. The Keysborough Golf Club driving range roof (Source: Spacetech collection).

Tensile membrane structures over the terrace bar, Silks Bar, at Moonee Valley Racecourse (1990) were designed by E F Bilson & Associates, and the structural engineers were Connell Wagner Pty Ltd (Figure 28) (MSAA, No. 9 1990). The structures are visible from the Dean Street gates at the edge of the main mass of the racecourse buildings, and feature five linked conical membrane roofs rising from square perimeter beams.



Figure 28. The roof structures at Silks Bar, Moonee Valley Racecourse (Source: MSAA, No. 9 1990).

At Greenscene Nursery in Carrum Downs, a large-scale tensile structure incorporating shade cloth was erected for weather protection (1990; Figure 29). The double conical saddle-shaped roof form was awarded the 1990 Excellence Award by the Membrane Structures Association of Australia (MSAA, No. 9 1990).



Figure 29. The shade cloth roof structure at Greenscene Nursery, Carrum Downs, 1990 (Source: MSAA, No. 9 1990).

Victoria in the 1990s

Architects and engineers continued to incorporate tensile membrane technology into various types of projects, resulting in some large-scale, prominent structures in Victoria. The food court roof constructed at the Queen Victoria Market (VHR H0734) in 1994-95 was formed with tensile membrane technology (Figure 30

- Figure 31) (Lovell Chen, April 2017); this structure was demolished in early 2022 as part of the market renewal project.



Figure 30. Roof over the foodcourt, Queen Victoria Market (demolished early 2022) (Source: Peter Kneen collection).



Figure 31. Interior of the Queen Vic Market foodcourt roof (demolished early 2022) (Source: ACLA Consultants).

Victoria in the 2000s

Tensile membrane technology has continued to remain highly popular in a variety of applications in the 21st century. Highlighted are some key Melbourne and Victorian examples.

Aquinas College in Ringwood includes a membrane structure, known as the ‘Forum Structure’, which provides shelter at access points to surrounding buildings. Originally constructed in 2004, an extension to the canopy was added in 2016 (LSAA, ‘Canteen Canopy Extension’).

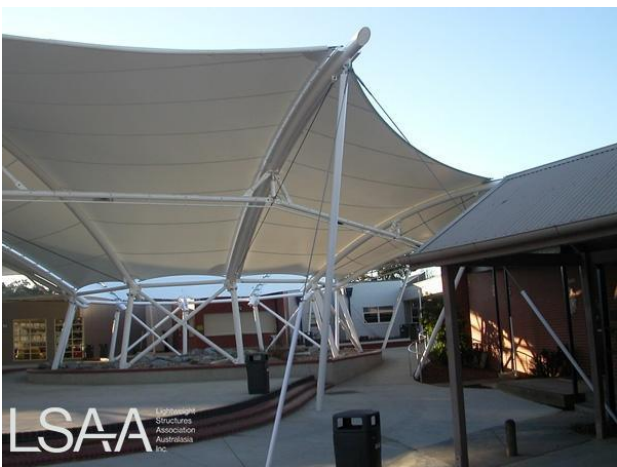


Figure 32. The Forum Structure at Aquinas College in Ringwood (Source: LSAA.org).

A substantial lightweight structure built in 2005 as part of the redevelopment of the Royal Melbourne Showgrounds, Flemington, is the Grand Pavilion, designed by Daryl Jackson Pty Ltd and Tensys Engineers Pty Ltd (Figure 33 - Figure 34). It was the largest permanent tensile membrane structure built in Australia, and reputedly the largest in the southern hemisphere. The structural design of the steel supporting structures was similar to the tensile membrane structures of the 1980s (LSAA, *Lightweight Talk*, August 2006).





Figure 33. The Grand Pavilion at the Royal Melbourne Showgrounds, 2022 (Source: GJM Heritage, Sep 2022).



Figure 34. The Grand Pavilion at the Royal Melbourne Showgrounds, c2005 (Source: Oasis, 'The Grand Pavilion, Melbourne Showground's').

At nearby Flemington Racecourse, a structure of multiple inverted cones was constructed at the Flemington Racecourse Meeting Point in c2007, designed by architects, Taiyo Membrane Corporation (later MakMax) (LSAA, 'Flemington Racecourse Meeting Point').



Figure 35. The tensile membrane structure at the Flemington Racecourse Meeting Point (Source: LSAA.org).

The 2006 additions to the Melbourne Sports and Aquatic Centre (MSAC), constructed for the Commonwealth Games in Albert Park (Figure 36 - Figure 37) were designed by Peddle Thorpe architects and Connell Wagner structural engineers, and included membrane roofs over a 50m competition pool and the accompanying grandstand. There were also tensile membrane structures on the north and east sides, which were later removed. This was a change in direction from previous tensile membrane structure designs, as they are relatively flat in profile and tied to lightweight steel beam and truss structures, with 'push up' elements providing the tension and double curvature to the membrane as opposed to the earlier use of masts and cables (*Steel Australia Jun 2006:14*).



Figure 36. Roof structure of the Melbourne Sports and Aquatic Centre, Albert Park (Source: LSAA.org).



Figure 37. Roof structure of the Melbourne Sports and Aquatic Centre, Albert Park (Source: LSAA.org).

Penbank Sound Shell in Morooduc was designed by Structureflex Pacific with structural engineer John Killmister in c2009. The tensile membrane structure is supported by a H-shaped frame and cables, allowing for an unobstructed view for the audience (LSAA, 'Penbank Sound Shell').



Figure 38. Penbank Sound Shell, Moorooduc (Source: LSAA.org).

A large structure was erected near the Mildura Riverfront to serve as a performance venue (2009), designed by architects Jackson Architecture and engineers Aurecom (LSAA, 'Mildura Riverfront Performance Venue').



Figure 39. Mildura Riverfront Performance Venue (Source: LSAA.org).

At the University of Melbourne Student Union Building, Parkville, a tensile membrane roof structure was erected over the North Court to a design by John Wardle Architects in 2001. This structure was demolished in late 2019.



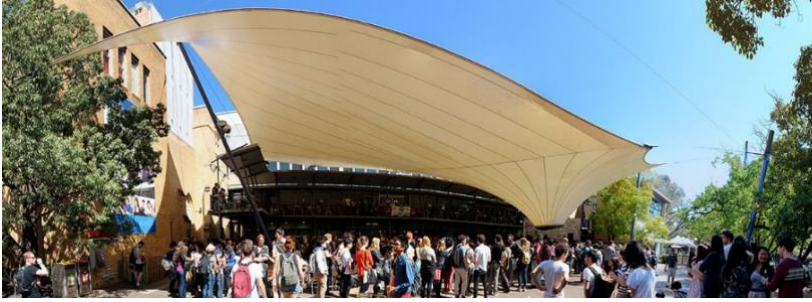


Figure 40. The structure over the North Court at the University of Melbourne Student Union Building (demolished late 2019) (Source: UMSU, 'North Court').

An asymmetrical inverted conical structure was erected over a communal deck at Melbourne Girls Grammar, South Yarra (c2011), designed by architects Sally Draper & Associates and structural engineers SEMF (LSAA, 'Melbourne Girls Grammar School Cover to Communal Deck').



Figure 41. The tensile membrane structure at Melbourne Girls Grammar, South Yarra (Source: LSAA.org).

In Bendigo, Y2 Architects designed two structures at Catholic College, Bendigo (2015). The main tensile membrane structure covers a large courtyard area, while a second, smaller canopy provides shelter for a stage space (LSAA, 'Catholic College Bendigo').



Figure 42. The main and secondary (stage) canopies at Catholic College, Bendigo (Source: LSAA.org).

Tensile membrane structures used on service stations

Within the wider Australasian context, in addition to the use of tensile membrane technology at the West Gate Service Stations, there is one other known example of this technology applied to a service station.

In 1999 Challenge Service Stations in New Zealand applied tensile membrane technology at their service stations, providing weather protection over the bays of bowsers. Designed by architect Alex Ross & Associates in collaboration with Structurflex Limited, the clients requested a distinctive look for their brand, and a quick construction time (Structurflex, 'Challenge Gas Service Station').

A single large canopy is formed by a perimeter truss and four masts, creating four peaks, covered with polyester reinforced PVC fabric. Lighting into the canopy creates a glow-in-the-dark effect at night, the canopy

as a whole having a landmark effect for the company (Structurflex, 'Glow-in-the-dark visibility for New Zealand petrol stations').



Figure 43. A Challenge service station canopy, c1999
(Source: Structurflex, 'Challenge Gas Service Station').



Figure 44. A Challenge service station canopy, c1999
(Source: Shelter-Rite Architectural fabrics).

Conclusion

Lightweight architecture grew in popularity, and its applications broadened, from its initial key development phase in Australia in the 1970s. The late 1980s saw a dramatic increase in the application of membrane architecture in Australia as the industry expanded. As published in the 1990 Membrane Structures Association of Australasia newsletter, *Warp & Weft*, industry expert Professor Vinzenz Sedlak wrote in summary of the 1990 Achievement Awards:

... membrane structures have arrived as a major new construction type in Australian building and have finally achieved a high level of acceptance amongst architects and clients alike.

Australian membrane structure's display a high degree of maturity in fabrication and execution and a solid knowledge base has been secured with many successful examples supporting their viability as a reliable construction method combined with their steadily increasing popularity (MSAA 1990).

The popularity of lightweight technology, and tensile membrane architecture, continued into the 21st century, in conjunction with the development of materials. Tensile membrane technology continues to be widely applied, creating innovative forms in architectural design.

Projects of all scales have taken advantage of the technology and its weather screening properties, with the technology applied to innumerable types of projects – both permanent and temporary – from small-scale to long-span. The technology has been applied to major sports stadiums, sports grounds and greens, swimming pools, churches, shopping centres and malls, public plazas and stages, plant nurseries, agricultural settings, playgrounds, carparks, parks and many other outdoor public and private spaces. Many of these projects have been award-winning for their technological innovation and design.

The technology demands specialist designers '*...who combine an intimate understanding of the medium with knowledge of form-finding laws, structural engineering, shape variation and manipulation, material fabrication and manufacturing methods and aesthetics*' (Picker & Sedlak 1982:2). Tensile membrane projects require the close co-operation of the entire project team – in design, fabrication and construction (Picker & Sedlak 1982:2).

Site History

New transport demands around Melbourne saw the construction of the West Gate Bridge between 1968 and 1978, opening on 15 November 1978. Toll sites were originally located on the Melbourne side of the bridge (Figure 45). Tom Roper MLA, Minister for Transport, stated (in hindsight in 1987):

Originally it had been intended to simply grow grass on the toll plaza area, but on a weekend drive it occurred to me that a service centre type development would be both better economically for the State and for the motoring public. I asked the RCA [Road Construction Authority] which at the time had a policy against service development on highways to consider the best use of the area (Tom Roper, 8 October 1987).



Figure 45. Looking east at the West Gate Bridge toll plaza in 1977, just prior to opening c.1978. The approximate locations of the West Gate service stations are indicated by the blue arrows (Source: Picture Victoria, ID 4861).

In 1986 the RCA invited expressions of interest from major oil companies and private developers to tender for the provision and operation of twin vehicular and motorist service facilities, one servicing the north carriageway and the other the southern carriageway. The successful tenderer would subsequently lease the government owned sites from the RCA (Dean & Law 1990). The major architectural requirements of the RCA brief were that the development should:

Achieve a standard of visual amenity commensurate with its proximity to the West Gate Bridge structure and the importance of the freeway as one of the major approach routes to Melbourne. The architectural style of the service buildings should consider the form and style of the adjacent bridge structure and should reflect in a general way such shape and form with the practical limits of the service functions that the centres are required to provide (Dean & Law 1990).

The development required provisions for fuelling facilities, take-away food, free public conveniences, telephones, tourist information, accommodation booking facilities, a 60-seat restaurant facility on the southern side, an automatic carwash on the northern side, an auto accessory shop, and carparking and road transport vehicle parking. The design was also required to consider the environs and relatively strong on-shore winds (Dean & Law 1990).

The Shell company approached architects Graeme Law and Associates Pty Ltd in 1986 to develop an architectural concept. They formulated 'the concept of sail like canopies, tension wires and structural towers' after observing 'the white sails of the craft on Hobson Bay and the cable stays to the bridge' during a site visit and drive over West Gate Bridge (Dean & Law 1990). Early concept designs were developed in collaboration

with Tract Consultants Australia and leaders in the field of tensile membrane technology, Spacetech Pty Ltd (McCready pers. comm., Aug 2021).



Figure 46. Early study model of the canopy structure (Source: Spacetech collection).

The proposal, submitted by Shell in December 1986, sought to set a precedent in the design of Australian service stations and departed from conventional garage architecture:

The site represents a unique and exciting development opportunity for the construction of two 'landmark' service centre facilities. The design ought to be a thoughtful and innovative response unfettered by existing corporate company design practices. It is our intention that this development proposal is not merely another service station (Breheny 1986).

In October 1987, Tom Roper, Minister for Transport, publicly announced the acceptance of the Shell tender (Roper 1987). In December 1987, the RCA and Shell signed an initial lease of ten years on the site, with three options for five year extensions (Dean & Law 1990).

A collaborative design approach was necessary between the architects, engineers and fabricators during the subsequent design phase, for the successful implementation of the project.

The canopy design engineers Connell Barrow McCready and Spacetech primarily designed the tensile membrane structures in accordance with the architect's brief (McCready, pers. comm., Aug 2021).

The design for the shape and form of the canopies evolved according to a number of issues within the brief and site constraints, which impacted upon the shape, such as the need to cover buildings of certain physical dimensions; the placement of petrol pumps and their required weather shelter; heights of articulated vehicles; points of entry/exit; and sight lines from cashier to petrol pumps. All of these issues pointed to the 'need for a lineal development with the form of the front canopy being cranked about the central axis to physically fit the development of the site' (Dean & Law 1990). The architect noted that 'there was also a need to create a building form which highlighted the location of this facility to the passing motorist and create a strong focal point which seduced the motorist into interrupting his journey' (Dean & Law 1990).

The built elements underneath the canopy were treated as 'simplistic gift boxes' or 'under canopy capsules', separate from the overhead canopy except for where they interlock at the major support towers, which penetrate the membrane through designed apertures. These tower masts 'were derived from communications network symbols' and intended to evoke the interconnectedness of this development with a larger, national Shell infrastructure. The Shell emblem originally surmounted the latticed masts to appropriately blazon the company image (Dean & Law 1990).



Figure 47. A sketch of a site
(Source: Spacetech collection).



Figure 48. Early model of the structures
(Source: Spacetech collection).

The extreme wind category of the site, with wind gusts of up to 180kph, directed that considerable attention be given to the canopy design and fabric, as well as structural load. After the final model was approved, five tent models made by the canopy design engineers, Connell Barrow McCready, were tested in the Vipac Boundary Layer Wind Tunnel at Port Melbourne in April 1988 (Connell Barrow McCready Pty Ltd, Apr 1988). John Connell, an Australian pioneer in lightweight structural design with experience dating from the 1970s, had been involved in the design and development of spaceframe systems and tensile fabric structures, and had worked on the prominent World Expo 1988 tensile exhibition structures in Brisbane. A range of fabric materials were researched for their durability and cost, leading Shell to finally select a PVC coated polyester fabric trademarked Polymar 6601 Grade III, which was acrylic lacquered on both sides (Catrice & Summerton 1997:86-90). For reasons of fabrication economy and erection procedure it was decided to subdivide the canopies into five separate membranes, two covering the north service station and three covering the south station (Dean & Law 1990). Because of the differing conditions on each site, the main 65m long bowser roofs required individual designs, so exact duplication of the buildings was not possible (Catrice & Summerton 1997:86-90).

Essentially, form followed function, and in a successful design process the final structures over the petrol bowser successfully echoed the form of the West Gate Bridge (McCready, pers. comm., Aug 2021).

Erection of the large canopies by Spacetech was a major task. The masts and fabric canopies were craned into position over the existing buildings, with the threat of wind damage resulting in night-time assembly (Dean & Law 1990).



Figure 49. Crane in the course of erecting the structures (Source: Spacetech collection).



Figure 50. Crane in the course of erecting the structures (Source: Spacetech collection).



Figure 51. Cranes and equipment in the course of erecting the structures (Source: Spacetech collection).



Figure 52. Cranes and equipment in the course of erecting the structures (Source: Spacetech collection).

Completed in 1989 at a cost of \$5.5 million, the Shell West Gate complex (now West Gate service stations) were called the “Opera House among Australian service stations” in ‘The Shell Report, 1989’ (Shell Australia, Jun 1989). Upon completion, the 1989 newsletter of the Membrane Structures Association of Australasia, *Warp & Weft*, reported:

The western approaches to Melbourne are largely funnelled across the spectacular long span Westgate Bridge, a bridge which is to Melbourne what the Harbour Bridge is to Sydney. Now sitting astride the freeway and framing this approach, five membrane structures of exquisite elegance have been designed and built for the Shell Company of Australia to shelter and roof their driveway areas, Shell Shops and Restaurant complex.

The freeform structures comprising approximately 7000 square metres of plan in entirety, embrace the best aspects of membrane structure design and construction in their detail and fabrication and as a bonus, the long span structure echoes the cable stayed configuration of the Westgate Bridge (MSAA, No. 7 1989).

Graeme Law, the project architect, reported on the reception of the completed project in 1990:

... the project has been most successful in that it has become a well known landmark and is seen as a fitting contribution to the Western Gateway to Melbourne. The Shell Company of Australia Limited have expressed their delight with the end product as has the Minister who instigated the site use proposal (Dean & Law 1990).

The separate drive-through food (formerly KFC) outlet on the north site with a conical membrane canopy was a later addition. Shell no longer operates the West Gate service stations. In 2021 the service stations were operated by United Petroleum.

The life expectancy of PVC materials is usually 12-15 years, and support system elements can deteriorate. Periodic replacement or rejuvenation of parts is expected with tensile membrane structures (McCready pers. comm., Aug 2021). As of September 2021, the West Gate canopy membranes and support system remain largely original. To date the canopy fabric has been repaired and reinforced in places, and a small number of parts of the support system have been replaced following vehicle accidents. Some elements of the West Gate structures have been rejuvenated (Spencely, pers. comm., Sep 2021).



Figure 53. Aerial view of the completed sites (Source: Spacotech collection).



Figure 54. The completed structures (Source: Spacotech collection).



Figure 55. The completed structures at the southern site, looking east (Source: Spacotech collection).



Figure 56. The completed structures (Source: Spacotech collection).





Figure 57. The structures at the northern site, looking south (Source: Spacetech collection).



Figure 58. Detail of the completed structures (Source: Spacetech collection).



Figure 59. Detail of the completed structures (Source: Spacetech collection).

Historical Themes

The West Gate Service Stations illustrate with the following theme and sub-theme described in *Victoria's Framework of Historical Themes, 2010*:

- 5 Building Victoria's industries and workforce
 - 5.4 Exhibiting Victoria's innovation and products

The place illustrates the following themes as outlined in *Thematic History – a History of the City of Melbourne's Urban Environment, 2012*:

- 5 Building a commercial city.

The place also illustrates the following theme and sub-theme as outlined in the *Postwar Thematic Environmental History 1945-1975, 2020*:

- 4 Creating a functioning city
 - 4.1 Planning for cars.

Description

Two service stations are located on opposite sides of the West Gate Freeway, on the Melbourne side of the West Gate Bridge at 1 West Gate Freeway, Port Melbourne (Lot 1 PS644562) and 2 West Gate Freeway, Port Melbourne (Lot 2 PS644562). Each site comprises a main canopy over the bowsers and a conical canopy over the petrol station buildings. On the south side there is an additional conical canopy over a food outlet.

The main canopies over the bowsers are PVC tensile membrane structures, approximately 65m by 20m in size. Each has a single, double-cranked steel-cable ridge supported on four tubular-steel main masts, with the canopy attached to catenary cut edge cables. The ends of the main masts are anchored to the ground by twin cables. The steel outer struts are supported by cable guy-wires are fixed to concrete ground anchors.

The canopies over the petrol station buildings are conical tensile membrane structures measuring approximately 30m by 25m. Steel lattice towers rise through the centre of the canopy, supporting it via teardrop looped cable connections. The towers extend higher than structurally necessary to carry corporate signage. The canopy over the restaurant on the southern site is of similar design but is larger measuring approximately 35m by 35m.

At the north site, a similar conical canopy supported by a tower structure (with a red membrane), built over a drive-through food outlet, is a later construction and is not significant.



Figure 60. West Gate service stations – south site in the foreground, north side in the background (GJM Heritage, August 2021).



Figure 61. The north site viewed from the east (GJM Heritage, August 2021).



Figure 62. The north site viewed from the west (GJM Heritage, August 2021).



Figure 63. The south site viewed from the south (GJM Heritage, August 2021).



Figure 64. The south site viewed from the east (GJM Heritage, August 2021).





Figure 65. The south site, showing the support struts, guy cables and ground anchors (GJM Heritage, August 2021).

Intactness

The structural system of steel lattice, struts, tensile cables and ground anchors are original and – while having undergone repair over its life – the tensile membrane fabric is thought to be original.

The service station shop and restaurant buildings are highly intact although internal fitout, signage and petrol bowsers have been altered; however, these elements are not significant.

Integrity

The tensile membrane structures at the north and south West Gate Service Stations retain a high degree of integrity to their 1989 construction. The structures, which includes the canopies and the supporting system (lattice steel masts, struts, cables and ground anchors) retain their original function.

Generally, PVC has a lifespan of as little as 12-15 years and the membrane fabric itself will require periodic replacement with similar fabric. This will not adversely affect the integrity of the place and should not be seen as detracting from its significance. Likewise, the steel support structure and cable system will need periodic renewal.

The smaller tensile membrane structure at the east end of the north site (over the drive-through food outlet) is a later construction, but does not detract from the original design.

Comparative Analysis

Lightweight architecture encompasses various technologies and materials, allowing for versatility in application and the creation of unique forms. Innovation and experimentation in the industry led to the development of prestressed and non-prestressed membrane structures, early cable net structures, spaceframes, pneumatic (air supported) structures, and tensile membrane structures, amongst others. They are lightweight, and are either temporary or permanent solutions for protection from the elements.

Lightweight architecture grew in popularity, and its applications broadened, from its initial key development phase in Australia in the 1970s. The late 1980s saw a dramatic increase in the application of membrane architecture in Australia, and by 1990 membrane structures were a major construction type and popular technology in the Australian building industry. The popularity of lightweight technology and tensile membrane architecture continued into the twenty-first century, in conjunction with the development of materials. Tensile membrane technology continues to be widely applied, creating innovative forms in architectural design.

This comparative analysis considered extant tensile membrane structures constructed in the late twentieth century within the City of Melbourne.

At the time of undertaking this assessment there were two examples of a lightweight structures dating from the twentieth century within the City of Melbourne included in the Victorian Heritage Register (VHR) or as part of a place included on the VHR: the Sidney Myer Music Bowl, The Domain, Melbourne (VHR H1772); and the food court at the Queen Victoria Market, West Melbourne (VHR H0734). As of January 2022, only the Sidney Myer Music Bowl remains extant.

Sidney Myer Music Bowl, The Domain, Melbourne (VHR H1772)

The 1959 Sidney Myer Music Bowl, Melbourne, designed by Yuncken Freeman Griffith Bros & Simpson in collaboration with engineer Bill Irwin, was among the earliest large-scale tensile cable net structures in the world, and is included in the VHR (VHR H1772). However, its construction as a mesh steel cable net structure with inserted plywood and aluminium sandwich panels is a forerunner to, and different from, the tensile membrane structures demonstrated at the Shell West Gate Service Stations.



Figure 66. The Sidney Myer Music Bowl structure in 1959 (Source: Mark Strizic, via Docomomo Australia).



Figure 67. Sidney Myer Music Bowl (Source: Lovell Chen, 'Sidney Myer Music Bowl HMP').

Food Court, Queen Victoria Market, West Melbourne (VHR H0734)

The substantially smaller tensile membrane structure that formed the roof of the food court at Queen Victoria Market (VHR H0734) was constructed in 1994-95 (Lovell Chen, Apr 2017); this structure was demolished in early 2022 as part of the market renewal project. While included within the extent of registration for the heritage place the food court roof did not form part of the significance of the Queen Victoria Market.



Figure 68. Roof over the food court, Queen Victoria Market (demolished 2022) (Source: Peter Kneen collection).



Figure 69. Interior of the Queen Vic Market foodcourt roof (demolished 2022) (Source: ACLA Consultants).

There are no other known examples of tensile membrane structures included on the Heritage Overlay of the Melbourne Planning Scheme. The tensile membrane structures at the West Gate Service Station sites appear to have no other direct comparators in the municipality.

The West Gate Service Stations retain a high degree of integrity to clearly demonstrate tensile membrane technology of the late-twentieth century.

Assessment Against Criteria

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

Criterion B: Possession of uncommon, rare or endangered aspects of our cultural or natural history (rarity).

The West Gate Service Stations are rare examples of lightweight tensile membrane structures of the late twentieth century within the City of Melbourne and are the only known application of this technology to a service station in Victoria. The distinctive canopies are the largest freestanding examples of this type of structure in the municipality that date prior to 2000. The only known comparable example in the municipality was the much smaller and less visible roof to the food court at the Queen Victoria Market, Melbourne dating from 1994-95 (demolished in 2022). In comparison, the Sidney Myer Music Bowl (1959) in the Domain is a cable net lightweight structure.

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

The West Gate Service Stations, designed by architects Graeme Law & Associates and engineers Connell Wagner and Connell Barrow McCreedy, specifically respond to their setting by referencing the cable stay structure of the West Gate Bridge and the white sails of seacraft on Hobson Bay. The design represented a marked departure from standard service station design of the time and the tensile membrane canopies and the lattice steel masts were conceived – and function – as landmark elements for users of the West Gate Freeway as they enter Melbourne over the West Gate Bridge.

Criterion F: Importance in demonstrating a high degree of creative or technical achievement at a particular period (technical significance)

The tensile membrane canopies clearly demonstrate the technical opportunities and complex forms that could be achieved by tensile membrane lightweight structures at the time. Designed collaboratively by the architects, engineers and canopy fabricators Spacetech, these lightweight structures remain a prominent feature of the Melbourne West Gate Freeway on the Melbourne side of the West Gate Bridge.

Grading and Recommendations

It is recommended that the place be included in the Heritage Overlay of the Melbourne Planning Scheme as an individual heritage place.

Recommendations for the Schedule to the Heritage Overlay (Clause 43.01) in the City of Melbourne Planning Scheme:

External Paint Controls?	No
Internal Alteration Controls?	No
Tree Controls?	No
Outbuildings or Fences not exempt under Clause 43.01-4?	No
Prohibited Uses Permitted?	No

Aboriginal Heritage Place?	No
----------------------------	----

It is recommended that an Incorporated Plan be prepared in accordance with Clause 43.01-3 to enable the replacement of the tensile membrane fabric and the management of the non-significant service station infrastructure.

Extent of the Recommended Heritage Overlay

To the extent of the boundary as shown in pink below:

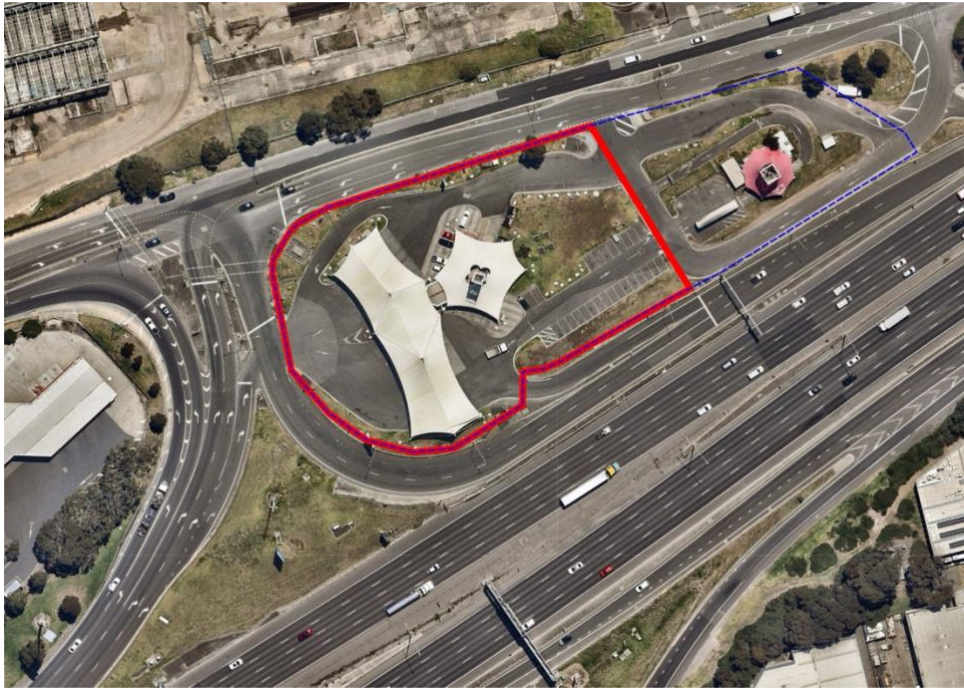


Figure 70. North site, 1 West Gate Freeway, Port Melbourne. Recommended Extent of Heritage Overlay (part Lot 1 PS644562) (boundary in red) (Basemap Source: nearmap, November 2023)



Figure 71. South site, 2 West Gate Freeway, Port Melbourne. Recommended Extent of Heritage Overlay (part Lot 2 PS644562) (boundary in red) (Basemap Source: nearmap, November 2023)



Previous Studies

<i>The Motor Garage & Service Station in Victoria – a survey</i> , 1997	Identified as potentially of State significance
<i>Southbank and Fishermans Bend Heritage Review</i> , 2017	Identified for further assessment
<i>Fishermans Bend In-Depth Heritage Review</i> , 2021	Recommended for inclusion on the Heritage Overlay

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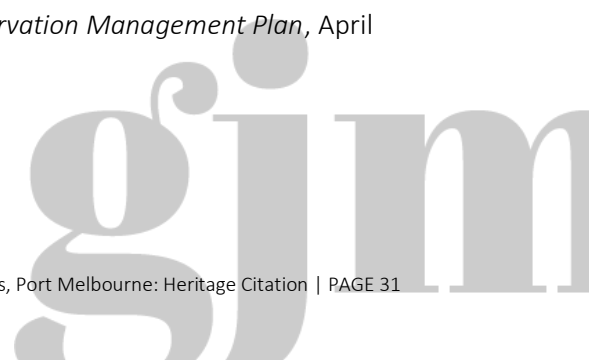
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- 'Canteen Canopy Extension'
- 'Catholic College Bendigo'
- 'Flemington Racecourse Meeting Point'
- 'Medium Fabric Structures'
- 'Melbourne Girls Grammar School Cover to Communal Deck'
- 'Membrane Structures'
- 'Mildura Riverfront Performance Venue'
- 'Penbank Sound Shell'
- 'Small Fabric Structures'
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'Challenge Gas Service Station'

'Glow-in-the-dark visibility for New Zealand petrol stations'.

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* This source is from D Catrice & M Summerton, *The Motor Garage & Service Station in Victoria – a survey*, completed for Heritage Victoria, February 1997, p 86-90. Cited in Helen Lardner Conservation and Design Pty Ltd (HLCD) & Dr Peter Mills, citation for 'West Gate Service Stations North and South', Section 5.8 in *Fishermans Bend In-Depth Heritage Review*, 2021.

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Acknowledgements

GJM Heritage would like to gratefully acknowledge the members of the Lightweight Structures Association of Australia for their research assistance, including Rowan Murray, Dr Peter Kneen and David McCready.

APPENDIX 2 – STATEMENT OF SIGNIFICANCE



West Gate Service Stations Statement of Significance

Heritage Place: West Gate Service Stations 1 & 2 West Gate Freeway, Port Melbourne	PS ref no: HO1380
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North service station site, 1 West Gate Freeway, Port Melbourne (GJM Heritage, August 2021).



South service station site, 2 West Gate Freeway, Port Melbourne (GJM Heritage, August 2021).



Aerial photograph showing extent of HO1380 (nearmap, November 2023).

What is significant?

The West Gate Service Stations at 1 & 2 West Gate Freeway, Port Melbourne, designed by architects Graeme Law & Associates with structural engineering design by Connell Wagner and canopy design by Connell Barrow McCready. Constructed by specialist lightweight structure fabricators Spacetech in 1989, the canopies form the roof of the petrol station shop and the canopy of the forecourts on the Melbourne side of the West Gate Bridge.

Elements that contribute to the significance of the place include (but are not limited to):

- The colour, form and technological system of the tensile membrane. Note: the membrane fabric itself will require periodic replacement with similar fabric which will not adversely affect the significance of the place;
- The central steel lattice masts; and
- The structural steel struts, steel cables and concrete ground anchors.

The shop/restaurants, bowsers, signage and other service station elements are not significant.

How is it significant?

The West Gate Service Stations at 1 & 2 West Gate Freeway, Port Melbourne are of local rarity, aesthetic and technical significance to the City of Melbourne.

Why is it significant?

The West Gate Service Station Canopies are rare examples of lightweight tensile membrane structures of the late twentieth century within the City of Melbourne and are the only known application of this technology to a service station in Victoria. The distinctive canopies are the largest freestanding examples of this type of structure in the municipality that date prior to 2000. The only known comparable example in the municipality was the much smaller and less visible roof to the food court at the Queen Victoria Market, Melbourne dating from 1994-95 (now demolished). In comparison, the Sidney Myer Music Bowl (1959) in the Domain is a cable net lightweight structure. (Criterion B)

The West Gate Service Stations, designed by architects Graeme Law & Associates and engineers Connell Wagner and Connell Barrow McCready, specifically respond to their setting by referencing the cable stay structure of the West Gate Bridge and the white sails of seacraft on Hobson Bay. The design represented a marked departure from standard service station design of the time and the tensile membrane canopies and the lattice steel masts were conceived – and function – as landmark elements for users of the West Gate Freeway as they enter Melbourne over the West Gate Bridge. (Criterion E)

The tensile membrane canopies clearly demonstrate the technical opportunities and complex forms that could be achieved by tensile membrane lightweight structures at the time. Designed collaboratively by the architects, engineers and canopy fabricators Spacetech, these lightweight structures remain a prominent feature of the Melbourne West Gate Freeway on the Melbourne side of the West Gate Bridge. (Criterion F)

Primary source

GJM Heritage, 'West Gate Service Station Canopies, 1 & 2 West Gate Freeway, Port Melbourne', February 2024.

This document is an incorporated document in the Melbourne Planning Scheme pursuant to section 6(2)(j) of the *Planning and Environment Act 1987*

APPENDIX 3 – INCORPORATED PLAN



Melbourne Planning Scheme

Incorporated Plan

West Gate Service Stations

1 and 2 West Gate Freeway, Port Melbourne

March 2024

West Gate Service Stations

1. Introduction

This document is an incorporated document in the schedules to Clause 43.01 Heritage Overlay (HO1380) and Clause 72.04 Incorporated Documents of the Melbourne Planning Scheme (scheme) pursuant to section 6(2)(j) of the *Planning and Environment Act 1987*.

This document applies to the land which is occupied by two service stations on the West Gate Freeway, comprising of land at 1 West Gate Freeway, Port Melbourne (north service station) and 2 West Gate Freeway, Port Melbourne (south service station).

This incorporated plan establishes planning permit exemptions in respect of the land.



Figure 1: map of north and south service stations with HO1380 extent shown in red.

2. Purpose

The purpose of this incorporated plan is to ensure that new development does not adversely affect the significance of the West Gate Service Station Canopies, while recognising the operational requirements of the facility and ensuring that it can continue to function safely, efficiently and appropriately.

3. Planning Permit Exemptions

This incorporated plan established planning permit exemptions, for the land, under the provisions of Clause 43.01-3 of the scheme.

The permit exemptions, set out in Clause 4 of this incorporated plan, prevail over any contrary or inconsistent provision in Clause 43.01 of the scheme.

4. Site specific exemptions under Clause 43.01-3

A planning permit is not required under Clause 43.01-1 of the scheme for the land at 1 West Gate Freeway, Port Melbourne (north service station) and 2 West Gate Freeway, Port Melbourne (south service station) to:

- Demolish or alter the freestanding under-canopy service station shops, restaurants and associated structures
- Remove, alter or install new fuel bowsers and associated infrastructure
- Remove, alter or install electric vehicle charging stations
- Remove, alter or install air, water and similar dispensing stations
- Lay new driveways and hard standings
- Resurface existing driveways and hard standings
- Remove, construct and display directional signage and all types of signage connected with the corporate identity of the service station operator including fuel price and promotional signage
- Undertake emergency and safety works to prevent damage to and injury to property and persons
- Install external security and fire detections services
- Install firefighting equipment
- Erection of temporary security fencing, scaffolding, hoardings for a period of no more than 30 days
- Replacement of below ground fuel tanks and associated ground works.

ATTACHMENT 3

TABLE OF CONTENTS

1. Explanatory Report
2. Instruction sheet
3. Planning Scheme Map 001hoMap10 Exhibition
4. Clause 15.03-1L-02 Heritage Local Policy
5. Clause 43.01 Heritage Overlay Schedule - Excerpt: Southbank, South Wharf, Docklands and Port Melbourne
6. Clause 72.04 Incorporated Documents Schedule
7. Clause 72.08 Background Documents Schedule
8. Incorporated Document *Heritage Places Inventory* (March 2022) – Excerpt: Southbank, South Wharf, Docklands and Port Melbourne
9. Incorporated Document: *West Gate Service Stations Incorporated Plan (1 and 2 West Gate Freeway , Port Melbourne)*, March 2024
10. Incorporated Document: *West Gate Service Stations Statement of Significance (1 and 2 West Gate Freeway , Port Melbourne)*, February 2024
11. Background Document: *West Gate Service Stations Heritage Review* (GJM Heritage 2024)

Planning and Environment Act 1987

Melbourne Planning Scheme

Amendment C463melb

Explanatory Report

Overview

The amendment implements the *West Gate Service Stations Heritage Review 2024* (the Review) which seeks to apply heritage controls to the properties identified in Figure 1. The amendment applies one Heritage Overlay (HO1380) to the two sites, updates the *Heritage Places Inventory March 2022* (Amended May 2023) and incorporates a Statement of Significance and Incorporated Plan to reflect the recommendations of the Review.

Where you may inspect this amendment

The amendment can be inspected free of charge at the Melbourne City Council website at <https://participate.melbourne.vic.gov.au/amendment-c444>

And/or

The amendment is available for public inspection, free of charge, during office hours at the following places:

City of Melbourne
Customer Service Counter
Ground Floor Melbourne Town Hall Administration Building
120 Swanston Street
MELBOURNE VIC 3000

The amendment can also be inspected free of charge at the Department of Transport and Planning website at <http://www.planning.vic.gov.au/public-inspection> or by contacting the office on 1800 789 386 to arrange a time to view the amendment documentation.

Submissions

Any person may make a submission about the amendment to the planning authority. Submissions about the amendment must be received by date (TBC).

A submission must be written and either lodged via:

- an online form available at: participate.melbourne.vic.gov.au
- emailed to: heritage@melbourne.vic.gov.au
- or posted to Manager Heritage Strategy City of Melbourne GPO Box 1603 MELBOURNE VIC 3001

Panel hearing dates

In accordance with clause 4(2) of Ministerial Direction No.15 the following panel hearing dates have been set for this amendment:

- Directions hearing: date TBC
- Panel hearing: date TBC

Details of the amendment

Who is the planning authority?

This amendment has been prepared by the City of Melbourne which is the planning authority for this amendment.

Land affected by the amendment

The amendment affects properties within the area shown below.

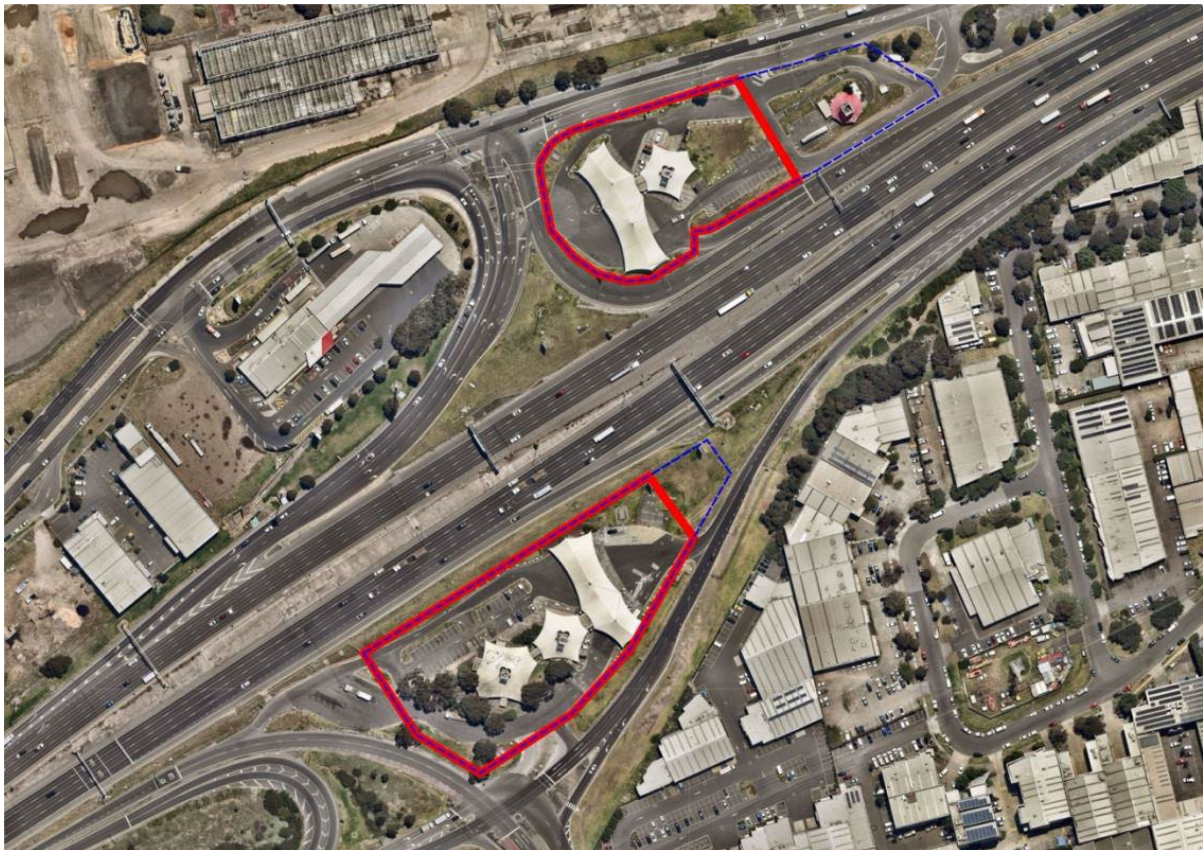


Figure 1: Map of north and south service stations with HO1380 extent shown in red.

The amendment applies to all land within the land outlined in red, the extent of the Heritage Overlay as shown in Figure 1.

A mapping reference table providing further information about the land affected by the amendment is at Attachment 1 to this explanatory report.

What the amendment does

The amendment proposes to amend the Melbourne Planning Scheme to implement the recommendations of the Review on a permanent basis by:

Overlay map

- Inserts a new Planning Scheme Map No. 10HO to apply the Heritage Overlay to part of the sites at 1 and 2 West Gate Freeway, Port Melbourne (HO1380).

Planning scheme ordinance

- Amends Clause 15.03-1L-02 (Heritage) to insert the *West Gate Freeway Service Stations, 1 & 2 West Gate Freeway, Port Melbourne Heritage Review* (GJM Heritage, 2024) as a policy document.
- Amends the Schedule to Clause 43.01 (Heritage Overlay) to:
 - insert one new individual heritage place on a permanent basis: HO1380 *West Gate Freeway Service Stations, 1 & 2 West Gate Freeway, Port Melbourne* and introduce a Statement of Significance and Incorporated Plan:
 - *West Gate Service Stations Statement of Significance (1 and 2 West Gate Freeway, Port Melbourne), February 2024*
 - *West Gate Service Stations Incorporated Plan (1 and 2 West Gate Freeway, Port Melbourne), March 2024*
- Amends the Schedule to Clause 72.04 (Incorporated Documents) to:
 - insert the following incorporated documents:
 - *West Gate Service Stations Statement of Significance (1 and 2 West Gate Freeway, Port Melbourne), February 2024*
 - *West Gate Service Stations Incorporated Plan (1 and 2 West Gate Freeway, Port Melbourne), March 2024*
 - Amend the title of the existing incorporated document *Heritage Places Inventory March 2022 (Amended May 2023)* to change the date to (Amended May 2024).
- Amend the incorporated document titled *Heritage Places Inventory March 2022 (Amended May 2023)* to:
 - Change the date to Amended May 2024.
 - Insert 1 West Gate Freeway, Port Melbourne with a significant building category.
 - Insert 2 West Gate Freeway, Port Melbourne with a significant building category.
- Amends the Schedule to Clause 72.08 (Background Documents) by inserting the *West Gate Service Stations Heritage Review* (GJM Heritage, 2024) as a background document.

Strategic assessment of the amendment

Why is the amendment required?

The amendment is required to provide permanent heritage protection for the place identified in the Review. The introduction of heritage controls will ensure that the impact of new development on the heritage value of the place is assessed as part of development applications.

How does the amendment implement the objectives of planning in Victoria?

The amendment implements the objectives of planning in Victoria as outlined in section 4(1) of the *Planning and Environment Act 1987* (PE Act) as follows:

- a) *Provide for the fair, orderly, economic and sustainable use, and development of land*

The amendment will result in the fair, orderly, economic and sustainable use and development of land by implementing a well-planned, holistic strategy that considers the heritage value of the service stations while recognising the operational requirements of the facility.

- d) *Conserve and enhance those buildings, areas or other places which are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value;*

The *West Gate Freeway Service Stations Heritage Review* identifies the local heritage significance of the service stations and proposes to protect them while with the application of a Heritage Overlay as well as recognising the operational requirements of the facility through the permit exemptions if the Incorporated Plan.

- g) *Balance the present and future interests of all Victorians.*

The proposed provisions in the Heritage Overlay schedule have been drafted to ensure development occurs in a logical manner consistent with the objectives set out in paragraphs a), d) and g).

How does the amendment address any environmental, social and economic effects?

Environmental effects

It is widely understood that the conservation of heritage buildings has environmental sustainability benefits. Reduction in energy usage associated with demolition, and minimising waste disposal from demolition and new construction to landfill is achieved through the conservation of heritage buildings. Retaining and adapting heritage buildings promotes sustainable development by conserving the embodied energy in the existing buildings.

Social and Economic effects

Heritage buildings and places engender a sense of place and connection in communities. The recognition of the iconic service station canopies contributes to an understanding of the western gateway into and out of Melbourne.

Heritage assets contribute to an area's liveability and sense of cultural identity and can have a positive influence on many aspects of the way a community develops.

Does the amendment address relevant bushfire risk?

The amendment will not result in any increase in bushfire risk meets bushfire policy in Clause 13.02 of the Planning Scheme.

Does the amendment comply with the requirements of any other Minister's Direction applicable to the amendment?

The amendment complies with the requirements of the Ministerial Direction – The Form and Content of Planning Schemes (section 7(5) of the PE Act).

Direction No. 11: Strategic Assessment of Amendments

The amendment complies with Ministerial Direction No. 11: (Strategic Assessment of Amendments) under section 12 of the PE Act. The amendment is consistent with this direction which ensures a comprehensive strategic evaluation of a planning scheme amendment and the outcomes it produces. This explanatory report provides a comprehensive strategic evaluation of the amendment and the outcomes it produces.

How does the amendment support or implement the Planning Policy Framework and any adopted State policy?

The amendment is consistent with the following clauses of the Planning Policy Framework and will assist in achieving objectives of the clauses:

- 15.01-1R (Urban design) – to create a distinctive and liveable city with quality design and amenity.
- 15.03-1S (Heritage conservation) – to ensure the conservation of places of heritage significance.
- 15.03-1L-02 (Heritage) - to encourage high quality contextual design, to encourage the retention of the three dimensional fabric and form of a building, to enhance the presentation and appearance of heritage places, and to protect significant views and vistas. By including the identified places within the Heritage Overlay, the Amendment will ensure that the significance of these heritage places is protected, conserved and enhanced. The Heritage Overlay will require consideration to be given to the significance of the identified heritage place as a decision guideline and will encourage development that is designed and sited to respect the identified significance of heritage places.

How does the amendment support or implement the Municipal Planning Strategy?

The Municipal Planning Strategy (MPS) contains objectives and strategies that are relevant to the proposed Amendment. In particular, the Amendment supports objective: Clause 02.03-4 (Built environment and heritage) of the Municipal Planning Strategy which seeks to: conserve and enhance places and precincts of identified cultural heritage significance.

Does the amendment make proper use of the Victoria Planning Provisions?

The amendment makes proper use of the Victoria Planning Provisions. The application of the Heritage Overlay, Schedule, statement of significance and incorporated plan is the appropriate Victorian Planning Provision tool for the protection of heritage places of local significance. The Amendment makes proper use of incorporated documents to clearly outline the heritage significance and to establish planning permit exemptions of the places affected by the Amendment. The application of the Heritage Overlay and statements of significance have been prepared in accordance with *Planning Practice Note 1: Applying the Heritage Overlay*.

How does the amendment address the views of any relevant agency?

The views of the Department of Transport and Planning have been sought in preparation of the Amendment.

The views of other relevant agencies, affected property owners and relevant community groups will be sought during the public exhibition phase for the amendment.

Does the amendment address relevant requirements of the Transport Integration Act 2010?

The Amendment does not have an impact on the transport system as defined by Section 3 of the Transport Integration Act 2010.

Resource and administrative costs

What impact will the new planning provisions have on the resource and administrative costs of the responsible authority?

The inclusion of one new place in the schedule to the Heritage Overlay may contribute to a minor increase in the number of planning permit applications.

This increase can be accommodated within the existing resources. These resource and administration costs will be off-set by a reduction in the need for individual responses to the possible demolition of significant heritage places which are not currently included within the Schedule to the Heritage Overlay.

Attachment 1 – Mapping reference table

Land Affected	Mapping Reference	Address	Proposed Zone changes	Proposed Overlay changes	Proposed deletion changes
<p>Part 1 West Gate Freeway, Port Melbourne</p> <p>The Heritage Overlay extent generally follows the property boundary with the exception that the eastern boundary aligns with the western kerb of the internal north-south road.</p>	<p>Melbourne C463melb 001hoMap10 Exhibition</p>	<p>1 West Gate Freeway, Port Melbourne</p>	N/a	Apply HO1380	N/a
<p>2 West Gate Freeway, Port Melbourne</p> <p>The Heritage Overlay extent generally aligns with the property boundary with the exception that the eastern boundary springs from the intersection of; the northern edge of the driveway kerb and the southern property boundary.</p>	<p>Melbourne C463melb 001ho Map10 Exhibition</p>	<p>2 West Gate Freeway, Port Melbourne</p>	N/a	Apply HO1380	N/a

Planning and Environment Act 1987

MELBOURNE PLANNING SCHEME

AMENDMENT C463melb

INSTRUCTION SHEET

The planning authority for this amendment is the Melbourne City Council.

The Melbourne Planning Scheme is amended as follows:

Planning Scheme Maps

The Planning Scheme Maps are amended by a total of one (1) attached map sheet.

Overlay Maps

1. Insert Planning Scheme Map No. 10HO in the manner shown on the one (1) attached map marked Melbourne Planning Scheme, Amendment C463melb.

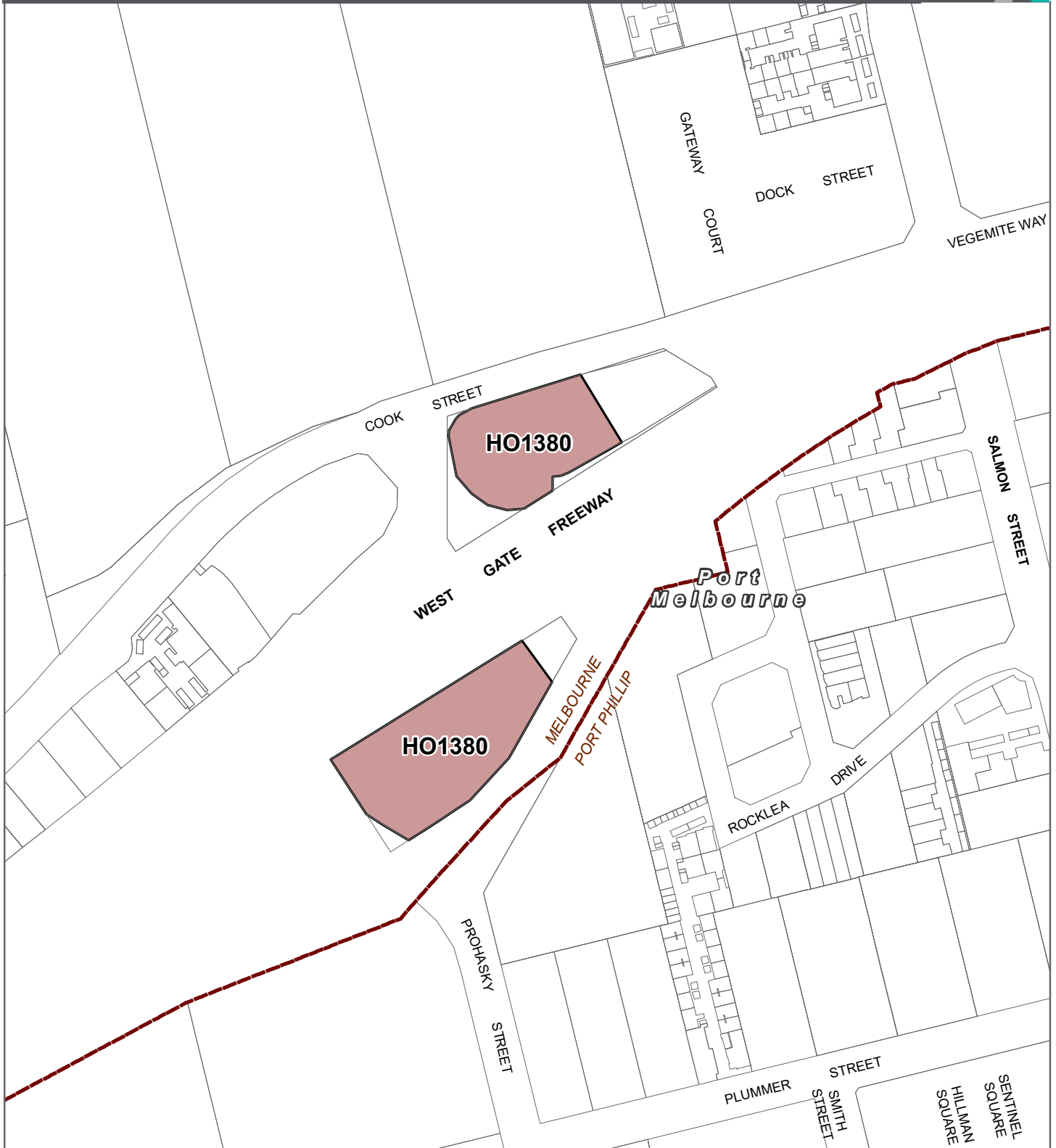
Planning Scheme Ordinance

The Planning Scheme Ordinance is amended as follows:



2. In **Planning Policy Framework** – replace Clause 15.03-1L-02 with a new Clause 15.03-1L-02 in the form of the attached document.
3. In **Overlays** – Clause 43.01, replace the Schedule with a new Schedule in the form of the attached document.
4. In **Operational Provisions** – Clause 72.04, replace the Schedule with a new Schedule in the form of the attached document.
5. In **Operational Provisions** – Clause 72.08, replace the Schedule with a new Schedule in the form of the attached document.

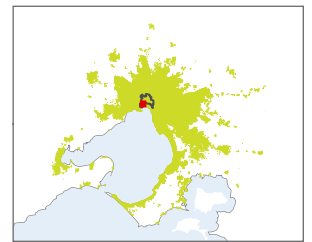
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MELBOURNE PLANNING SCHEME - LOCAL PROVISION
 AMENDMENT C463melb



LEGEND

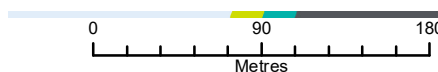
-  HO - Heritage Overlay
-  Local Government Area



Part of Planning Scheme Map 10HO

Disclaimer
 This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

Planning Group
 Print Date: 19/03/2024
 Amendment Version: 1



Department of Transport and Planning

15.03

31/07/2018
VC148

HERITAGE

15.03-1S

26/10/2018
VC155

Heritage conservation

Objective

To ensure the conservation of places of heritage significance.

Strategies

Identify, assess and document places of natural and cultural heritage significance as a basis for their inclusion in the planning scheme.

Provide for the protection of natural heritage sites and man-made resources.

Provide for the conservation and enhancement of those places that are of aesthetic, archaeological, architectural, cultural, scientific or social significance.

Encourage appropriate development that respects places with identified heritage values.

Retain those elements that contribute to the importance of the heritage place.

Encourage the conservation and restoration of contributory elements of a heritage place.

Ensure an appropriate setting and context for heritage places is maintained or enhanced.

Support adaptive reuse of heritage buildings where their use has become redundant.

Consider whether it is appropriate to require the restoration or reconstruction of a heritage building in a Heritage Overlay that has been unlawfully or unintentionally demolished in order to retain or interpret the cultural heritage significance of the building, streetscape or area.

Policy guidelines

Consider as relevant:

- The findings and recommendations of the Victorian Heritage Council.
- The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013.

15.03-1L-01 Heritage places within the World Heritage Environs Area21/09/2022
C409melb**Policy application**

This policy applies to land shown as 'Area of Greater Sensitivity' in the Area of Greater Sensitivity Plan to this clause, and within HO992 (World Heritage Environs Area Precinct), HO81, HO87, HO103, HO104 and HO809.

Objectives

To provide a buffer zone for the World Heritage Listed Royal Exhibition Building and Carlton Gardens.

To provide a setting and context of significant historic character for the World Heritage property.

To protect significant views and vistas to the Royal Exhibition Building and Carlton Gardens.

To maintain and conserve the significant historic character including built form and landscapes of the area.

To ensure development in the area responds to the prominence and visibility of the Royal Exhibition Building and Carlton Gardens.

Strategies

Retain and conserve individually significant and contributory places, including contributory fabric, form, architectural features and settings.

Retain and conserve the valued heritage character of streetscapes.

Retain the predominantly lower scale form of development which provides a contrast to the dominant scale and form of the Royal Exhibition Building.

Avoid consolidation of allotments in residential areas that will result in the loss of evidence of typical nineteenth century subdivision and allotment patterns.

Protect direct views and vistas to the Royal Exhibition Building and Carlton Gardens from bordering streets and other views and vistas to the dome available from streets within the precinct including Queensberry Street, the north ends of Spring and Exhibition Streets, and the east end of Latrobe Street.

Discourage the introduction and proliferation of permanent structures and items such as shelters, signage (other than for historic interpretation purposes), kiosks and the like around the perimeter of the Royal Exhibition Building and Carlton Gardens in order to:

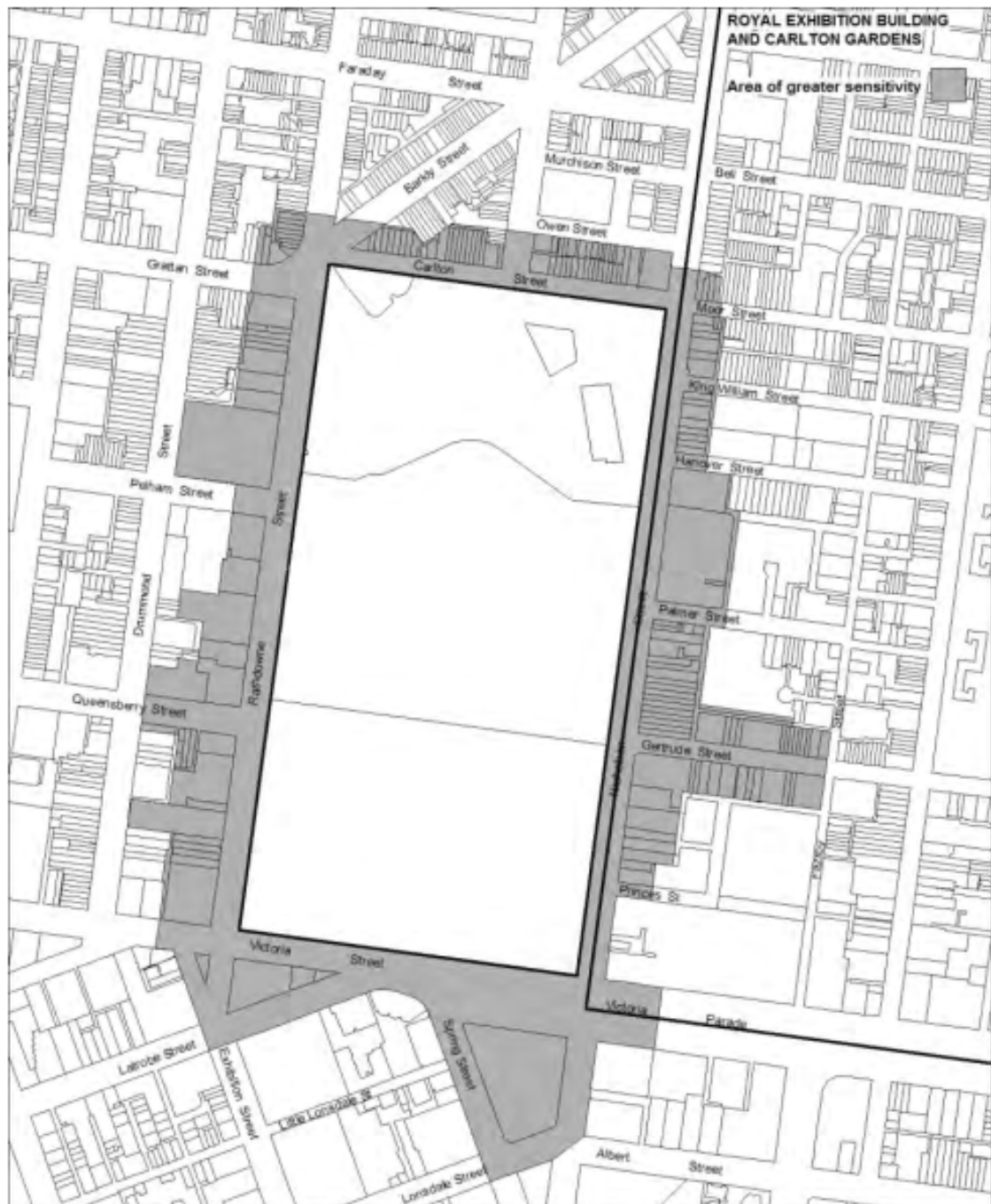
- Avoid impacts on the presentation of the Royal Exhibition Building and Carlton Gardens, including impacts on axial views along treed allees and avenues.
- Minimise inappropriate visual clutter around the perimeter of the Royal Exhibition Building and Carlton Gardens.

Policy document

Consider as relevant:

- *World Heritage Environs Area Strategy Plan: Royal Exhibition Building and Carlton Gardens* (Lovell Chen, 2009)

Area of Greater Sensitivity Plan



Ensure alterations to non-contributory buildings and fabric respect, and not detract, from the assessed significance of the heritage precinct.

Avoid sandblasting of render, masonry or timber surfaces and painting of previously unpainted surfaces.

Encourage removal of paint from original unpainted masonry or other surfaces, provided it can be undertaken without damage to the heritage place.

Support reconstruction of an original awning or verandah where it is based on evidence of the original form, detailing and materials.

Support new awnings or verandahs that are an appropriate contextual design response, compatible with the location on the heritage place and that can be removed without loss of fabric.

Alterations policy guidelines

Consider as relevant:

- The assessed significance of the building and heritage place.
- The degree to which the alterations would detract from the significance, character and appearance of the building and heritage place.
- The structural condition of the building.
- The character and appearance of the proposed replacement materials.
- Whether the alterations can be reversed without loss of fabric which contributes to the significance of the heritage place.

Additions strategies

Ensure additions to buildings in a heritage precinct are respectful of and in keeping with:

- 'Key attributes' of the heritage precinct, as identified in the precinct Statement of Significance.
- Precinct characteristics including building height, massing and form; style and architectural expression; details; materials; front and side setbacks; and orientation.
- Character and appearance of nearby significant and contributory buildings.
- Where abutting a lane, the scale and form of heritage fabric as it presents to the lane.

Ensure additions to significant or contributory buildings:

- Are respectful of the building's character and appearance, scale, materials, style and architectural expression.
- Do not visually dominate or visually disrupt the appreciation of the building as it presents to the street.
- Maintain the prominence of the building by setting back the addition behind the front or principal part of the building, and from other visible parts.
- Do not build over or extend into the air space directly above the front or principal part of the building.
- Retain significant roof form within the setback from the building façade together with roof elements of original fabric.
- Do not obscure views of façades or elevations associated with the front or principal part of the building.
- Are distinguishable from the original fabric of the building.

Ensure additions:

- Adopt high quality and respectful contextual design.

- Avoid direct reproduction of the form of historic fabric.
- Adopt an interpretive design approach to other details such as verandahs, fences, and shopfronts.

Concealment of additions strategies

Outside the Capital City Zone and Docklands Zone, ensure additions are:

- Concealed in significant streetscapes for significant or contributory buildings.
- Concealed in other streetscapes for significant buildings, for a second-storey addition to a single storey building, concealment is often achieved by setting back the addition at least 8 metres behind the front facade.
- Partly concealed in other streetscapes for contributory buildings, which means that some of the addition may be visible, provided it does not dominate or reduce the prominence of the building's façade(s) and the streetscape.
- For ground level additions to the side of a building, set back behind the front or principal part of the building.
- All additions to corner properties may be visible, but should be respectful of the significant or contributory building in terms of scale and placement, and not dominate or diminish the prominence of the building or adjoining contributory or significant building.

New buildings strategies

Ensure new buildings:

- Are in keeping with 'key attributes' of the heritage precinct as identified in the precinct Statement of Significance.
- Are in keeping with key attributes of the heritage precinct such as:
 - Building height, massing and form.
 - Style and architectural expression.
 - Details.
 - Materials.
 - Front and side setbacks.
 - Orientation.
 - Fencing.
 - Prevailing streetscape height and scale.
- Do not obscure views from the street and public parks of the front or principal part of adjoining significant or contributory places or buildings.
- Do not visually dominate or visually disrupt the appreciation of the heritage place.
- Maintain a façade height that is consistent with that of adjoining significant or contributory buildings, whichever is the lesser.
- Set back higher building components so as not to dominate or reduce the prominence of an adjoining significant or contributory place or building.
- Adopt a façade height that is generally consistent with the prevailing heights in the street, avoiding heights that are significantly lower.
- Are neither positioned forward of the façade of adjoining significant or contributory heritage places or buildings, or set back significantly behind the prevailing building line in the street.

- Do not build over or extend into the air space directly above the front or principal part of an adjoining significant or contributory building or heritage place.
- Where abutting a lane, are respectful of the scale and form of historic fabric of heritage places abutting the lane.
- Do not impact adversely on Aboriginal cultural heritage values.
- Adopt high quality and respectful contextual design.
- Adopt an interpretive design approach to other details such as verandahs, fences and shopfronts.
- In the Capital City Zone and Docklands Zone, should be positioned in line with the prevailing building line in the street.

Concealment of higher rear parts of a new building strategies

Outside the Capital City Zone and Docklands Zone, ensure:

- In significant streetscapes, higher rear parts of a new building should be concealed.
- In other streetscapes, higher rear parts of a new building should be partly concealed. Some of the higher rear part may be visible, provided it does not dominate or reduce the prominence of the building's façade(s) and the streetscape.

Restoration and reconstruction strategies

Encourage the restoration and/or reconstruction of heritage places.

Ensure where there is to be reconstruction or restoration to any part of a significant building, or any visible part of a contributory building, that it be an authentic restoration or reconstruction process, or should not preclude such a process at a future date.

Ensure where there is to be restoration or reconstruction of a building, it is based on evidence of what a building originally looked like by reference to elements of nearby identical buildings, other parts of the building or early photographs and plans.

Subdivision strategies

Ensure subdivision:

- Reflects the pattern of development in the street or precinct.
- Maintains settings and contexts for significant and contributory heritage buildings and places, including the retention of any original garden areas, large trees and other features which contribute to the significance of the heritage place.
- Does not provide for future development which will visually disrupt the setting and impact on the presentation of the significant or contributory building.

Ensure subdivision that provides for three dimensional building envelopes for future built form to each lot proposed.

Discourage subdivision of airspace above heritage buildings that provides for future development.

Relocation strategy

Retain buildings in-situ unless it can be shown that it has a history of relocation or is designed for relocation.

Vehicle accommodation and access strategies

Discourage new on-site car parking, garages, carports, and vehicle crossovers unless:

- Car parking is located to the rear of the property, where this is an established characteristic.
- Any garage or carport is placed behind the principal or front part of the building (excluding verandahs, porches, bay windows or similar projecting features), and:

- It will be visually recessive.
 - It will not conceal an original contributory element of the building (other than a plain side wall).
 - The form, details and materials will be respectful of, but not replicate details of the building.
- Ramps to basement or sub-basement car parking are located to the rear of the property, or to a side street or side lane boundary, where they would not visually disrupt the setting of the significant or contributory building, or impact on the streetscape character.

Fences and gates strategies

Ensure the reconstruction of fences or gates to the front or principal part of a building are based on evidence of the original form, detailing and materials.

Ensure for new fences or gates there is an appropriate contextual design response; the style, details and materials are interpretive and consistent with the architectural period of the heritage place and established street characteristics and:

- It does not conceal views of the building or heritage place.
- Is a maximum height of 1.5 metres.
- Is more than 50 per cent transparent.

Trees strategies

Retain trees with assessed heritage significance (as noted in the Schedule to the Heritage Overlay).

Locate new development at a distance that ensures the ongoing health of any tree with assessed heritage significance.

Ensure new buildings and works comply with the *Australian Standard AS 4970-2009 Protection of Trees on Development Sites* (Standards Australia) for vegetation of assessed significance.

Services and ancillary fixtures strategies

Ensure services and ancillary fixtures, in particular those that will reduce greenhouse gas emissions or water consumption such as solar panels, solar hot water services or water storage tanks, may be permitted on any visible part of significant or contributory buildings, where:

- It can be demonstrated there is no feasible alternative.
- It will not detract from the character and appearance of the building or heritage place.

Ensure items affixed to roofs, such as solar panels, align with the profile of the roof.

Ensure services and ancillary fixtures are installed in a manner where they can be removed without damaging significant fabric.

Ensure, for new buildings, services and ancillary fixtures are concealed, integrated or incorporated into the design of the building.

Street fabric and infrastructure strategies

Encourage street furniture, including shelters, seats, rubbish bins, bicycle racks, drinking fountains and the like, where it avoids:

- Impacts on views to significant or contributory places and contributory elements.
- Physical impacts on bluestone kerbs, channels and gutters, other historic street infrastructure, lanes and street tree plantings.

Ensure works to existing historic street/lane fabric and infrastructure is carried out in a way that retains the original fabric, form and appearance.

Signage strategies

Retain existing signage with heritage value and do not alter or obscure historic painted signage.

Ensure new signage associated with heritage places:

- Minimises visual clutter.
- Does not conceal architectural features or details which contribute to the significance of the heritage place.
- Does not damage the fabric of the heritage place.
- Is in keeping with historical signage in terms of size and proportion in relation to the heritage place.
- Is placed in locations where they were traditionally placed.
- Is readily removable.

Policy documents

Consider as relevant:

- *Heritage Places Inventory March 2022* (City of Melbourne, 2022)
- *Central Activities District Conservation Study* (Graeme Butler, 1985)
- *Central City (Hoddle Grid) Heritage Review* (Graeme Butler, 2011)
- *Bourke Hill Precinct Heritage Review Amendment C240* (Trethowan, 2015)
- *The Burra Charter: the Australia ICOMOS charter for Places of Cultural Significance, 2013* (Australia ICOMOS)
- *City North Heritage Review, RBA Architects* (RBA Architects, 2013)
- *East Melbourne & Jolimont Conservation Study* (Meredith Gould, 1985)
- *North and West Melbourne Conservation Study* (Graeme Butler, 1985 & 1994)
- *Carlton, North Carlton and Princes Hill Conservation Study* (Nigel Lewis and Associates, 1994 & 1985)
- *South Melbourne Conservation Study* (Bryce Raworth Pty Ltd, 1985 & 1998)
- *Harbour, Railway, Industrial Conservation Study* (Meredith Gould Architects, 1985)
- *Hoddle Grid Heritage Review* (GML and GJM, July 2020) (Updated March 2022)
- *Guildford and Hardware Laneways Heritage Study* (Lovell Chen, 2017) (Updated October 2018)
- *Southbank Heritage Review* (Biosis and Graeme Butler, 2017) (Updated November 2020)
- *South Melbourne Urban Conservation Study* (Allom Lovell Sanderson Pty Ltd, 1987)
- *Parkville Conservation Study* (City of Melbourne, 1985)
- *Flemington & Kensington Conservation Study* (Graeme Butler & Associates, 1985)
- *South Yarra Conservation Study* (Meredith Gould, 1985)
- *Kensington Heritage Review* (Graeme Butler & Associates, 2013)
- *Review of Heritage Buildings in Kensington: Percy Street Area* (Graeme Butler, 2013)
- *Arden Macaulay Heritage Review* (Graeme Butler & Associates, 2012)
- *West Melbourne Heritage Review* (Graeme Butler & Associates, 2016)
- *Amendment C396 Heritage Category Conversion Review* (Lovell Chen and Anita Brady Heritage, 2021)

- *Extract from Fishermans Bend In-Depth Heritage Review and Stakeholder Engagement Summary Report (HLCD, 2022)*
- *West Gate Service Stations, 1 & 2 West Gate Freeway, Port Melbourne Heritage Review (GJM Heritage, 2024)*

15.03-1L-03 Heritage - Old categorisation system

21/09/2022
C409melb

Policy application

This policy applies to places within a Heritage Overlay and graded A to D within the *Heritage Places Inventory February 2020 Part B*.

General objectives

To conserve all parts of buildings of historic, social or architectural interest which contribute to the significance, character and appearance of the building, streetscape or area.

To ensure that new development, and the construction or external alteration of buildings, make a positive contribution to the built form and amenity of the area and are respectful to the architectural, social or historic character and appearance of the streetscape and the area.

To promote the identification, protection and management of aboriginal cultural heritage values.

Demolition strategies

The demolition or removal of original parts of buildings, as well as complete buildings, will not normally be permitted in the case of 'A' and 'B', the front part of 'C' and many 'D' graded buildings. The front part of a building is generally considered to be the front two rooms in depth.

A demolition permit should not be granted until the proposed replacement building or works have been approved.

Demolition policy guidelines

Consider as relevant:

- The degree of its significance.
- The character and appearance of the building or works and its contribution to the architectural, social or historic character and appearance of the streetscape and the area.
- Whether the demolition or removal of any part of the building contributes to the long-term conservation of the significant fabric of that building.
- Whether the demolition or removal is justified for the development of land or the alteration of, or addition to, a building.

Renovating graded buildings strategy

Intact significant external fabric on any part of an outstanding building, and on any visible part of a contributory building, should be preserved. Guidelines on what should be preserved are included in Urban Conservation in the City of Melbourne.

Renovating graded buildings policy guidelines

Consider as relevant:

- The degree of its significance.
- Its contribution to the significance, character and appearance of a building or a streetscape.
- Its structural condition.
- The character and appearance of proposed replacement materials.
- The contribution of the features of the building to its historic or social significance.

- Where there is evidence of what a building originally looked like, renovation of any part of an outstanding building, or any visible part of a contributory building, should form part of an authentic restoration or reconstruction process, or should not preclude it at a future date. Evidence of what a building used to look like might include other parts of the building or early photographs and plans.
- Where there is no evidence of what a building originally looked like, renovations should preferably be respectful of an interpretive modern design, rather than "guesswork" reconstruction or any other form of reproduction design.

Sandblasting and painting of previously unpainted surfaces strategy

Sandblasting of render, masonry or timber surfaces and painting of previously unpainted surfaces will not normally be permitted.

Designing new buildings and works or additions to existing buildings strategies

Form

The external shape of a new building, and of an addition to an existing building, should be respectful in a Level 1 or 2 streetscape, or interpretive in a Level 3 streetscape.

Facade Pattern and Colours

The facade pattern and colours of a new building, and of an addition or alteration to an existing building, should be respectful where visible in a Level 1 streetscape, and interpretive elsewhere.

Materials

The surface materials of a new building, and of an addition or alteration to an existing building, should always be respectful.

Details

The details (including verandahs, ornaments, windows and doors, fences, shopfronts and advertisements) of a new building, and of an addition or alteration to an existing building, should preferably be interpretive, that is, a simplified modern interpretation of the historic form rather than a direct reproduction.

Concealment of Higher Rear Parts (Including Additions)

Higher rear parts of a new building, and of an addition to an existing graded building, should be concealed in a Level 1 streetscape, and partly concealed in a Level 2 and 3 streetscape. Also, additions to outstanding buildings ('A' and 'B' graded buildings anywhere in the municipality) should always be concealed. In most instances, setting back a second-storey addition to a single-storey building, at least 8 metres behind the front facade will achieve concealment.

Facade Height and Setback (New Buildings)

The facade height and position should not dominate an adjoining outstanding building in any streetscape, or an adjoining contributory building in a Level 1 or 2 streetscape. Generally, this means that the building should neither exceed in height, nor be positioned forward of, the specified adjoining building. Conversely, the height of the facade should not be significantly lower than typical heights in the streetscape. The facade should also not be set back significantly behind typical building lines in the streetscape.

Building Height

The height of a building should respect the character and scale of adjoining buildings and the streetscape. New buildings or additions within residential areas consisting of predominantly single and two-storey terrace houses should be respectful and interpretive.

Archaeological sites strategy

Proposed development must not impact adversely on the aboriginal cultural heritage values, as indicated in an archaeologist's report, for any site known to contain aboriginal archaeological relics.

Sites of historic or social significance policy guidelines

Consider as relevant:

- The degree to which the existing fabric demonstrates the historic and social significance of the place, and how the proposal will affect this significance. Particular care should be taken in the assessment of cases where the diminished architectural condition of the place is outweighed by its historic or social value.

Policy documents

Consider as relevant:

- *Urban Conservation in the City of Melbourne* (City of Melbourne, 1985)
- *East Melbourne & Jolimont Conservation Study* (Meredith Gould, 1985)
- *Parkville Conservation Study* (City of Melbourne, 1985)
- *North & West Melbourne Conservation Study* (Graeme Butler & Associates, 1985, & 1994)
- *Flemington & Kensington Conservation Study* (Graeme Butler & Associates, 1985)
- *Carlton, North Carlton and Princes Hill Conservation Study* (Nigel Lewis and Associates, 1994 & 1985)
- *South Yarra Conservation Study* (Meredith Gould, 1985)
- *South Melbourne Conservation Study* (Allom Lovell Sanderson Pty Ltd, 1985 & 1998)
- *Harbour, Railway, Industrial Conservation Study* (Meredith Gould Architects, 1985)
- *Kensington Heritage Review* (Graeme Butler & Associates, 2013)
- *Review of Heritage Buildings in Kensington: Percy Street Area* (Graeme Butler, 2013)
- *City North Heritage Review* (RBA Architects, 2013)
- *Arden Macaulay Heritage Review* (Graeme Butler & Associates, 2012)

15.03-2S

31/07/2018
VC148

Aboriginal cultural heritage

Objective

To ensure the protection and conservation of places of Aboriginal cultural heritage significance.

Strategies

Identify, assess and document places of Aboriginal cultural heritage significance, in consultation with relevant Registered Aboriginal Parties, as a basis for their inclusion in the planning scheme.

Provide for the protection and conservation of pre-contact and post-contact Aboriginal cultural heritage places.

Ensure that permit approvals align with the recommendations of any relevant Cultural Heritage Management Plan approved under the *Aboriginal Heritage Act 2006*.

Policy guidelines

Consider as relevant:

- The findings and recommendations of the Aboriginal Heritage Council.
- The findings and recommendations of the Victorian Heritage Council for post-contact Aboriginal heritage places.

Policy documents

Consider as relevant:

- *Aboriginal Heritage Act 2006*

29/03/2019
C351melb

SCHEDULE TO CLAUSE 43.01 HERITAGE OVERLAY

1.0

21/09/2022
C409melb

Application requirements

The following application requirements apply to an application under Clause 43.01, in addition to those specified elsewhere in the planning scheme and must accompany an application, as appropriate, to the satisfaction of the responsible authority:

- A comprehensive explanation as to how the proposed development achieves the policy objectives of Clause 15.03-1S, and Clause 15.03-1L Heritage or Clause 15.03-1L Heritage (Old categorisation system).
- Information on the history of the place, where there is limited information in an existing citation or council documentation.
- A Heritage Impact Statement in accordance with Heritage Victoria's Guidelines for preparing Heritage Impact Statements. For a heritage precinct, the statement should address impacts on adjoining significant or contributory buildings and the immediate heritage context, in addition to impacts on the subject place.
- For major development proposals to significant heritage places, a Conservation Management Plan in accordance with the *Conservation Management Plans: Managing Heritage Places - A Guide* (Heritage Council of Victoria, 2010).
- For works that may affect significant vegetation (as listed in the schedule to the Heritage Overlay or vegetation of assessed significance), an arboricultural report. The report should, where relevant, address landscape significance, arboricultural condition, impacts on the vegetation and impacts on the assessed significance of the heritage place.
- For development in heritage precincts, sightlines and heights of existing and adjoining buildings, streetscape elevations, photos and 3D model, as necessary to determine the impact of the proposed development.
- For building relocation or full demolition, information that demonstrates a method to record its location on the site prior to relocation or demolition and supervision of the works by an appropriately qualified person including archival photographic recording and/ or measured drawings.
- For alterations, works or demolition of an individual heritage building or works involving or affecting heritage trees, a conservation analysis and management plan in accordance with the principles of the *Charter for the Conservation of Places of Cultural Significance* (Australian International Council on Monuments and Sites, 2013, 'the Burra Charter').

2.0

19/10/2022
C394melb

Heritage places

The requirements of this overlay apply to both the heritage place and its associated land.

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO872	<p><i>Veterinary and Agricultural Sciences Building, The University of Melbourne</i></p> <p>Statement of Significance: Veterinary and Agricultural Sciences Building Statement of Significance (The University of Melbourne, Parkville), March 2022</p>	Yes	No	No	Yes	No	No	No	No

2.10

Southbank, South Wharf, Docklands and Port Melbourne

20/03/2023 - / - / - -
VC229 Proposed C463melb

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO1381	<p>Former Kraft Vegemite Factory 1 Vegemite Way, Port Melbourne</p> <p>Statement of Significance: Former Kraft Vegemite Factory Statement of Significance (1 Vegemite Way, Port Melbourne), July 2022</p>	Yes - 1956 Administration Building	No	No	Yes	No	No	No	No
HO1382	Electricity Substation	No	No	No	Yes	No	No	No	No

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	224-236 Salmon Street, Port Melbourne Statement of Significance: Electricity Substation Statement of Significance (224-236 Salmon Street, Port Melbourne), May 2022								
HO1383	Shed 21 206 Lorimer Street, Docklands Statement of Significance: Shed 21 Statement of Significance (206 Lorimer Street, Docklands), May 2022	No	No	No	Yes	No	No	No	No
HO1215	<i>Electricity substation thematic group:</i> <ul style="list-style-type: none"> ▪ 99A Sturt Street, Southbank ▪ 79 Fawkner Street, Southbank ▪ 33 Hancock Street, Southbank ▪ 7 Moray Street, Southbank ▪ 175 Sturt Street, Southbank Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO1216	<i>Bluestone pitched laneways group:</i> <ul style="list-style-type: none"> ▪ Anthony Lane SML246 between Coventry Street and Dorcas Street, Southbank ▪ Blakeney Place SML639 off Clarendon Street, Southbank 	Yes	No	No	Yes	No	No	No	No

PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	<ul style="list-style-type: none"> ▪ <i>lane off Catherine Street SM0477 between 18-24 Moray Street and 245-251 City Road, Southbank</i> ▪ <i>lane off City Road SM0199 from City Road, Southbank</i> ▪ <i>lane off Clarendon Street SM0337, adjacent to 54 Clarendon Street, Southbank</i> ▪ <i>Fawkner Street between Southbank Boulevard and Power Street, Southbank</i> ▪ <i>Haig Lane between Kings Way and Clarke Street, Southbank</i> ▪ <i>lane off Hancock Street SM549 between 11 – 15 Hancock Street, Southbank</i> ▪ <i>lane off Power Street PL5195, to 173 City Road, Southbank</i> ▪ <i>Wells Place SML609, Sml 247 and Sm 0248 from Dodds Street and between Wells Street and Anthony Lane, Southbank</i> <p>Statement of Significance: Southbank Statements of Significance, December 2020</p>								
HO1218	<p><i>New St John's Lutheran Church, 20 City Road, Southbank</i></p> <p>Statement of Significance: Southbank Statements of Significance, December 2020</p>	Yes	Yes	No	Yes	No	No	No	No

MELBOURNE PLANNING SCHEME

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PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO1203	<i>Former Crown Chemical Co warehouse, 63-65 City Road, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	No	No	No	Yes	No	No	No	No
HO1220	<i>Maurice Artaud & Co. façade, 71-75 City Road, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO366	<i>James Moore's Timber Yards and Sawmills complex façade, 133-139 City Road, 141-155 City Road & 68-82 Southbank Boulevard, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO368	<i>Sharp & Sons Timber, General Motors (Australia), International Harvester 171-193, & 195-205 City Road & 1 Balston Street, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO369	<i>State School No.2686, South Melbourne Girls School, J.H. Boyd Domestic College, 207 City Road, Southbank</i>	-	-	-	-	-	Yes Ref No H769	Yes	No
HO370	<i>Main Point Hotel, 235-239 City Road, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No

MELBOURNE PLANNING SCHEME

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PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO371	<i>Bank of New South Wales, 269-283 City Road, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO374	<i>Edward Murphy warehouse and workshop, 272 City Road, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO375	<i>Murphy's Buildings, 276- 282 City Road, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO376	<i>White & Hancock's warehouse, White, Hancock and Mills Pty Ltd., 300 City Road, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO1221	<i>Spencer Street Bridge, Clarendon Street Southbank and Spencer Street, Melbourne</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO1223	<i>Melbourne and Metropolitan Tramways Board Electricity Substation 'S', 67-69 Clarke Street, Southbank</i> Statement of Significance:	Yes	No	No	Yes	No	No	No	No

MELBOURNE PLANNING SCHEME

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PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
	Southbank Statements of Significance, December 2020								
HO764	<i>Duke & Orr's Dry Dock, & Cargo Sheds 4,5,6,7,8,9, adjoining Melbourne Convention & Exhibition Centre, 1-27 & 29-65 South Wharf Promenade & 2 Clarendon Street, South Wharf</i>	-	-	-	-	-	Yes Ref No H1096 & Ref No H891	Yes	No
HO765	<i>Fergus and Mitchell Robur Tea House, 28 Clarendon Street, Southbank</i>	-	-	-	-	-	Yes Ref No H526	Yes	No
HO914	<i>No. 2 Goods Shed, 707 Collins Street and 733 Bourke Street, Docklands</i>	-	-	-	-	-	Yes Ref No H933	No	No
HO1224	<i>Thornycroft (Aust) Ltd later Herald Sun Television Studio, 49-61 Coventry Street and 50 Dorcas Street, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO650	<i>Missions to Seamen, 717 Flinders Street, Docklands</i>	-	-	-	-	-	Yes Ref No H1496	Yes	No
HO918	<i>Berth No. 5, North Wharf, 731-739 Flinders Street, Docklands</i>	-	-	-	-	-	Yes Ref No H1798		
HO916	<i>Queens Warehouse, 749-755 Collins Street, Docklands</i>	-	-	-	-	-	Yes	Yes	No

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PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
							Ref No H1211		
HO651	<i>Retaining Wall, 614-666 Flinders Street, Docklands</i>	-	-	-	-	-	Yes Ref No H932	No	No
HO1225	<i>Vault sculpture corner Grant Street and Dodds Street, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO1226	<i>Austral Otis engineering works, later Regent House, 63 Kings Way, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO1227	<i>Kings Way Bridge, Kings Way, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO1200	<i>Former Castlemaine Brewery, Part 107-127, 129-131, and 133 Queens Bridge Street, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	Yes – uppermost two floors only of 129-131 Queens Bridge Street (tower)	No	Yes	No	No	No	No

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PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO1228	<i>Queens Bridge Hotel, 1-7 Queens Bridge Street, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO1229	<i>Robur Tea Company factory-warehouse, Part 107-127 Queens Bridge Street, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO763	<i>Jones Bond Store, 1 Riverside Quay, Southbank</i>	-	-	-	-	-	Yes Ref No H828	Yes	No
HO760	<i>Hamer Hall, 100 St. Kilda Road and Arts Centre, 2 St. Kilda Road, Southbank</i>	-	-	-	-	-	Yes Ref No H1500 & part Ref No H1447 & part Ref No H2378	Yes	No
HO791	Queens Bridge, Queens Bridge Street over Yarra River, Melbourne	-	-	-	-	-	Yes Ref No H1448	Yes	No
HO1298	<i>Forward Surge, 100 St. Kilda Road, Southbank</i>	-	-	-	-	-	Yes	No	No

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PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
							Ref No H2378 & part Ref No H1500 & part Ref No H2359		
HO792	<i>National Gallery Victoria, 180 St. Kilda Road, Southbank</i>	-	-	-	-	-	Yes Ref No H1499	Yes	No
HO910	<i>Victoria Police depot including Barracks, Mounted Branch stables and Police Hospital, 234 St. Kilda Road & 13 Dodds Street, Southbank</i>	-	-	-	-	-	Yes Ref No H1541	Yes	No
HO498	<i>Former Victorian Railway Headquarters, 33-67 Spencer Street, Docklands</i>	-	-	-	-	-	Yes Ref No H699	Yes	No
HO1201	<i>PMG Postal Workshops, Garage & Stores complex, Part 45-99 Sturt Street Southbank</i> Incorporated plan: PMG Postal Workshops, Garages & Stores complex, Part 45-99 Sturt Street Southbank Incorporated Plan, November 2020 Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No

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PS map ref	Heritage place	External paint controls apply?	Internal alteration controls apply?	Tree controls apply?	Solar energy system controls apply?	Outbuildings or fences not exempt under Clause 43.01-4	Included on the Victorian Heritage Register under the Heritage Act 2017?	Prohibited uses permitted?	Aboriginal heritage place?
HO390	<i>Castlemaine Brewery Malthouse/Malthouse Theatre 113 Sturt Street, Southbank</i> Statement of Significance: Southbank Statements of Significance, December 2020	Yes	No	No	Yes	No	No	No	No
HO762	<i>Sandridge Rail Bridge, Over Yarra River, Queensbridge Square, Southbank</i>	-	-	-	-	-	Yes Ref No H994	Yes	No
HO915	<i>Victoria Dock, Harbour Esplanade, Victoria Harbour Promenade, North Wharf Road, Docklands Drive and Newquay Promenade, Docklands</i>	-	-	-	-	-	Yes Ref No H1720	Yes	No
HO1380	<u><i>West Gate Service Stations, 1 and 2 West Gate Freeway, Port Melbourne</i></u> Incorporated Plan: <u>West Gate Service Stations Incorporated Plan (1 and 2 West Gate Freeway, Port Melbourne), March 2024</u> Statement of Significance: <u>West Gate Service Stations Statement of Significance (1 and 2 West Gate Freeway, Port Melbourne), February 2024</u>	No	No	No	No	No	No	No	No

Name of document	Introduced by:
ABC Melbourne New Office and Studio Accommodation Project (Southbank), December 2013	C226
Advertising Signs - Mercedes-Benz, 135-149 Kings Way, Southbank	C103
AMP Tower and St James Building Complex Statement of Significance (527-555 Bourke Street, Melbourne), April 2022	C387melb
Apartment Building Statement of Significance (13-15 Collins Street, Melbourne), April 2022	C387melb
Arden Macaulay Heritage Review 2012: Statements of Significance June 2016	C207
Arden Parking Precinct Plan, August 2021	C407melb
Arden Precinct Cross Sections, July 2022	C407melb
<i>Arden Precinct Wurundjeri Woi Wurrung Country Development Contributions Plan</i> (Victorian Planning Authority, December 2023)	VC249
Australia-Netherlands House Statement of Significance (468-478 Collins Street, Melbourne), April 2022	C387melb
Big Day Out Music Festival, January 2006	C112
Building Envelope Plan – Replacement Plan No.1, DDO 20 Area 45	NPS1
Carlton Brewery Comprehensive Development Plan October 2007	C126
Central City (Hoddle Grid) Heritage Review: Statements of Significance June 2013	C186(Part 1)
Carlton Connect Initiative Incorporated Document, March 2018	C313
Carlton Recreation Ground Incorporated Document, September 2020	C377melb
Charles Grimes Bridge Underpass, December 2011	C191
City North Heritage Review 2013: Statements of Significance (Revised June 2015)	C198
Cliveden Hill Private Hospital, 29 Simpson Street, East Melbourne, July 1999	C6
Caulfield Dandenong Rail Upgrade Project, Incorporated Document, April 2016	C349melb
Coates Building Statement of Significance (18-22 Collins Street, Melbourne), April 2022	C387melb
Collins Gate Statement of Significance (377-379 Little Collins Street, Melbourne), April 2022	C387melb
Commercial building Statement of Significance (480 Bourke Street, Melbourne), April 2022	C387melb
Commercial building Statement of Significance (582-584 Little Collins Street, Melbourne), April 2022	C387melb
Crown Casino Third Hotel, September 2007	C136
David Jones Melbourne City Store Redevelopment, May 2008	C139
Docklands Stadium - Signs, Incorporated Document, October 2023	C454melb
Downs House Statement of Significance (441-443 Little Bourke Street, Melbourne), April 2022	C387melb
Dreman Building Statement of Significance (96-98 Flinders Street, Melbourne), April 2022	C387melb
Drewery Lane Precinct Statement of Significance, April 2022	C387melb
Dynon Port Rail Link Project	C113

Name of document	Introduced by:
Electricity Substation Statement of Significance (224-236 Salmon Street, Port Melbourne), May 2022	C394melb
Emporium Melbourne Development, July 2009	C148
Epstein House Statement of Significance (134-136 Flinders Street, Melbourne), April 2022	C387melb
Equitable House Statement of Significance (335-349 Little Collins Street, Melbourne), April 2022	C387melb
Federation Arch and Sports and Entertainment Precinct Signs, April 2002	C66
Flinders Gate car park, Melbourne, July 1999	C6
Flinders Lane East Precinct Statement of Significance, April 2022	C387melb
Flinders Street Railway Viaduct Statement of Significance (Flinders Street, Melbourne), April 2022	C387melb
Former Ajax House Statement of Significance (103-105 Queen Street, Melbourne), April 2022	C387melb
Former Allans Building Statement of Significance (276-278 Collins Street, Melbourne), April 2022	C387melb
Former AMP Building Statement of Significance (344-350 Collins Street, Melbourne), April 2022	C387melb
Former AMP Building Statement of Significance (402-408 Lonsdale Street, Melbourne), April 2022	C387melb
Former Atlas Assurance Building Statement of Significance (404-406 Collins Street, Melbourne), April 2022	C387melb
Former Australia Pacific House Statement of Significance (136-144 Exhibition Street, Melbourne), April 2022	C387melb
Former Bank of Adelaide Building Statement of Significance (265-269 Collins Street, Melbourne), April 2022	C387melb
Former Bank of Australasia Statement of Significance (152-156 Swanston Street, Melbourne), April 2022	C387melb
Former Bank of New South Wales Statement of Significance (137-139 Flinders Lane, Melbourne), April 2022	C387melb
Former Batman Automatic Telephone Exchange Statement of Significance (376-382 Flinders Lane, Melbourne), April 2022	C387melb
Former Bryson Centre Statement of Significance (174-192 Exhibition Street, Melbourne), April 2022	C387melb
Former Cassells Tailors Pty Ltd Statement of Significance (341-345 Elizabeth Street, Melbourne), April 2022	C387melb
Former Coles and Garrard Building Statement of Significance (376-378 Bourke Street, Melbourne), April 2022	C387melb
Former Colonial Mutual Life Assurance Building and Plaza with 'Children's Tree' Sculpture Statement of Significance (308-336 Collins Street, Melbourne), April 2022	C387melb
Former Commercial Banking Company of Sydney Building Statement of Significance (251-257 Collins Street, Melbourne), April 2022	C387melb
Former Commonwealth Banking Corporation Building Statement of Significance (359-373 Collins Street, Melbourne), April 2022	C387melb
Former Craig, Williamson Pty Ltd complex Statement of Significance (57-67 Little Collins Street, Melbourne), April 2022	C387melb

Name of document	Introduced by:
Former Dalgety House Statement of Significance (457-471 Bourke Street, Melbourne), April 2022	C387melb
Former Dillingham Estates House Statement of Significance (114-128 William Street, Melbourne), April 2022	C387melb
Former Excelsior Chambers Statement of Significance (17-19 Elizabeth Street, Melbourne), April 2022	C387melb
Former Exhibition Towers Statement of Significance (287-293 Exhibition Street, Melbourne), April 2022	C387melb
Former Factory Statement of Significance (203-207 King Street, Melbourne), April 2022	C387melb
Former Fishmarket Site, Flinders Street Melbourne, September 2002	C68
Former Gilbert Court Statement of Significance (100-104 Collins Street, Melbourne), April 2022	C387melb
Former Godfrey's Building Statement of Significance (188-194 Little Collins Street, Melbourne), April 2022	C387melb
Former Gordon Buildings Statement of Significance (384-386 Flinders Lane, Melbourne), April 2022	C387melb
Former Gothic Chambers and warehouse Statement of Significance (418-420 Bourke Street and 3 Kirks Lane, Melbourne), April 2022	C387melb
Former Guardian Building Statement of Significance (454-456 Collins Street, Melbourne), April 2022	C387melb
Former Herald and Weekly Times building, 46-74 Flinders Street, Melbourne, August 2002	C69
Former Hosie's Hotel Statement of Significance (1-5 Elizabeth Street, Melbourne), April 2022	C387melb
Former John Danks & Son Statement of Significance (Part 393-403 Bourke Street, Melbourne), April 2022	C387melb
Former Kantay House Statement of Significance (12-18 Meyers Place, Melbourne), April 2022	C387melb
Former Kraft Vegemite Factory Statement of Significance (1 Vegemite Way, Port Melbourne), July 2022	C394melb
Former Law institute House (382 Little Collins Street, Melbourne), April 2022	C387melb
Former Law Department's Building Statement of Significance (221-231 Queen Street, Melbourne), April 2022	C387melb
Former Legal and General House Statement of Significance (375-383 Collins Street, Melbourne), April 2022	C387melb
Former London Assurance House Statement of Significance (Part 468-470 Bourke Street, Melbourne), April 2022	C387melb
Former Malcolm Reid & Co Department Store Statement of Significance (151-163 Bourke Street, Melbourne), April 2022	C387melb
Former Manchester Unity Oddfellows Building Statement of Significance (335-347 Swanston Street, Melbourne), April 2022	C387melb
Former Markillie's Prince of Wales Hotel Statement of Significance (562-564 Flinders Street and rear in Downie Street, Melbourne), April 2022	C387melb
Former Melbourne and Metropolitan Tramways Board Building Statement of Significance (616-622 Little Collins Street, Melbourne), April 2022	C387melb

Name of document	Introduced by:
Former Melbourne City Council Power Station Statement of Significance (617-639 (part) and 651-669 Lonsdale Street, 602-606 and 620-648 Little Bourke Street, Melbourne), April 2022	C387melb
Former Melbourne City Council Substation Statement of Significance (23-25 George Street, Melbourne), April 2022	C387melb
Former Melbourne City Council Substation Statement of Significance (10-14 Park Street, Melbourne), April 2022	C387melb
Former Melbourne City Council Substation Statement of Significance (11-27 Tavistock Place, Melbourne), April 2022	C387melb
Former Melbourne Shipping Exchange Statement of Significance (25 King Street, Melbourne), April 2022	C387melb
Former National Bank of Australasia Stock Exchange Branch Statement of Significance (85-91 Queen Street, Melbourne), April 2022	C387melb
Former Olympic Swimming Stadium, Collingwood Football Club signage, April 2004	C91
Former Palmer's Emporium Statement of Significance (220 Bourke Street, Melbourne), April 2022	C387melb
Former Patersons Pty Ltd Statement of Significance (Part 152-158 Bourke Street, Melbourne), April 2022	C387melb
Former Paramount House Statement of Significance (256-260 King Street, Melbourne), April 2022	C387melb
Former Printcraft House Statement of Significance (428-432 Little Bourke Street, Melbourne), April 2022	C387melb
Former Queen Victoria Hospital Site - Open Lot Car Park, Melbourne	NPS1
Former Princes Bridge Lecture Room Statement of Significance (Princes Walk, Birrarung Marr, Melbourne), , April 2022	C387melb
Former Ridgway Terrace Statement of Significance (20 Ridgway Place, Melbourne), April 2022	C387melb
Former Rockman's Showrooms Pty Ltd Statement of Significance (188 Bourke Street, Melbourne), April 2022	C387melb
Former Royal Automobile Club of Victoria Statement of Significance (111-129 Queen Street, Melbourne), April 2022	C387melb
Former Russell Street Automatic Telephone Exchange and Postal Building Statement of Significance (114-120 Russell Street, Melbourne), April 2022	C387melb
Former Sharpe Bros Pty Ltd Statement of Significance (202-204 Bourke Street Melbourne), April 2022	C387melb
Former Sleigh Buildings Statement of Significance (158-172 Queen Street, Melbourne), April 2022	C387melb
Former South British Insurance Company Ltd Building Statement of Significance (155-161 Queen Street, Melbourne), April 2022	C387melb
Former Southern Cross Hotel site, Melbourne, March 2002	C64
Former State Savings Bank of Victoria Statement of Significance (258-264 Little Bourke Street, Melbourne), April 2022	C387melb
Former State Savings Bank of Victoria Statement of Significance (233-243 Queen Street, Melbourne), April 2022	C387melb
Former State Savings Bank of Victoria Statement of Significance (45-63 Swanston Street, Melbourne), April 2022	C387melb

Name of document	Introduced by:
Former Sunday School Union of Victoria Statement of Significance (100-102 Flinders Street, Melbourne), April 2022	C387melb
Former Thomas Warburton Pty Ltd Statement of Significance (365-367 Little Bourke Street, 2-6 and 8-14 Rankins Lane. Melbourne), April 2022	C387melb
Former Union House Statement of Significance (43-51 Queen Street, Melbourne), April 2022	C387melb
Former Victoria Brewery site, East Melbourne – ‘Tribeca’ Redevelopment October 2003	C86
Former Victorian Amateur Turf Club Statement of Significance (482-484 Bourke Street, Melbourne), April 2022	C387melb
Former Wenley Motor Garage Statement of Significance (39-41 Little Collins Street, Melbourne), April 2022	C387melb
Former Zander's No 2 Store Statement of Significance (11 Highlander Lane, Melbourne), April 2022	C387melb
Freshwater Place, Southbank, August 2001 (Amended 2012)	C193
Grange Lynne Pty Ltd Statement of Significance (183-189 A'Beckett Street, Melbourne), April 2022	C387melb
Great Western Hotel Statement of Significance (204-208 King Street, Melbourne), April 2022	C387melb
Guildford and Hardware Laneways Heritage Study May 2017: Heritage Inventory, November 2018 (Amended April 2022)	C387melb
Guildford and Hardware Laneways Heritage Study May 2017: Statements of Significance, November 2018 (Amended April 2022)	C387melb
Hamer Hall Redevelopment July 2010	C166
Henty House Statement of Significance (499-503 Little Collins Street, Melbourne), April 2022	C387melb
Heritage Places Inventory March 2022 (Amended May 2023 2024)	C425melbC463melb
Heritage Places Inventory February 2020 Part B (Amended September 2022)	C409melb
Heritage Precincts Statements of Significance February 2020 (Amended April 2022)	C387melb
High wall signs - 766 Elizabeth Street, Carlton	NPS1
Hilton on the Park Complex Redevelopment, December 2004	C101
Hobsons Road Precinct Incorporated Plan, March 2008	C124
<i>Helicopter Emergency Medical Services - Royal Children's Hospital South-East Helicopter Flight Path Protection Incorporated Document</i> (Victorian Health Building Authority, November 2023)	C457melb
Hospital Emergency Medical Services - Helicopter Flight Path Protection Areas Incorporated Document, June 2017	GC49
Hotham Estate	C134
Hoyts Mid City Cinemas Statement of Significance (194-200 Bourke Street, Melbourne), April 2022	C387melb
Incorporated Plan Overlay No. 1 – 236-254 St Kilda Road	NPS1
Judy Lazarus Transition Centre, March 2005	C102
Kensington Heritage Review Statements of Significance, March 2018	C324

Name of document	Introduced by:
Laurens House Statement of Significance (414-416 Lonsdale Street, Melbourne), April 2022	C387melb
Little Lonsdale Street Precinct Statement of Significance, April 2022	C387melb
Lonsdale Exchange Building Statement of Significance (447-453 Lonsdale Street, Melbourne), April 2022	C387melb
Lyceum Club Statement of Significance (2-18 Ridgway Place, Melbourne), April 2022	C387melb
M1 Redevelopment Project, October 2006	C120
Major Promotion Signs, December 2008	C147
Melbourne Aquarium Signs, July 2001	C11
Melbourne Arts Precinct Transformation Project, Phase One, January 2022	C356melb
Melbourne Assessment Prison (MAP) 317-353 Spencer Street, West Melbourne, February 2020	C258melb
Melbourne Central redevelopment, March 2002 (Amended October 2019)	C344melb
Melbourne City Link Project – Advertising Sign Locations, November 2003	VC20
Melbourne Convention Centre Development, Southbank and North Wharf redevelopment, Docklands, April 2006, Amended May 2016	GC44
Melbourne Girls Grammar – Merton Hall Campus Master Plan, June 2002	C22
Melbourne Grammar School Master Plan - Volume One, Senior School South Yarra Campus, Issue Date 14 October 2003.	C90
Melbourne House Statement of Significance (354-360 Little Bourke Street, Melbourne), April 2022	C387melb
Melbourne Metro Rail Project Incorporated Document, May 2018	GC82
Melbourne Metro Rail Project – Infrastructure Protection Areas Incorporated Document, December 2016	GC45
Melbourne Park Redevelopment February 2014	C229
Melbourne Planning Scheme Incorporated Plan, June 2016, Melbourne Water Permit Exemptions to the Schedule to Clause 43.01 for the Moonee Ponds Creek (HO1092)	C207
Melbourne Recital Hall and MTC Theatre project , August 2005	C111
Mental Health Beds Expansion Program Incorporated Document, November 2020	GC176
Metro Tunnel: Over Site Development – CBD North Incorporated Document, October 2017	C315
Metro Tunnel: Over Site Development – CBD South Incorporated Document, October 2017	C316
Metropolitan Hotel Statement of Significance (263-267 William Street, Melbourne), April 2022	C387melb
Mirvac, Residential Towers, 236-254 St. Kilda Road, Southbank	NPS1
Moonee Ponds Creek Concept Plan	C134
Myer Melbourne Bourke Street store redevelopment, Melbourne, October 2007	C137
North Melbourne Recreation Reserve Signage, 2022	C422melb
North West Corner of Mark and Melrose Street, North Melbourne	C134

Name of document	Introduced by:
Nubrik House Statement of Significance (269-275 William Street, Melbourne), April 2022	C387melb
Office building Statement of Significance (589-603 Bourke Street), April 2022	C387melb
Offices Statement of Significance (422-424 Bourke Street, Melbourne), April 2022	C387melb
One Queensbridge, 1-29 Queens Bridge Street, Southbank (Crown's Queensbridge Hotel Tower), February 2017	C310
Park Tower Statement of Significance (199-207 Spring Street, Melbourne), April 2022	C387melb
Peter Hall Building (formerly known as the Richard Berry Building) Statement of Significance (The University of Melbourne, Parkville), March 2022	C396melb
PMG Postal Workshops, Garages & Stores complex, Part 45-99 Sturt Street Southbank Incorporated Plan, November 2020	C305melb
Port Capacity Project, Webb Dock Precinct, Incorporated Document, October 2012 (Amended August 2016)	GC54
Project Core Building, Federation Square, December 2017	C314
Promotional Panel sign, Crown Allotment 21D, Power Street, Southbank, July 1999	C6
Punt Road Oval Redevelopment – Part Crown Allotment 2114 at East Melbourne City of Melbourne Parish of Melbourne North, June 2022	C421melb
Rectangular Pitch Stadium Project: Olympic Park and Gosch's Paddock, Melbourne, August 2007	C130
Regional Rail Link Project Section 1 Incorporated Document, March 2015	GC26
Residences Statement of Significance (120-122 Little Lonsdale Street, Melbourne), April 2022	C387melb
Residence Statement of Significance (474 Little Lonsdale Street, Melbourne), April 2022	C387melb
Rialto South Tower Communications Facility Melbourne, November 2020	C57
Royal Insurance Group building Statement of Significance (430 - 442 Collins Street, Melbourne), April 2022	C387melb
Royal Mail House Statement of Significance (253-267 Bourke Street, Melbourne), April 2022	C387melb
Royal Melbourne Showgrounds Redevelopment Master Plan – December 2004	C100
Royal Melbourne Showgrounds Redevelopment Project – December 2004	C100
Sanders and Levy Building Statement of Significance (149-153 Swanston Street, Melbourne), April 2022	C387melb
Scots Church Site Redevelopment, Melbourne, May 2013	C202
Shadow Controls, 555 Collins Street, Melbourne, February 2013	C216
Shed 21 Statement of Significance (206 Lorimer Street, Docklands), May 2022	C394melb
Shop and residence Statement of Significance (215-217 Swanston Street, Melbourne), April 2022	C387melb
Shop, cafe and office Statement of Significance (7-9 Elizabeth Street, Melbourne), April 2022	C387melb
Shops and dwellings Statement of Significance (201-207 Bourke Street, Melbourne), April 2022	C387melb

Name of document	Introduced by:
Shops and dwellings Statement of Significance (209-215 Bourke Street, Melbourne), April 2022	C387melb
Shops and offices Statement of Significance (359-363 Lonsdale Street, Melbourne), April 2022	C387melb
Shops, residence and former bank Statement of Significance (146-150 Bourke Street, Melbourne), April 2022	C387melb
Shops Statement of Significance (173-175 Bourke Street, Melbourne), April 2022	C387melb
Shops Statement of Significance (470-472 Little Lonsdale Street, Melbourne), April 2022	C387melb
Shop Statement of Significance (171 Bourke Street, Melbourne), April 2022	C387melb
Shop Statement of Significance (37 Little Collins Street, Melbourne), April 2022	C387melb
Shop Statement of Significance (215 Queen Street, Melbourne), April 2022	C387melb
Shrine of Remembrance Signage, July 2021	C388melb
Shrine of Remembrance Vista Control April 2014	C220
Simplot Australia head office, Kensington, October 2001	C52
Sky sign - 42 Clarendon Street, South Melbourne	NPS1
Southbank Statements of Significance, December 2020	C305melb
Southgate Redevelopment Project, 3 Southgate Avenue, Southbank, September 2021	C390melb
Spencer Street Station redevelopment, June 2013	C218
Sports and Entertainment Precinct, Melbourne, August 2007	C130
State Coronial Services Centre Redevelopment Project, August 2007	C130
State Netball and Hockey Centre, Brens Drive Royal Park, Parkville, May 2000 (Amended September 2018)	C341
Swanston Street North Precinct Statement of Significance, April 2022	C387melb
Swanston Street South Precinct Statement of Significance, April 2022	C387melb
Swiss Club of Victoria Statement of Significance (87-89 Flinders Lane, Melbourne), April 2022	C387melb
The Former Houston Building Statement of Significance (184-192 Queen Street, Melbourne), April 2022	C387melb
The Games Village Project, Parkville, September 2015	C281
The New Royal Children's Hospital Project, Parkville, October 2007	C128
The University of Melbourne Fishermans Bend Campus, August 2020	C371melb
The Waiters Restaurant Statement of Significance (20 Meyers Place, Melbourne), April 2022	C387melb
Tram Route 109 Disability Discrimination Act compliant Platform Tram Stops, August 2007	C130
Tramway Infrastructure Upgrades Incorporated Document, May 2017	GC68
Treasury Gate Statement of Significance (93-101 Spring Street, Melbourne), April 2022	C387melb
Turnverein Hall Statement of Significance (30-34 La Trobe Street, Melbourne), April 2022	C387melb

Name of document	Introduced by:
University of Melbourne Bio 21 Project Parkville, November 2018	C342melb
University of Melbourne, University Square Campus, Carlton, November 1999	C17
Veterinary and Agricultural Sciences Building Statement of Significance (The University of Melbourne, Parkville), March 2022	C396melb
Victoria Club Building Statement of Significance (131-141 Queen Street, Melbourne), April 2022	C387melb
Victoria Police Precinct, Sky Bridges 263 – 283 Spencer Street and 313 Spencer Street, Docklands Incorporated Document June 2018	C317
Visy Park Signage, 2012	C172
Wales Corner Statement of Significance (221-231 Collins Street, Melbourne), April 2022	C387melb
Warehouse Statement of significance (1-5 Coverlid Place, Melbourne), April 2022	C387melb
Warehouse statement of Significance (11-15 Duckboard Place, Melbourne), April 2022	C387melb
Warehouse Statement of Significance (353 Exhibition Street, Melbourne), April 2022	C387melb
Warehouse Statement of Significance (11A Highlander Lane, Melbourne), April 2022	C387melb
Warehouse Statement of Significance (26-32 King Street, Melbourne), April 2022	C387melb
Warehouse Statement of Significance (171-173 King Street, Melbourne), April 2022	C387melb
Warehouse Statement of Significance (34-36 Little La Trobe Street, Melbourne), April 2022	C387melb
Warehouse Statement of Significance (27-29 Little Lonsdale Street, Melbourne), April 2022	C387melb
Warehouse Statement of Significance (410-412 Lonsdale Street, Melbourne), April 2022	C387melb
Warehouse Statement of Significance (577-583 Little Collins Street, Melbourne), April 2022	C387melb
West Gate Tunnel Project Incorporated Document, December 2017	GC93
<u>West Gate Service Stations Incorporated Plan (1 and 2 West Gate Freeway, Port Melbourne), March 2024</u>	<u>C463melb</u>
<u>West Gate Service Stations Statement of Significance (1 and 2 West Gate Freeway, Port Melbourne), February 2024</u>	<u>C463melb</u>
West Melbourne Heritage Review 2016: Statements of Significance February 2020 (Amended March 2022)	C396melb
Yarra Park Master Plan Implementation September 2010	C158
Young and Jackson's Hotel, Promotional Panel Sky sign, Melbourne, July 1999	C6

Name of background document	Amendment number - clause reference
<i>Central City Planning and Design Guidelines</i> (City of Melbourne, 1991)	C105 Clause 15.01-1L
<i>Central Melbourne Design Guide</i> (City of Melbourne, 2019)	C308melb Schedule 1 to Clause 43.02
<i>City Plan 2010</i> (City of Melbourne, 2001)	C162
<i>City of Melbourne: Energy, Water and Waste Review</i> (City of Melbourne, 2011)	C187 Clause 15.01-2L
City of Melbourne Exceptional Tree Register 2019	C379melb Schedule 2 to Clause 42.01
<i>City of Melbourne Open Space Strategy</i> (Thompson Berrill Landscape Design and Environment & Land Management, 2012)	C209 Clause 19.02-6L
<i>City of Melbourne Open Space Strategy, Technical Report</i> (Thompson Berrill Landscape Design and Environment & Land Management, 2012)	C209 Clause 19.02-6L
<i>City of Melbourne Open Space Strategy, Open Space Contributions Framework</i> (Environment & Land Management and Thompson Berrill Landscape Design, 2012)	C209 Clause 19.02-6L
<i>City of Melbourne, Zero, Net Emissions by 2020</i> (City of Melbourne, 2002)	C187 Clause 15.01-2L
<i>City of Melbourne, Zero Net Emissions by 2020 Update 2008</i> (City of Melbourne, 2008)	C187 Clause 15.01-2L
<i>CBD Lanes Built Form Review ID Sheets</i> (Hansen Partnership Ltd, 2005)	C105 Clause 15.01-1L
<i>City of Melbourne, Total Watermark - City as a Catchment</i> (City of Melbourne, 2009)	C187 Clause 15.01-2L
<i>City of Melbourne Waste Management Strategy</i> (City of Melbourne, 2005)	C187 Clause 15.01-2L
<i>City of Melbourne Water Sensitive Urban Design Guidelines</i> (City of Melbourne, 2009)	C142 Clause 19.03-3L
<i>Guidelines for Preparing a Waste Management Plan</i> (City of Melbourne, 2021)	C187 Clause 15.01-2L
<i>City of Melbourne Social Planning Framework</i> (City of Melbourne, 2002)	C162
<i>City of Melbourne Stormwater Management Plan</i> (City of Melbourne, 2000)	C162
<i>City North Heritage Review</i> , RBA Architects (RBA Architects, 2013)	C198 Clause 15.03-1L
<i>City of Port Phillip and City of Moreland, Sustainable Design Scorecard</i> (City of Port Phillip and City of Moreland)	C187 Clause 15.01-2L
<i>City West Plan, 2002</i> (City of Melbourne, 2002)	C162
<i>Disability Action Plan 2001—2004</i> (City of Melbourne, 2001)	C162
<i>Docklands Community Development Plan 2001-2016</i> (City of Melbourne, 2002)	C162 Clause 11.03-6L

Name of background document	Amendment number - clause reference
<i>Drugs Action Plan 2001-2003</i> (City of Melbourne, 2001)	C162
<i>East Melbourne & Jolimont Conservation Study</i> (Meredith Gould, 1985)	C258 Clause 15.03-1L
<i>Extract from Fishermans Bend In-Depth Heritage Review and Stakeholder Engagement Summary Report</i> (HLCD, 2022)	C394melb Clause 02.03-4 and Clause 15.03-1L
<i>Fitzroy and Treasury Gardens Management Plan</i> (City of Melbourne, 1996)	C162
<i>Fishermans Bend Vision</i> (DELWP, 2016)	C162 Clause 11.03-6L
<i>Fishermans Bend Framework</i> (DELWP, 2018)	C162 Clause 11.03-6L
<i>Fishermans Bend Community Infrastructure Plan</i> (DELWP, 2017)	C162
<i>Fishermans Bend Urban Design Strategy</i> (Hodyl and Co, 2017)	C162
<i>Fishermans Bend Public Space Strategy</i> (Planisphere, 2017)	C162
<i>Fishermans Bend Integrated Transport Plan</i> (DEDJTR, 2017)	C162
<i>Fishermans Bend Sustainability Strategy</i> (DELWP, 2017)	C162
<i>Flagstaff Gardens Master Plan</i> (City of Melbourne, 2000)	C162
<i>Flemington & Kensington Conservation Study</i> (Graeme Butler & Associates, 1985)	C258 Clause 15.03-1L
<i>Future Melbourne Community Plan</i> (City of Melbourne , September 2008)	C187 Clause 15.01-2L
<i>Grids and Greenery: The Character of Inner Melbourne</i> (City of Melbourne, 1987)	C162 Clause 15.01-1L
<i>Growing Green</i> (City of Melbourne, 2003)	C162
<i>Green Star Rating Tools</i> (Green Building Council of Australia)	C187 Clause 15.01-2L
<i>Guildford and Hardware Laneways Heritage Study</i> (Lovell Chen, 2017) (Updated October 2018)	C387melb Clause 15.03-1L
<i>Harbour, Railway, Industrial Conservation Study</i> (Meredith Gould Architects, 1985)	C258 Clause 15.03-1L
<i>Hoddle Grid Heritage Review</i> (GML and GJM, July 2020) (Updated March 2022)	C387melb Clause 15.03-1L
<i>How to Calculate Floor Area Uplifts and Public Benefits</i> (DELWP, 2016)	C270 Clause 15.01-2L
<i>Integration and Design Excellence, Melbourne Docklands</i> (Docklands Authority, July 2000)	C162 Clause 11.03-6L
<i>JJ Holland Park Concept Plan</i> (City of Melbourne, 1998)	C162
<i>Kensington Heritage Review</i> (Graeme Butler & Associates, 2013)	C215 Clause 15.03-1L

Name of background document	Amendment number - clause reference
<i>Linking People, Homes and Communities - A Social Housing Strategy 2001—2004</i> (City of Melbourne, 2001)	C162
<i>Lygon Street Action Plan</i> (Melbourne Metropolitan Board of Works and City of Melbourne, 1984)	C59 Clause 17.02-1L
<i>Melbourne BioAgenda</i> (City of Melbourne, 2002)	C162
<i>Melbourne Docklands Bicycle Strategy</i> (EDAW in association with SKM, 2000)	C92 Clause 11.03-6L
<i>Melbourne Docklands Community Development Plan 2001-2016</i> (Docklands Authority, 2001)	C92 Clause 11.03-6L
<i>Melbourne Docklands ESD Guide</i> (Docklands Authority , 2002)	C92 Clause 11.03-6L
<i>Melbourne Docklands Outdoor Signage Guidelines</i> (VicUrban, 2004)	C162 Clause 11.03-6L Clause 15.01-1L
<i>Melbourne's Greenhouse Action Plan 2001-2003</i> (City of Melbourne, 2001)	C162
<i>Melbourne Sustainable Energy and Greenhouse Strategy</i> (City of Melbourne, 2000)	C162
<i>Melbourne Docklands Water Plan</i> (Docklands Authority, June 2001)	C92 Clause 11.03-6L
<i>Moving Melbourne into the Next Century-Transport Strategy</i> (City of Melbourne, 1997)	C162
<i>National Australian Built Environment Rating System 'NABERS'</i>	C187 Clause 15.01-2L
<i>North and West Melbourne Conservation Study</i> (Graeme Butler 1985 & 1994)	C258 Clause 15.03-1L
<i>North West 2010 Local Plan</i> (City of Melbourne, 1999)	C162
<i>Parks Policy</i> (City of Melbourne, 1997)	C162
<i>Parkville Conservation Study</i> (City of Melbourne, 1985)	C258 Clause 15.03-1L
<i>Places for People</i> (City of Melbourne and Jan Gehl, 1994)	C60 (part1A) Clause 15.01-1L
<i>Places for Everyone – A Strategy for Creating and Linking Public Open Spaces at Melbourne Docklands</i> (Melbourne Docklands, 2002)	C92 Clause 11.03-6L
<i>Port of Melbourne Land Use Plan</i> (Maunsell McIntyre Pty Ltd., 2002)	C162
<i>Port Melbourne Structure Plan</i> (City of Melbourne, 1999)	C162
<i>Princes Park Ten Year Plan</i> (City of Melbourne, 1998)	C162
<i>Queen Victoria Market Precinct Renewal Built Form Review & Recommendations</i> (Jones and Whitehead Pty Ltd, 2015)	C245
<i>Queen Victoria Market Precinct Renewal Master Plan</i> (City of Melbourne, 2015)	C245

Name of background document	Amendment number - clause reference
<i>Retail Core Development Strategy</i> (City of Melbourne, 2001)	C162
<i>Review of Heritage Buildings in Kensington: Percy Street Area</i> (Graeme Butler, 2013)	C215 Clause 15.03-1L
<i>Royal Park Master Plan</i> (City of Melbourne, 1998)	C162
<i>Southbank Heritage Review</i> (Biosis and Graeme Butler, 2017) (updated November 2020)	C305 Clause 15.03-1L
<i>Southbank Structure Plan 2010</i> (AECOM, 2010)	C162
<i>South Melbourne Urban Conservation Study</i> (Allom Lovell Sanderson Pty Ltd , 1987)	C258 Clause 15.03-1L
<i>State Environment Protection Policy (Waters of Victoria)</i> , (Environment Protection Authority, 2003)	C142 Clause 19.03-3L
<i>South Melbourne Conservation Study</i> (Bryce Raworth Pty Ltd, 1985 & 1998)	C258 Clause 15.03-1L
<i>South Yarra Conservation Study</i> (Meredith Gould, 1985)	C258 Clause 15.03-1L
<i>Swanston Street, Carlton- Urban Design Guidelines</i> (City of Melbourne, 1999)	C162
<i>Swanston Street Walk – Precinct Amenity Planning Report</i> (Department of Planning and Housing, City of Melbourne, 1992)	C60 Clause 15.01-1L
<i>The Docklands Authority Environmental Management Plan</i> (EMP, 2000)	C92 Clause 11.03-6L
<i>The Shrine of Remembrance: Managing the significance of the Shrine</i> (Message Consultants Australia, 2013)	C162 Clause 15.01-1L
<i>The Bourke Russell Street Area Development Strategy</i> (City of Melbourne, 1999)	C60 Clause 13.07-1L
<i>Total Watermark 2004</i> (City of Melbourne, 2004)	C162
<i>Towards a Knowledge City Strategy</i> (SGS Economics & Planning and The Eureka Project for City of Melbourne , 2002)	C162
<i>Transport Program 2003-2006</i> (City of Melbourne 2003)	C162
<i>Urban Stormwater Best Practice Environmental Management Guidelines</i> (CSIRO, 1999)	C187 Clause 19.03-3L
<i>Victoria Harbour Development Plan</i> (Lend Lease, 2010)	C92 Clause 11.03-6L
<i>Water Sensitive Urban Design – Engineering Procedures: Stormwater</i> (Melbourne Water, 2005)	C142 Clause 19.03-3L
<i>West Gate Service Stations Heritage Review</i> (GJM Heritage, 2024)	C463melb Clause 15.03-1L-02
<i>West Melbourne Heritage Review</i> (Graeme Butler & Associates, 2016)	C258 Clause 15.03-1L
<i>West Melbourne Structure Plan</i> (City of Melbourne, 2018)	C385melb

Name of background document	Amendment number - clause reference
<i>World Heritage Environs Area Strategy Plan: Royal Exhibition Building and Carlton Gardens</i> (Lovell Chen, 2009)	C154 Clause 15.03-1L
<i>Yarra River: Use and Development Guidelines</i> (R.G. Harvey Pty. Ltd., 1991)	C60 Clause 15.01-1L
<i>Zero Net Emissions by 2020 – A Roadmap to a Climate Neutral City</i> (City of Melbourne, 2003)	C162



Melbourne Planning Scheme

Incorporated Document

Heritage Places Inventory March 2022 (Amended May
~~2023~~2024)

**This document is an incorporated document in the Melbourne Planning Scheme pursuant to
Section 6(2)(j) of the Planning and Environment Act 1987**

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INTRODUCTION

Buildings contained in the Heritage Overlay of the Melbourne Planning Scheme which are categorised as 'significant' or 'contributory' are listed in this document. This document also indicates whether they are located in a significant streetscape.

Buildings contained in the Heritage Overlay of the Melbourne Planning Scheme are 'non-contributory' if they are not:

- Categorised as 'significant' or 'contributory' in this document or another incorporated heritage document to the Melbourne Planning Scheme, or
- Graded in the *Heritage Places Inventory 2020 Part B* or another incorporated heritage document to the Melbourne Planning Scheme, or
- Contained in the *Central City Heritage Study Review 1993*.

The property listings are divided into the following geographical areas:

- Carlton and Carlton North;
- East Melbourne and Jolimont;
- Flemington and Kensington;
- Melbourne;
- North and West Melbourne;
- Parkville;
- Southbank, South Wharf and Docklands and Port Melbourne; and
- South Yarra.

Within each area individual properties are listed alphabetically by street name and numerically.

In addition to this document, further information regarding heritage buildings can be found in the relevant heritage study, statement of significance and/or "Building Identification Form".

The policies in the Melbourne Planning Scheme applied by the Responsible Authority when considering relevant planning permit applications are dependent on the particular building category and whether it is in a significant streetscape.

The building category and significant streetscape definitions are in the Melbourne Planning Scheme.

DEFINITIONS

Term	Definition
Concealed/partly concealed	Concealed means cannot be seen from a street (other than a lane, unless the land has heritage value) or public park. Partly concealed means that some of the addition or higher rear part may be visible provided it does not visually dominate or reduce the prominence of the existing building's façade(s) in the street.
Contextual design	A contextual design for new buildings and additions to existing buildings is one which adopts a design approach, derived through analysis of the subject property and its heritage context. Such an approach requires new development to comfortably and harmoniously integrate with the site and the street character.
Contributory heritage place	A contributory heritage place is important for its contribution to a heritage precinct. It is of historic, aesthetic, scientific, social or spiritual significance to the heritage precinct. A contributory heritage place may be valued by the community; a representative example of a place type, period or style; and/or combines with other visually or stylistically related places to demonstrate the historic development of a heritage precinct. Contributory places are typically externally intact, but may have visible changes which do not detract from the contribution to the heritage precinct.
Enhance	Enhance means to improve the presentation and appearance of a heritage place through restoration, reconstruction or removal of unsympathetic or intrusive elements; and through appropriate development.
Facadism	The retention of the exterior face/faces of a building without the three-dimensional built form providing for its/their structural support and understanding of its function.
Front or principal part of a building	The front or principal part of a building is generally considered to be the front two rooms in depth, complete with the structure and cladding to the roof; or that part of the building associated with the primary roof form, whichever is the greater. For residential buildings this is generally 8-10 metres in depth. For most non-residential buildings, the front or principal part is generally considered to be one full structural bay in depth complete with the structure and cladding to the roof or generally 8-10 metres in depth. For corner sites, the front or principal part of a building includes the side street elevation. For sites with more than one street frontage, the front or principal part of a building may relate to each street frontage.
Individual heritage place	An individual heritage place is equivalent to a significant heritage place. It may be categorised significant within a heritage precinct. It may also have an individual Heritage Overlay control, and be located within or outside a heritage precinct.
Lane	A lane is a narrow road or right of way (ROW) generally abutting the rear or side boundary of a property. It may be paved or unpaved and in public or private ownership and will typically provide vehicle access to adjoining properties.
Non-contributory	A non-contributory place does not make a contribution to the cultural significance or historic character of the heritage precinct.
Respectful and interpretive	Respectful means a modern design approach to new buildings, additions and alterations to buildings, in which historic building size and form are adopted, and proportions and details are referenced but not directly copied, and sympathetic colours and materials are used. Interpretive means a looser and simplified modern interpretation of historic building form, details and materials.
Services and ancillary fixtures	Services and ancillary fixtures include, but are not limited to, satellite dishes, shade canopies and sails, solar panels, water storage tanks, disabled access ramps and handrails, air conditioners, cooling or heating systems and hot water services.

Term	Definition
Significant heritage place	A significant heritage place is individually important at state or local level, and a heritage place in its own right. It is of historic, aesthetic, scientific, social or spiritual significance to the municipality. A significant heritage place may be highly valued by the community; is typically externally intact; and/or has notable features associated with the place type, use, period, method of construction, siting or setting. When located in a heritage precinct a significant heritage place can make an important contribution to the precinct.
Significant streetscape	Significant streetscapes are collections of buildings outstanding either because they are a particularly well preserved group from a similar period or style, or because they are a collection of buildings significant in their own right.
Visible	Visible means anything that can be seen from a street (other than a lane, unless the lane is identified as having heritage value) or public park.

SOUTHBANK, SOUTH WHARF, DOCKLANDS AND PORT MELBOURNE

SOUTHBANK, SOUTH WHARF, DOCKLANDS AND PORT MELBOURNE			
Street	Number	Building Category	Significant Streetscape
Laneway (unnamed) off Catherine Street	Sm0477	Contributory	-
Laneway (unnamed) off City Road	Sm0199	Contributory	-
Laneway (unnamed) off Clarendon Street	Sm0337	Contributory	-
Laneway (unnamed) off Hancock Street	Sm0549	Contributory	-
Laneway (unnamed) off Power Street	PL5195	Contributory	-
Anthony Lane	Laneway SML246	Contributory	-
Balston Street	1 (also known as 195-205 City Road)	Significant	-
Blakeney Place	Laneway SML639 (off Clarendon Street)	Contributory	-
Bourke Street	731-733	Significant	-
City Road	20	Significant	-
City Road	272	Significant	-
City Road	276-282	Significant	-
City Road	300	Significant	-
City Road	63-65	Significant	-
City Road	71-75	Significant	-
City Road	133-139	Significant	-
City Road	141-155	Significant	-
City Road	171-193	Significant	-
City Road	207	Significant	-
City Road	235-239	Significant	-
City Road	269-283	Significant	-
Clarendon & Spencer Streets	Spencer Street Bridge	Significant	-
Clarendon Street	2	Significant	-
Clarendon Street	28	Significant	-
Clarke Street	67-69	Significant	-
Collins Street	708-710	Significant	-
Collins Street	749-755	Significant	-

SOUTHBANK, SOUTH WHARF, DOCKLANDS AND PORT MELBOURNE			
Street	Number	Building Category	Significant Streetscape
Coventry Street	49-61 (also known as 50 Dorcas Street)	Significant	-
Fawkner Street	79	Contributory	-
Fawkner Street	Laneway (off Power Street)	Contributory	-
Flinders Street	614-666	Significant	-
Flinders Street	717	Significant	-
Flinders Street	731-739	Significant	-
Grant Street	Corner Dodds Street (Vault sculpture)	Significant	-
Haig Lane	Laneway (off Clarendon Street)	Contributory	-
Hancock Street	33	Contributory	-
Kings Way	63	Significant	-
Kings Way	Kings Way Bridge	Significant	-
Lorimer Street	206	Significant	-
Moray Street	7	Contributory	-
Queensbridge Square	Sandridge Rail Bridge	Significant	-
Queens Bridge Street	Queens Bridge	Significant	-
Queens Bridge Street	1-7	Significant	-
Queens Bridge Street	107-127, includes:		
	<ul style="list-style-type: none"> 107-113 Queens Bridge Street 	Significant	-
	<ul style="list-style-type: none"> 115-127 Queens Bridge Street 	Significant	-
Queens Bridge Street	129-131	Significant	-
Queens Bridge Street	133	Significant	-
Riverside Quay	1	Significant	-
Salmon Street	224-236	Significant	-
South Wharf Promenade	1-27	Significant	-
South Wharf Promenade	29-65	Significant	-
Southbank Boulevard	68-82 (also known as 115-131 City Road)	Significant	-
Southbank Boulevard	148-170	Significant	-
Southbank Boulevard	93-115	Significant	-
Spencer Street	33-67	Significant	-
St Kilda Road	100	Significant	Significant

SOUTHBANK, SOUTH WHARF, DOCKLANDS AND PORT MELBOURNE			
Street	Number	Building Category	Significant Streetscape
St Kilda Road	180	Significant	Significant
St Kilda Road	234 (also known as 13 Dodds Street)	Significant	Significant
Sturt Street	1-9	Significant	-
Sturt Street	Part 45-99	Significant	-
Sturt Street	99A	Contributory	-
Sturt Street	113	Significant	-
Sturt Street	175	Contributory	-
Vegemite Way	1	Significant	-
Victoria Dock, Harbour Esplanade, Victoria Harbour Promenade, North Wharf Road, Docklands Drive & Newquay Promenade	-	Significant	-
Village Street	2-42	Significant	-
Village Street	68-82	Significant	-
Wells Place	Laneway SML609, SML247 and Sm0248 (off Dodds Street)	Contributory	-
West Gate Freeway	1	Significant	-
West Gate Freeway	2	Significant	-

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Melbourne Planning Scheme

Incorporated Plan

West Gate Service Stations

1 and 2 West Gate Freeway, Port Melbourne

March 2024

West Gate Service Stations

1. Introduction

This document is an incorporated document in the schedules to Clause 43.01 Heritage Overlay (HO1380) and Clause 72.04 Incorporated Documents of the Melbourne Planning Scheme (scheme) pursuant to section 6(2)(j) of the *Planning and Environment Act 1987*.

This document applies to the land which is occupied by two service stations on the West Gate Freeway, comprising of land at 1 West Gate Freeway, Port Melbourne (north service station) and 2 West Gate Freeway, Port Melbourne (south service station).

This incorporated plan establishes planning permit exemptions in respect of the land.

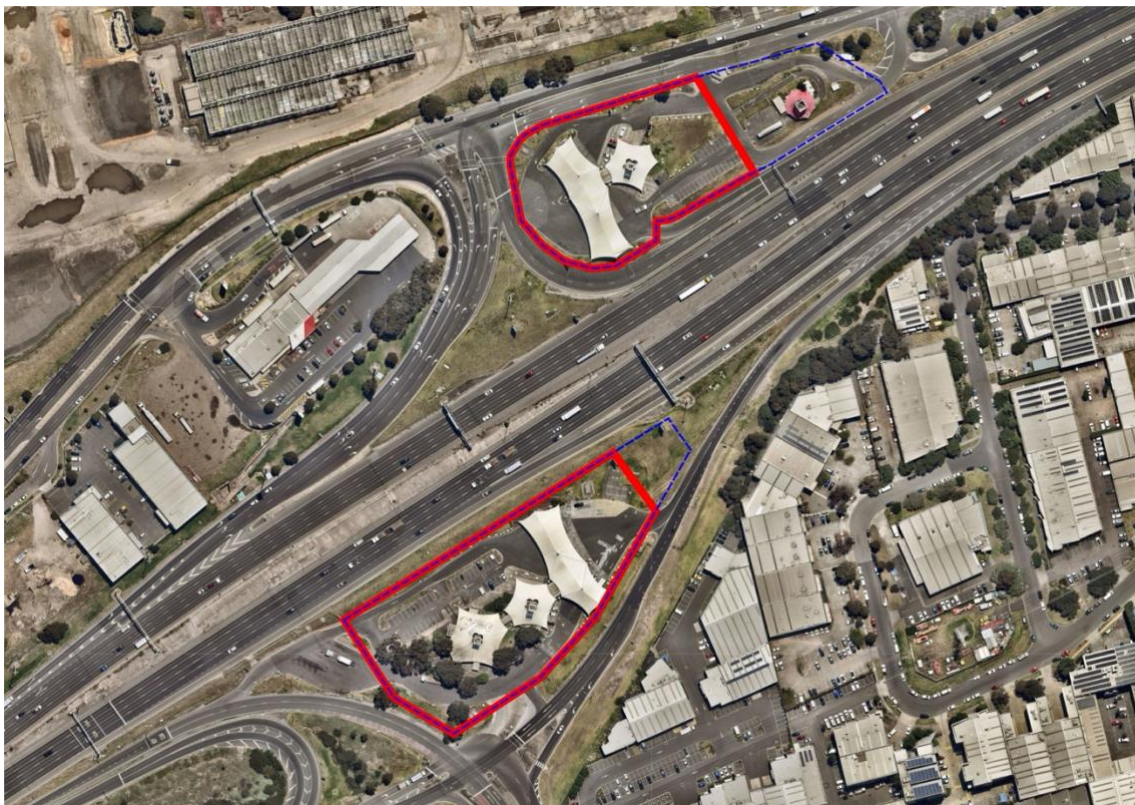


Figure 1: map of north and south service stations with HO1380 extent shown in red.

2. Purpose

The purpose of this incorporated plan is to ensure that new development does not adversely affect the significance of the West Gate Service Station Canopies, while recognising the operational requirements of the facility and ensuring that it can continue to function safely, efficiently and appropriately.

3. Planning Permit Exemptions

This incorporated plan established planning permit exemptions, for the land, under the provisions of Clause 43.01-3 of the scheme.

The permit exemptions, set out in Clause 4 of this incorporated plan, prevail over any contrary or inconsistent provision in Clause 43.01 of the scheme.

4. Site specific exemptions under Clause 43.01-3

A planning permit is not required under Clause 43.01-1 of the scheme for the land at 1 West Gate Freeway, Port Melbourne (north service station) and 2 West Gate Freeway, Port Melbourne (south service station) to:

- Demolish or alter the freestanding under-canopy service station shops, restaurants and associated structures
- Remove, alter or install new fuel bowsers and associated infrastructure
- Remove, alter or install electric vehicle charging stations
- Remove, alter or install air, water and similar dispensing stations
- Lay new driveways and hard standings
- Resurface existing driveways and hard standings
- Remove, construct and display directional signage and all types of signage connected with the corporate identity of the service station operator including fuel price and promotional signage
- Undertake emergency and safety works to prevent damage to and injury to property and persons
- Install external security and fire detections services
- Install firefighting equipment
- Erection of temporary security fencing, scaffolding, hoardings for a period of no more than 30 days
- Replacement of below ground fuel tanks and associated ground works.

West Gate Service Stations Statement of Significance

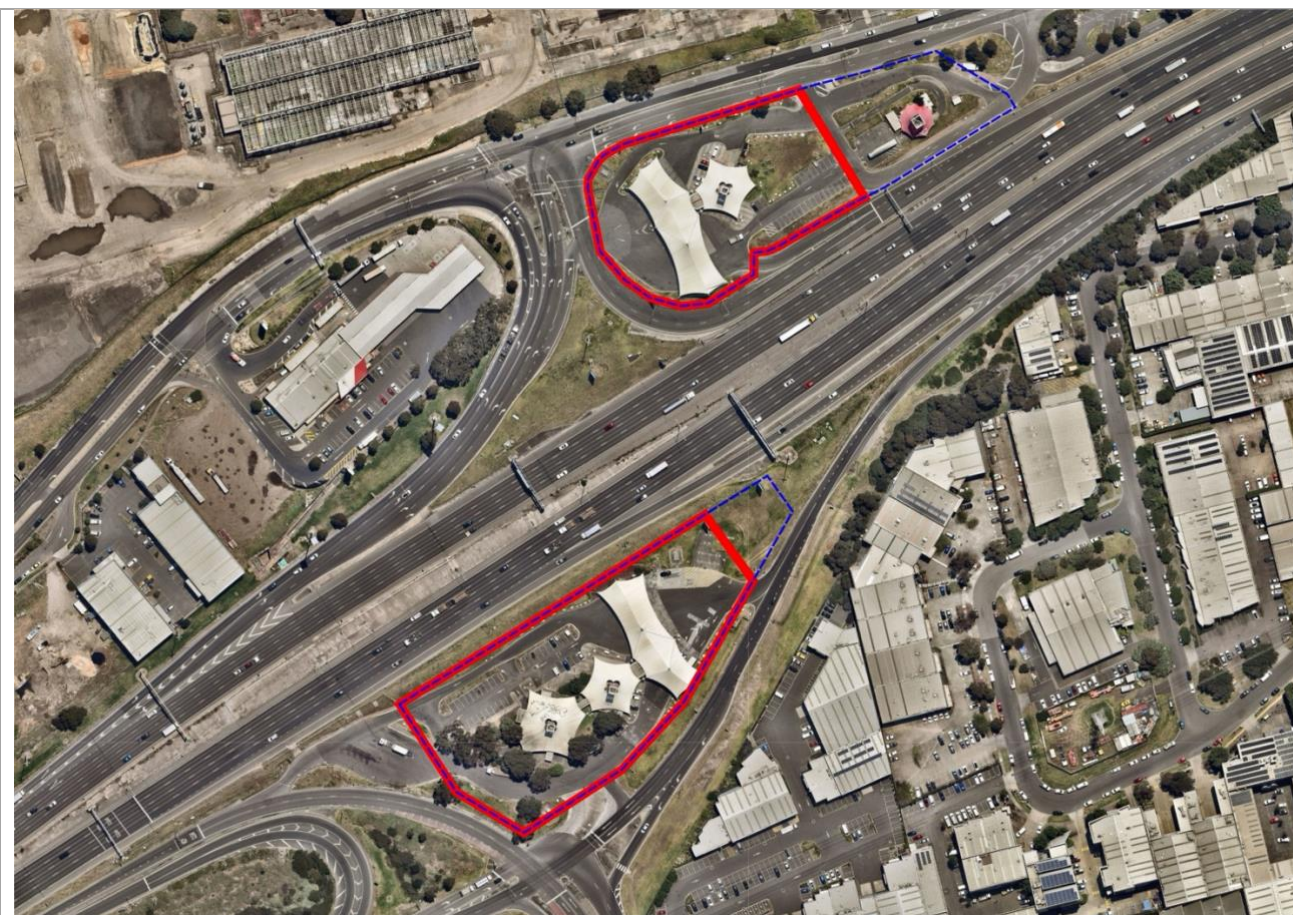
Heritage Place: West Gate Service Stations 1 & 2 West Gate Freeway, Port Melbourne	PS ref no: HO1380
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North service station site, 1 West Gate Freeway, Port Melbourne (GJM Heritage, August 2021).



South service station site, 2 West Gate Freeway, Port Melbourne (GJM Heritage, August 2021).



Aerial photograph showing extent of HO1380 (nearmap, November 2023).

What is significant?

The West Gate Service Stations at 1 & 2 West Gate Freeway, Port Melbourne, designed by architects Graeme Law & Associates with structural engineering design by Connell Wagner and canopy design by Connell Barrow McCready. Constructed by specialist lightweight structure fabricators Spacetech in 1989, the canopies form the roof of the petrol station shop and the canopy of the forecourts on the Melbourne side of the West Gate Bridge.

Elements that contribute to the significance of the place include (but are not limited to):

- The colour, form and technological system of the tensile membrane. Note: the membrane fabric itself will require periodic replacement with similar fabric which will not adversely affect the significance of the place;
- The central steel lattice masts; and
- The structural steel struts, steel cables and concrete ground anchors.

The shop/restaurants, bowsers, signage and other service station elements are not significant.

How is it significant?

The West Gate Service Stations at 1 & 2 West Gate Freeway, Port Melbourne are of local rarity, aesthetic and technical significance to the City of Melbourne.

Why is it significant?

The West Gate Service Station Canopies are rare examples of lightweight tensile membrane structures of the late twentieth century within the City of Melbourne and are the only known application of this technology to a service station in Victoria. The distinctive canopies are the largest freestanding examples of this type of structure in the municipality that date prior to 2000. The only known comparable example in the municipality was the much smaller and less visible roof to the food court at the Queen Victoria Market, Melbourne dating from 1994-95 (now demolished). In comparison, the Sidney Myer Music Bowl (1959) in the Domain is a cable net lightweight structure. (Criterion B)

The West Gate Service Stations, designed by architects Graeme Law & Associates and engineers Connell Wagner and Connell Barrow McCready, specifically respond to their setting by referencing the cable stay structure of the West Gate Bridge and the white sails of seacraft on Hobson Bay. The design represented a marked departure from standard service station design of the time and the tensile membrane canopies and the lattice steel masts were conceived – and function – as landmark elements for users of the West Gate Freeway as they enter Melbourne over the West Gate Bridge. (Criterion E)

The tensile membrane canopies clearly demonstrate the technical opportunities and complex forms that could be achieved by tensile membrane lightweight structures at the time. Designed collaboratively by the architects, engineers and canopy fabricators Spacetech, these lightweight structures remain a prominent feature of the Melbourne West Gate Freeway on the Melbourne side of the West Gate Bridge. (Criterion F)

Primary source

GJM Heritage, 'West Gate Service Station Canopies, 1 & 2 West Gate Freeway, Port Melbourne', February 2024.

This document is an incorporated document in the Melbourne Planning Scheme pursuant to section 6(2)(j) of the *Planning and Environment Act 1987*



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WEST GATE SERVICE STATIONS
1 & 2 WEST GATE FREEWAY,
PORT MELBOURNE
HERITAGE REVIEW

METHODOLOGY REPORT



PREPARED FOR: City of Melbourne
DATE: 8 March 2024
FILE: 2021-024

PROJECT TEAM

Jim Gard'ner | Director

Jessi Briggs | Associate

The subject site forms part of the traditional lands of the Bunurong People, who are represented by the Bunurong Land Council Aboriginal Corporation. This report is limited in its scope to consideration of post-contact cultural heritage and does not provide advice on any Aboriginal cultural heritage significance. Nonetheless, we acknowledge the Bunurong People as the Traditional Owners of the land at this place and pay our respects to their Elders past and present. For more information on the Bunurong People, please visit <http://www.bunuronglc.org/>.

Cover page image: 1 West Gate Freeway, Port Melbourne (Source: GJM Heritage, August 2021).

DOCUMENT VERSIONS

Project No.	Version	Issued To	Date Issued
2021-024	DRAFT	Katherine Smart, Strategic Planner, City of Melbourne	8 February 2024
	FINAL	Katherine Smart, Strategic Planner, City of Melbourne	8 March 2024



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- APPENDIX 1 - CITATION**
- APPENDIX 2 - STATEMENT OF SIGNIFICANCE**
- APPENDIX 3 - INCORPORATED PLAN**



1 OVERVIEW

In June 2021 GJM Heritage was engaged by the City of Melbourne (Council) to prepare a local heritage assessment of the pair of West Gate Service Stations at 1 and 2 West Gate Freeway, Port Melbourne (see Figure 1).

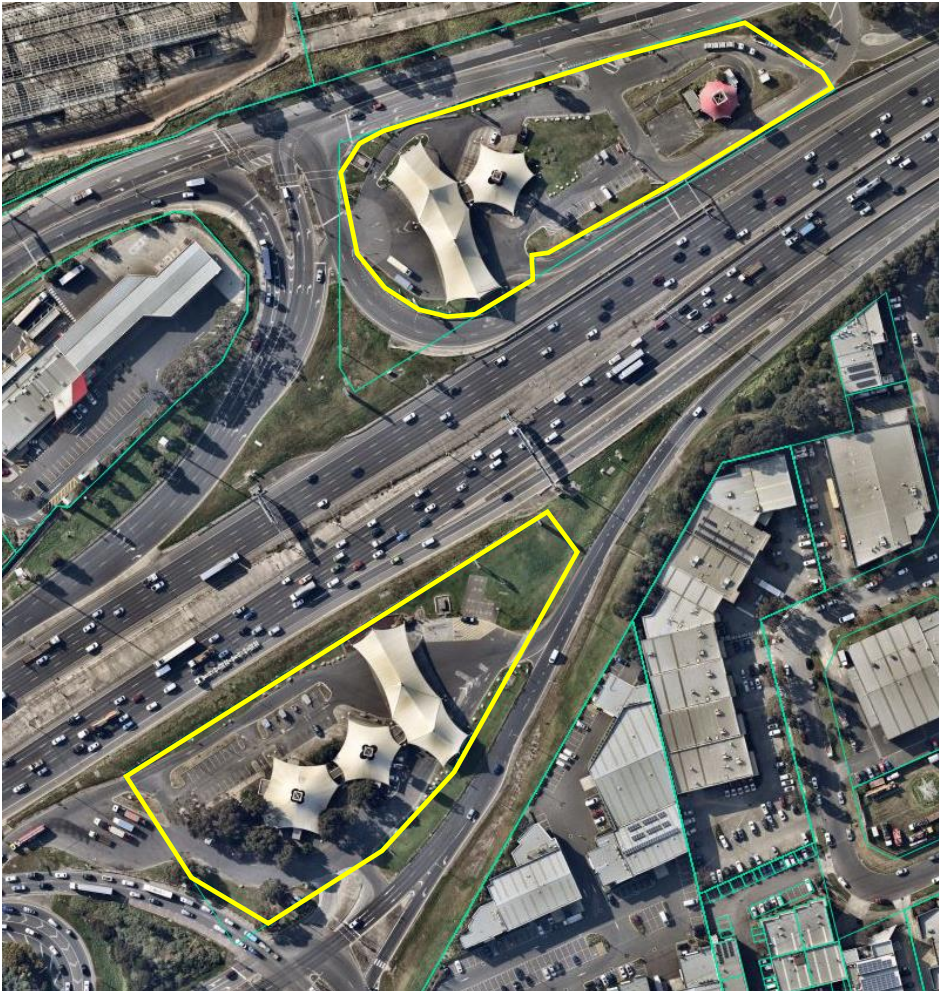


Figure 1. West Gate Service Stations, 2023. Property boundaries indicated in yellow. (Source: Nearmap, aerial photograph dated Sep 2023)

GJM Heritage's engagement followed the completion of a heritage assessment of the 'West Gate Service Stations North and South' prepared by Helen Lardner Conservation and Design (HLCD) Pty Ltd and Dr Peter Mills as part of the *Fishermans Bend In-Depth Heritage Review*, 2021. This assessment concluded that the place should be included in the Heritage Overlay of the Melbourne Planning Scheme, with the elements under 'What is Significant?' identified as follows:

West Gate Service Stations North and South, 1 and 2 West Gate Freeway Port Melbourne... On the south side, this includes the whole of the built structure, including the tensile membrane roofs to the bowlers, the shop and the restaurant buildings and associated walkways and canopies. On the north side, it includes the whole of the built structure, including the tensile membrane roofs to the bowlers and the shop with associated walkways and canopies. The restaurant which is located separately on the north side is not significant. For both service stations, the structural system, particularly the tensile membrane roofs and steel members, the built form and design is

significant rather than the actual building materials which may have been renewed.

GJM Heritage's role in undertaking a new heritage assessment was therefore to validate the findings of the HLCD and Mills assessment in relation to significance and the fabric which contributed to any identified significance.

Following a number of internal Council reviews on our draft assessment – which concluded that the tensile membrane canopies of the West Gate Service Stations at 1 and 2 West Gate Freeway were of local significance and warranted inclusion in the Heritage Overlay of the Melbourne Planning Scheme – a finalised assessment and Statement of Significance was issued in September 2022. The recommendation of our assessment did not progress to a Planning Scheme Amendment at this time.

Subsequently, in January 2024, Council engaged GJM Heritage to:

- Review and make any necessary updates to the 2022 assessment and Statement of Significance for the West Gate Service Station Canopies;
- Review an Incorporated Plan prepared pursuant to section 6(2)(j) of the *Planning and Environment Act 1987* by Council for the place and make recommendations for updates; and
- Prepare a brief report to outline the background to our involvement in the matter and the methodology applied to our 2021/22 assessment and 2024 review.

This report addresses the third dot point above and contains our reviewed and updated heritage assessment (Appendix 1), Statement of Significance (Appendix 2) and Incorporated Plan (Appendix 3).

Separately, it is noted that on 20 April 2021 the Future Melbourne Committee of Council considered a number of recommendations in relation to Amendments C393melb and C394melb following the completion of the *Fishermans Bend In-Depth Heritage Review*. This heritage review included a recommendation to Council that the West Gate Bridge be nominated to the Victorian Heritage Register (VHR). While we understand that a nomination of the West Gate Bridge to the VHR has been accepted by Heritage Victoria, the West Gate Bridge has not yet been considered for inclusion in the VHR by the Heritage Council of Victoria.

2 METHODOLOGY

2.1 2021/22: HERITAGE ASSESSMENT

The approach taken for our 2021/22 heritage assessment of the West Gate Service Stations was as follows:

2.1.1 Review of existing documentation

The existing Heritage Citation and Statement of Significance for the ‘West Gate Service Stations North and South’ prepared by HLCD and Mills in 2021 was reviewed. This documentation, particularly the contextual history, site history and description, informed our assessment.

Prior to 2021, the place was considered as part of the following surveys and studies:

Study	Recommendation
<i>The Motor Garage & Service Station in Victoria – a survey, 1997</i>	Identified as potentially of State significance
<i>Southbank and Fishermans Bend Heritage Review, 2017</i>	Identified for further assessment

2.1.2 Site visit

The two service station sites and their surrounding areas were inspected and photographed to enable the preparation of a physical description, and to gain an understanding of the level of intactness and integrity of the elements at each site.

2.1.3 Detailed historical research

The HLCD and Mills contextual history and site history formed the basis of the histories prepared for the GJM Heritage citation. We identified points that required clarification and further research and subsequently conducted comprehensive research into the site and the field of lightweight membrane architecture, and in particular, tensile membrane architecture.

The aim of the detailed historical research was to determine or confirm, where possible:

- The architects, engineers and manufacturers for the structures on the site, particularly the lightweight architectural elements
- The design and construction process of the lightweight architecture
- The current level of intactness compared to the original design
- The introduction and development of lightweight architecture in Australia
- Examples of lightweight architecture in Victoria generally, and Melbourne in particular.

An integral part of the historical research was the information and documentation provided by professionals who were involved with the project at the subject site, and in the field of lightweight architecture in the late twentieth century more broadly; including Rowan Murray, Dr Peter Kneen, David McCready and Dean Spencely. These professionals were members of the Membrane Structures Association of Australasia (MSAA) (Kneen and McCready being founding members),



now the Lightweight Structures Association of Australia (LSAA). From the 1980s the MSAA held seminars, workshops and conferences in the field of membrane structures and lightweight architecture. The LSAA remains a key depository of information for the field of lightweight architecture.

A comprehensive range of primary and secondary sources were consulted as part of the historical research into the subject site. Key sources reviewed included:

- HLCD and Mills assessment, 2021
- Documentation provided by the professionals identified above:
 - Papers presented at the Membrane Structures Association of Australasia (MSAA) conferences in the 1980s
 - Historical images for the site
 - Project-specific engineering study for the site
- Lightweight architecture publications
- Lightweight Structures Association of Australasia (LSAA) newsletters
- Lightweight Structures Association of Australasia (LSAA) website, <https://www.lsa.org/>
- E Picker & Vinzenz Sedlak, *Membrane Structures in Australia*, 1982.

The HLCD and Mills contextual history was refined and expanded to outline key international and Australian examples of lightweight architecture, focussing on the development of tensile membrane structures in the Victorian and – in particular – the City of Melbourne context.

The HLCD and Mills site history was expanded. The key additions being the historical imagery and information provided by the professionals who worked on the West Gate Service Stations project and in the field of lightweight architecture in the late twentieth century. The history of the service station canopies was considered in the context of *Victoria's Framework of Historical Themes* (Heritage Council of Victoria, 2010).

2.1.4 Physical Analysis

Informed by the site visit, a physical description was compiled for the two sites, noting the components of the lightweight structures, their current condition, intactness and integrity, and the associated built form of the service stations.

2.1.5 Comparative Analysis

A comparative analysis was undertaken for the place to establish its context within the municipality and its significance threshold. The place was compared in terms of its architectural type (tensile membrane architecture), period of construction, historic use and level of integrity. The Heritage Overlay of the Melbourne Planning Scheme was reviewed for comparable places.

It was determined that there are no other known extant examples of tensile membrane structures dating from the twentieth century included on the Heritage Overlay of the Melbourne Planning Scheme. The tensile membrane structures at the West Gate Service Station sites appear to have no other direct comparators of this period in the municipality.

2.1.6 Assessment Against Criteria

Drawing upon the historical research, physical analysis and comparative analysis, an assessment against the heritage criteria included in *Planning Practice Note 1: Applying the Heritage Overlay* (PPN1) (August 2018) (PPN1) was undertaken. The place was found to meet the threshold of local significance under Criterion B (rarity), E (aesthetic) and F (technical), and was recommended for inclusion in the Schedule to the Heritage Overlay of the Melbourne Planning Scheme.

2.1.7 Statement of Significance

A Statement of Significance was prepared in accordance with the guidance provided within PPN1, following the format of 'What is significant?', 'How is it significant?' and 'Why is it significant?'. The Statement of Significance clearly defines the heritage values of the place and identifies contributory fabric to guide future management.

In summary, the assessment completed by GJM determined that:

- The West Gate Service Station Canopies (the lightweight structures and associated systems at each site) are of local rarity, aesthetic and technical significance to the City of Melbourne; and
- The shop/restaurants, bowsters, signage and other service station elements are not significant.

2.1.8 Extent of Heritage Curtilage

A plan was prepared to indicate the recommended extent of the Heritage Overlay (heritage curtilage). The recommended heritage curtilages have been determined in accordance with the guidance provided in PPN1 and capture all elements that are considered to contribute to the significance of the place. To ensure that the mapped extent is clearly identifiable on site, the eastern boundary of the Heritage Overlay is taken to the kerb line of the slip road entry.

2.1.9 Schedule to the Heritage Overlay Triggers

Consideration was given to the following:

- Whether tree controls, paint controls or internal alteration controls should be triggered in the Schedule to the Heritage Overlay;
- Whether outbuildings and fences should be subject to the notice and review requirement of the *Planning and Environment Act 1987*; and
- Whether provisions for allowing prohibited uses should be made.

In accordance with the guidance provided in PPN1, it was determined that no specific triggers were warranted for the heritage place.

2.1.10 Citation

A Heritage Citation was prepared comprising:

- The documentation outlined above (contextual history, site history, physical description, analysis of intactness and integrity, comparative analysis and assessment against criteria);
- A plan showing the recommended extent for the Heritage Overlay; and
- Recommended triggers in the Schedule to the Heritage Overlay.

2.1.11 Council Review

A draft Citation and Statement of Significance was provided to Council in October 2021 for Council comment. Following feedback, minor edits (generally grammatical or changes necessary for clarification) were made to the draft documentation.

Final versions of the Citation and Statement of Significance were issued to Council officers in September 2022.

2.2 2024: UPDATED DOCUMENTATION

At Council's request, in January 2024, we reviewed and updated the 2021/22 GJM Citation and Statement of Significance for the place, and reviewed and updated the Incorporated Plan drafted by Council.

2.2.1 Citation and Statement of Significance

Given the passage of time GJM Heritage reviewed the Citation and Statement of Significance, to bring them up to date, noting in particular where comparative places within the City of Melbourne have since been demolished.

The Statement of Significance has also been updated to utilise the online template provided as part of PPN1 guidance.

The referencing system in the Citation has also been converted from footnotes to Harvard (author/date) referencing, at Council's request.

The 2024 updated final versions of the Citation and Statement of Significance are attached at Appendices 1 and 2.

2.2.2 Revised Incorporated Plan

In February 2021 Council prepared an Incorporated Plan pursuant to section 6(2)(j) of the *Planning and Environment Act 1987* to provide a suite of works that would be exempt from a permit under Clause 43.01-1 of the Melbourne Planning Scheme. This document was based on the heritage values and extent identified in the 2021 HLCD and Mills assessment. GJM Heritage reviewed and updated the Incorporated Plan in February 2024 to reflect the heritage values and extent identified in the 2021/22 assessment. This revised Incorporated Plan provides a larger suite of works that would be exempt from a permit under Clause 43.01-1 than was proposed in the February 2021 version.

The revised Incorporated Plan is provided at Appendix 3 to this report.

3 SUMMARY

It is our assessment that the West Gate Service Station Canopies meet heritage criteria B, E and F at the local level and warrant inclusion in the Schedule to the Heritage Overlay of the Melbourne Planning Scheme.

APPENDIX 1 - CITATION



HERITAGE CITATION

West Gate Service Stations

1 & 2 West Gate Freeway, Port Melbourne



Figure 1. North service station site, 1 West Gate Freeway, Port Melbourne (GJM Heritage, August 2021).



Figure 2. South service station site, 2 West Gate Freeway, Port Melbourne (GJM Heritage, August 2021).

DATE: 8 March 2024

WEST GATE SERVICE STATIONS , 1 & 2 WEST GATE FREEWAY, PORT MELBOURNE

Place Type: Lightweight architecture, service stations	Architect: Graeme Law & Associates
Construction Date: 1989	Structural Engineer: Connell Wagner
Recommendation: Include in the Heritage Overlay	Canopy Engineer: Connell Barrow McCready
Extent of Overlay: See Figure 70 & Figure 71	Manufacturers: Spacetech

Contextual History: Lightweight Architecture

[The following contextual history is informed by the 2021 citation for ‘West Gate Service Stations North and South’ prepared by HLCD & Dr Peter Mills as part of the ‘Fishermans Bend In-Depth Heritage Review’; with additional information as cited.]

Arising from the tradition of tent making, lightweight architecture developed from the 1950s in response to the development of new materials and technologies (LSAA, ‘Membrane Structures’). Major developments in the design and construction of membrane structures as well as in the manufacture of suitable materials in this initial phase, occurred almost exclusively in Europe (West Germany), with the likes of architect and engineer Frei Otto, as well as in the United States (Picker & Sedlak 1982:2).

Lightweight architecture encompasses various technologies and materials, allowing for versatility in application and the creation of unique forms. Innovation and experimentation in the industry led to the development of prestressed and non-prestressed membrane structures, early cable net structures, spaceframes, pneumatic (air supported) structures and tensile membrane structures, amongst others. They are lightweight, temporary or permanent solutions for protection from the elements.

This contextual history focusses on key international and Australian examples of lightweight architecture, and follows in more detail the development of tensile membrane structures, particularly in the Victorian context.

1950s

Early examples of tensile architecture were cable net structures, which featured a variety of infill panels. One of the most prominent structures constructed in Melbourne in the 1950s was the 1959 Sidney Myer Music Bowl, Melbourne (VHR H1772) (Figure 3), designed by Yuncken Freeman Griffith Bros & Simpson in collaboration with engineer Bill Irwin. It was among the earliest large-scale tensile cable net structures in the world.



Figure 3. The Sidney Myer Music Bowl structure in 1959 (Source: Mark Strizic, via Docomomo Australia).

1960s

The Australian lightweight architecture industry was inspired by the innovative works of international architects and engineers experimenting in the field, a prime example being Frei Otto. Otto was a Berlin-born architect and engineer, renowned for his development of lightweight structures in collaboration with European tent fabricators L Stromeier & Company in the 1950s and '60s. Commencing in practice in 1952, Otto gained prominence for his doubly-curved stressed tensile structures, producing inspiring and experimental 3D forms and long-span tensile structures (LSAA, 'The Legacy of Frei Otto'; McCready, pers. comm.).

Otto used cable net technology in his prominent designs of the 1960s and '70s, including the 1964 Institute for Lightweight Structures (IL) at the University of Stuttgart, a highly regarded and creative research centre which continues today. The West German Pavilion at Montreal 1967 Expo (Figure 4), for which he gained international attention, was a free form cable net roof structure with a tensioned fabric skin suspended below the cable net. It was one of the first tensile structures to use a PVC coated polyester membrane, which would become the industry norm. His design of the 1972 Munich Olympic Stadium structures (Figure 5) further developed the free formed stressed cable net structure, the cladding being large flat rectangular sheets of acrylic supported by flexible rubber pads above the cable net.



Figure 4. West German pavilion at Expo 1967 Montreal, designed by Frei Otto (Source: Peter Kneen collection via LSAA.org).



Figure 5. Munich Olympic Stadium cable net structures by Frei Otto (Source: Peter Kneen collection).

In New South Wales, Bert Bilsborough of B Bilsborough & Sons was a pioneer in the design and fabrication of membrane structures in Australia. He developed various lightweight structures in the 1960s, including prestressed and non-prestressed tent-type structures for various clients and purposes, such as transportable display marquees. His company also developed pneumatic structures, including the design and construction of Australia's first known 'air-house' in 1960, erected in Botany, New South Wales (Picker & Sedlak 1982: iv, 26).

1970s

Lightweight architecture technology primarily developed in Australia from the 1970s, with designers and fabricators experimenting with its application, with varying degrees of success. During this period a number of lightweight structures were fabricated in Australia for temporary and travelling projects, while small to large-scale permanent structures were constructed for a range of clients (Picker & Sedlak 1982: iv, 26).

Two early examples of permanent tensile membrane structures in Victoria featured tensile fabric roofs over more conventional wall structures – an 'Art House' at Ivanhoe Girls' Grammar (1978) and St Anne's Catholic Church at Seaford, Victoria (1978-82).

The 'Art House' at Ivanhoe Girls' Grammar School (1978; Figure 6) was the first tensile membrane structure constructed in Australia (as distinct from a cable net structure). The 'Art House' roof, constructed over an art studio, was built at the rear of a heritage home at 129 Marshall Street, Ivanhoe (MSAA No. 4, 1988; Mehler Technologies 2007; *Age* 1 Jun 1979:16). The roof structure was designed by architects Bryan R Dowling & Associates and fabricated by Geodome Space Frames (later Spacetech), with engineer Dr Peter Kneen, using PVC-coated polyester fabric on a steel support frame (Picker & Sedlak 1982:30).

St Anne's Catholic Church at Seaford, Victoria (1978-82; extant) was the first membrane structure in Australia classified as a permanent building, according to the local building regulations (Figure 7) (Picker & Sedlak 1982:40). The roof structure incorporates a Teflon-coated fibreglass membrane atop brick walls enclosing the church (*Sydney Morning Herald* 19 May 1982:18; Picker & Sedlak 1982:9). Council approval to build was obtained in 1978, with construction commencing in May 1981, and the first mass held in April 1982. The architects were Payne Pattendon and the engineers were B J O'Neill & Associates. The church was refurbished in 2007 (St Annes, 'Our History'). The design incorporated religious symbolism with 12 support masts and the whole structure literally hanging from the cross. The building featured on the front cover of a contemporary issue of *Engineers Australia*, where it was labelled 'a first for Victoria'.



Figure 6. The 'Art House' roof structure at Ivanhoe Girls' Grammar, 1982 (Source: Picker & Sedlak 1982:31).



Figure 7. St Anne's Church, Seaford, 2023 (Source: ACCH).

Amongst the group of early tensile fabric structures in Australia was the arch-supported roof structure over the Norlane Olympic Pool in North Geelong (1980; Figure 8), which comprises a modular steel space frame supporting an outer and inner membrane of PVC coated polyester (Picker & Sedlak 1982:36).

Interstate examples included a theatredome, erected at the 1979 Sydney Easter Show, and later at Luna Park (1979), designed by Seaman Buildings Systems (Picker & Sedlak 1982:32). In Queensland, the Dean Park Sound Shell roof in Townsville (demolished; Figure 9) was built in 1980, designed by Geodome Space Frames and engineer Dr Peter Kneen.



Figure 8. The Norlane Olympic Pool roof structure in 2015
(Source: Ausleisure).



Figure 9. Dean Park Sound Shell, South Townsville, c1980
(Source: Spacetech collection).

Professor Vinzenz Sedlak was at the forefront of lightweight architecture in Australia, having worked with Frei Otto at the Institute of Lightweight Structures at the University of Stuttgart, Germany. In 1976 Sedlak was appointed to a position at the University of New South Wales School of Architecture, where he established the Lightweight Structures Research Unit (LSRU) (Picker & Sedlak 1982: III).

In 1981 Sedlak was one of the founding members of the Membrane Structures Association of Australasia (MSAA), along with professionals in the field Dr Peter Kneen and David McCready, now the Lightweight Structures Association of Australasia (LSAA). The first Australian Seminar and Workshop on membrane structures was held in 1981. A crowning achievement of the association was the holding of the renowned International Conference in Sydney in 1986.

Sedlak produced a range of structures including tensioned membranes, inflated pillows (pneumatic structures), timber grid and the demountable stage structure used in Sydney's Domain each summer (LSAA, 'The Legacy of Frei Otto'). The demountable open-air stage with a tensile membrane canopy was installed at the Domain in 1983, featuring lattice-truss steel masts (Figure 10) (MSAA No. 1, 1986).



Figure 10. The canopy at Sydney's Domain
(Source: Peter Kneen collection).

1980s

The 1980s were a key period for the growth and development of the lightweight architecture industry in Victoria, and Australia as a whole, as public interest increased and technology advanced. The 1980 Australian lecture tour by expert Frei Otto and a travelling exhibition of his work contributed to the popularity of tensile architecture and influenced tensile structure building activity in Australia.

Newcastle architect Phillip Drew, who had written a book on Otto's work in 1976, designed an Otto-inspired temporary 'fishnet tent' structure to house Otto's travelling exhibition (demolished; Figure 11), which in Melbourne was located in the Queen Victoria Gardens opposite the Victorian Arts Centre in St Kilda Road (*Age* 15 Apr 1980:10).

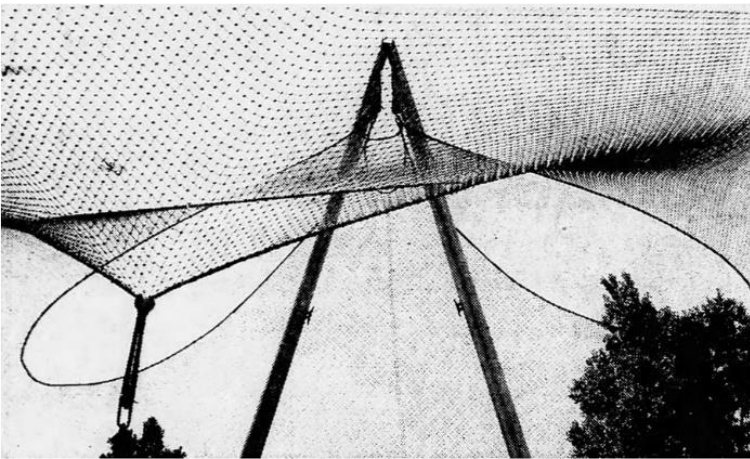


Figure 11. The demountable 'fishnet tent' to cover the 1980 exhibition of Frei Otto's work at Queen Victoria Gardens, Melbourne (Source: Age 15 April 1980:10).

The 1980s saw a large number of tensile membrane structures constructed throughout Australia. In 1982 a tensile membrane structure served as an amphitheatre roof, covering the audience space at Seven Creeks Run in Euroa (demolished; Figure 12). It was designed by Spacetech Pty Ltd and architects Roy Grounds & Partners (McCready 1989).



Figure 12. The structure over the audience space at Seven Creeks Run, Euroa (Source: Peter Kneen collection).

A series of hotels in the 1980s incorporated tensile membrane roof structures designed by Canberra architects Bryan Dowling and Associates, including the Canberra International Motor Inn (now The Pavilion), in Dickson, which comprised an entrance canopy and inner courtyard roof (1981; extant). Extensions in 1984 saw the replacement of the original membrane atrium roof, similar to the original (*Canberra Times* 16 Mar 1984:7).

The same architects designed The Pavilion Motor Inn in Wagga Wagga (1985) (*Age* 23 Sep 1985:45) and The Pavilion Hotel Forrest, Canberra (1984/5; extant) which featured a tensile membrane atrium structure

supplied by Space Structures Australia (*Canberra Times* 8 Apr 1984:10). The Airport International Motor Inn in Queanbeyan, NSW (Figure 13; extant), opened July 1985, was designed by Bryan Dowling and Associates with engineer Ray Franzi (*Canberra Times* 23 Jul 1985:7; 4 Aug 1985:11).



Figure 13. The Airport International Motor Inn, Queanbeyan, NSW (Source: Trivago).

One of the most celebrated uses of tensile structures of this period was at the 1984 Yulara Tourist Resort (Figure 14), which featured an array of single sail elements supported on cable-stayed tubular steel masts. Designed by architects Philip Cox and Partners, and Arup engineers, the resort won the Royal Australian Institute of Architect's Sir Zelman Cowan Award in 1985 (*Sydney Morning Herald* 2 Nov 1985:9).



Figure 14. Uluru (Yulara) Resort (Source: Spacetech collection).

Tensile membrane technology was highly suitable for projects in community and public spaces. Examples include the Port Lincoln Leisure Centre (1985; demolished), and the Glenorchy (Tolosa Park) Sound Shell roof in Hobart (1986; Figure 15). The Todd Street Mall structure in Alice Springs (1986; demolished; Figure 16) was the winner of the 'Small Structures' category in the 1988 Membrane Structures Association of Australasia Design Awards (Mehler Technologies 2007; MSAA, No. 5 1988). Other examples were located at Langtree Mall in Mildura, Pitt Street Mall in Sydney and Preston Market, Preston (discussed further below) (McCready 1988). A twin-conical tensile membrane roof was erected over the Mayfair Plaza in Sandy Bay, Hobart c1987 (MSAA, No. 4 1988:5). The roof membrane was renewed in 2015, and the plaza is now fully enclosed (*Mercury* 16 Sep 2015).

Other notable examples erected in the late 1980s include the Toowong Village atrium in Brisbane built in 1988, covered by a Teflon/glassfibre membrane wrapped over steeltube arches. The Roxby Downs Motel gained a 34m square conical PVC membrane roof in 1987. The Lake & Oceans Hotel Lake Macquarie, NSW was a twin conical structure completed by 1988. The Marina Mirage Roof Sails at Southport, Queensland (Figure 17) were completed by 1988 (MSAA, No. 2 1987; No. 3 1987; No. 5, 1988).

The 'Quadome recreational enclosure' designed by Brisbane firm Vesi Membrane Systems covered a pool at the Beaton Park Leisure Centre, Wollongong, in 1989 (Figure 18). The PVC coated membrane covered a large, high dome supported on a spider-like frame of triangular web tubular-steel trusses (MSAA, No. 7 1989).

Australian Bicentennial celebrations in 1988 produced two major temporary membrane structure projects. The series of tensile membrane sun sails at the World Expo 88 in Brisbane (Figure 19), was the largest tensile membrane project in Australia to date. It was designed by West German Harald Muhlberger and travelled Australia-wide. The smaller Expo Gateway, designed and made in Australia, was a simple cable stayed and edged structure (Figure 19). The sun sails of the World Expo 88, Brisbane, were the winner of the 'Large Structures' category in the 1988 Membrane Structures Association of Australasia Design Awards (MSAA, No.1, 1986; No. 2, 1987; No. 4, 1988; No. 5, 1988).



Figure 15. Tolosa Park Sound Shell, Glenorchy, Hobart (Source: Google Street View, image captured 2015).



Figure 16. Todd Street Mall, Alice Springs, c1987 (Source: Spacetech collection).

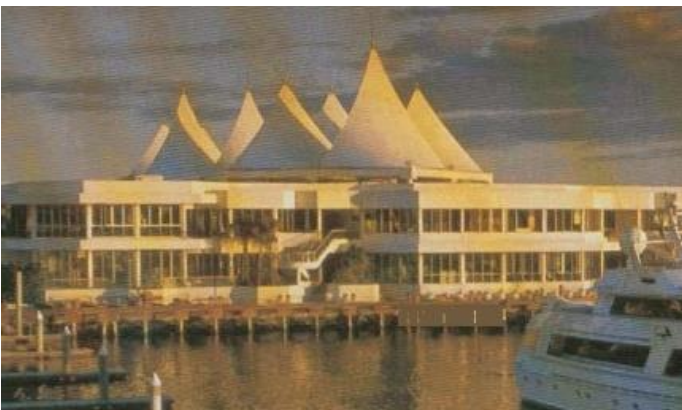


Figure 17. Marina Mirage sails at Southport Broadwater, Gold Coast, 1989 (Source: MSAA, No. 6 1989).





Figure 18. The 'Quadome recreational enclosure' at Beaton Park Leisure Centre, Wollongong, 1989
(Source: MSAA, No. 7 1989).



Figure 19. Expo 88 Brisbane structures, showing the main membrane structures in the background, and the Expo Gateway in the foreground (Source: Expo 88 website).

The temporary Australian Bicentennial Travelling Exhibition (Figure 20) was designed by architect Daryl Jackson, and engineers the Connell Group, and fabricated by Geodome Space Frames (later Spacetech). The transportable tension structures included one large conical main tent and a series of smaller double conical structures that were carried between 34 sites (*Architecture Australia*, Mar 1989).



Figure 20. A full-scale trial of the erection of the Bicentennial Travelling Exhibition in Ballarat, Victoria (Source: MSAA, No. 4 1988).

A small bicentennial structure in Canberra, the Bicentennial Sound Shell Stage 88 in Commonwealth Park (Figure 21), was designed by Philip Cox, Taylor & Partners and Ove Arup Engineers, and fabricated by Space Structures (Australia) Pty Ltd. The design featured two internal mushroom heads and a steel-web push-up arch, with catenary cable edges linked to masts and tie-downs (MSAA, No. 4 1988).





Figure 21. Stage 88, Commonwealth Park, Canberra (Source: Canberra Weekly, published 13 December 2018).

Victoria in the late 1980s

The late 1980s saw tensile membrane structures of various forms, size and application constructed across Victoria.

A prominent project was the structures erected for the Penguin Parade on Phillip Island, which opened on 14 November 1988, comprising an entrance structure and viewing shelter (demolished; Figure 22 - Figure 23) (Age 15 Nov 1988:3). The entrance structure was described in *Warp & Weft* as 'two complexly curved, paired interactive structures' (MSAA, No.6 1989). The architects were Daryl Jackson Pty Ltd, the engineers the Connell Group, and the contractors were Spacetech Pty Ltd. Two offset layers of blue-tinted membranes were suspended from a single square-section lattice mast in tubular steel. On the outside were catenary cables attached to tubular steel struts and tie down cables anchored to the ground. The overlapping membranes produced a layered effect. The independent lightweight structure served to shelter and shade the main entrance to the facilities buildings, which radiated out in a series of stepped skillions from the focus of the canopy and steel tower. The main structure was demolished in late 2019 as construction started on a new visitor centre.



Figure 22. The entrance structure at the Penguin Parade visitor centre (Source: Spacetech Collection).



Figure 23. Viewing shelter at the Phillip Island Penguin Parade (Source: Spacetech Collection).

At St Michael's Grammar School, St Kilda, the courtyard roof (1988; Figure 24) enclosed an elongated court. Slender steel columns support segmental arch rafters with tensioned membrane between. The structure was built by B J O'Neill & Partners Pty Ltd (MSAA, No. 5 1988).



Figure 24. St Michael's Grammar School courtyard roof (Source: MSAA, No. 5 1988).

At Preston Market, the 1988 redevelopment included a series of 50 repetitive conical forms to the roof market arcades, designed by Spacetech Pty Ltd (Figure 25 - Figure 26) (MSAA, No. 5 1988; McCready 1988). The arcade roofs are supported by a steel frame, and sit above and overlap the buildings, providing ventilation through the resulting gap. While the roof of the market buildings themselves is formed by a spaceframe system. The design received an award from the Membrane Structures Association of Australia in 1988.



Figure 25. Structures to the arcades, Preston Market redevelopment (Source: Spacetech collection).



Figure 26. Top view of the Preston Market redevelopment membrane structures (Source: Spacetech collection).

In Port Melbourne, the Shell West Gate complex saw the implementation of numerous tensile membrane structures over twin service station sites on the Melbourne side of the West Gate Bridge (1989). The design was a collaboration between architects Graeme Law & Associates, canopy engineers Connell Barrow McCready Pty Ltd (comprising David McCready and Bob Barrow), structural engineers Connell Wagner, and contractors Spacetech Pty Ltd, as well as planners and landscape architects, Tract Consultants Australia (discussed in detail in the Site History).

The Golf City Driving Range at Keysborough Golf Course (Figure 27) was opened in 1990. A membrane roof structure was fabricated by Spacetech, the structural engineers were Connell Wagner, and the building was

designed by Millar Sainsbury Mulcair Architects (MSAA, No. 8 & 9 1990). The membrane structure has a linked twin cone form suspended from masts that enclose a large two-storey space. The masts have conical caps.



Figure 27. The Keysborough Golf Club driving range roof (Source: Spacetech collection).

Tensile membrane structures over the terrace bar, Silks Bar, at Moonee Valley Racecourse (1990) were designed by E F Bilson & Associates, and the structural engineers were Connell Wagner Pty Ltd (Figure 28) (MSAA, No. 9 1990). The structures are visible from the Dean Street gates at the edge of the main mass of the racecourse buildings, and feature five linked conical membrane roofs rising from square perimeter beams.



Figure 28. The roof structures at Silks Bar, Moonee Valley Racecourse (Source: MSAA, No. 9 1990).

At Greenscene Nursery in Carrum Downs, a large-scale tensile structure incorporating shade cloth was erected for weather protection (1990; Figure 29). The double conical saddle-shaped roof form was awarded the 1990 Excellence Award by the Membrane Structures Association of Australia (MSAA, No. 9 1990).



Figure 29. The shade cloth roof structure at Greenscene Nursery, Carrum Downs, 1990 (Source: MSAA, No. 9 1990).

Victoria in the 1990s

Architects and engineers continued to incorporate tensile membrane technology into various types of projects, resulting in some large-scale, prominent structures in Victoria. The food court roof constructed at the Queen Victoria Market (VHR H0734) in 1994-95 was formed with tensile membrane technology (Figure 30

- Figure 31) (Lovell Chen, April 2017); this structure was demolished in early 2022 as part of the market renewal project.



Figure 30. Roof over the foodcourt, Queen Victoria Market (demolished early 2022) (Source: Peter Kneen collection).



Figure 31. Interior of the Queen Vic Market foodcourt roof (demolished early 2022) (Source: ACLA Consultants).

Victoria in the 2000s

Tensile membrane technology has continued to remain highly popular in a variety of applications in the 21st century. Highlighted are some key Melbourne and Victorian examples.

Aquinas College in Ringwood includes a membrane structure, known as the 'Forum Structure', which provides shelter at access points to surrounding buildings. Originally constructed in 2004, an extension to the canopy was added in 2016 (LSAA, 'Canteen Canopy Extension').



Figure 32. The Forum Structure at Aquinas College in Ringwood (Source: LSAA.org).

A substantial lightweight structure built in 2005 as part of the redevelopment of the Royal Melbourne Showgrounds, Flemington, is the Grand Pavilion, designed by Daryl Jackson Pty Ltd and Tensys Engineers Pty Ltd (Figure 33 - Figure 34). It was the largest permanent tensile membrane structure built in Australia, and reputedly the largest in the southern hemisphere. The structural design of the steel supporting structures was similar to the tensile membrane structures of the 1980s (LSAA, *Lightweight Talk*, August 2006).



Figure 33. The Grand Pavilion at the Royal Melbourne Showgrounds, 2022 (Source: GJM Heritage, Sep 2022).



Figure 34. The Grand Pavilion at the Royal Melbourne Showgrounds, c2005 (Source: Oasis, 'The Grand Pavilion, Melbourne Showground's').

At nearby Flemington Racecourse, a structure of multiple inverted cones was constructed at the Flemington Racecourse Meeting Point in c2007, designed by architects, Taiyo Membrane Corporation (later MakMax) (LSAA, 'Flemington Racecourse Meeting Point').



Figure 35. The tensile membrane structure at the Flemington Racecourse Meeting Point (Source: LSAA.org).

The 2006 additions to the Melbourne Sports and Aquatic Centre (MSAC), constructed for the Commonwealth Games in Albert Park (Figure 36 - Figure 37) were designed by Peddle Thorpe architects and Connell Wagner structural engineers, and included membrane roofs over a 50m competition pool and the accompanying grandstand. There were also tensile membrane structures on the north and east sides, which were later removed. This was a change in direction from previous tensile membrane structure designs, as they are relatively flat in profile and tied to lightweight steel beam and truss structures, with 'push up' elements providing the tension and double curvature to the membrane as opposed to the earlier use of masts and cables (*Steel Australia* Jun 2006:14).



Figure 36. Roof structure of the Melbourne Sports and Aquatic Centre, Albert Park (Source: LSAA.org).



Figure 37. Roof structure of the Melbourne Sports and Aquatic Centre, Albert Park (Source: LSAA.org).

Penbank Sound Shell in Morooduc was designed by Structureflex Pacific with structural engineer John Killmister in c2009. The tensile membrane structure is supported by a H-shaped frame and cables, allowing for an unobstructed view for the audience (LSAA, 'Penbank Sound Shell').



Figure 38. Penbank Sound Shell, Moorooduc (Source: LSAA.org).

A large structure was erected near the Mildura Riverfront to serve as a performance venue (2009), designed by architects Jackson Architecture and engineers Aurecom (LSAA, 'Mildura Riverfront Performance Venue').



Figure 39. Mildura Riverfront Performance Venue (Source: LSAA.org).

At the University of Melbourne Student Union Building, Parkville, a tensile membrane roof structure was erected over the North Court to a design by John Wardle Architects in 2001. This structure was demolished in late 2019.



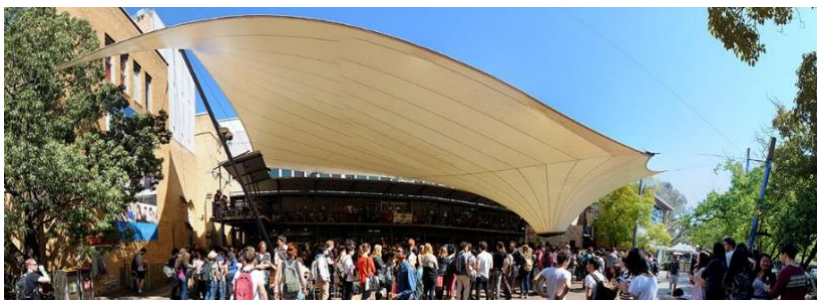


Figure 40. The structure over the North Court at the University of Melbourne Student Union Building (demolished late 2019) (Source: UMSU, 'North Court').

An asymmetrical inverted conical structure was erected over a communal deck at Melbourne Girls Grammar, South Yarra (c2011), designed by architects Sally Draper & Associates and structural engineers SEMF (LSAA, 'Melbourne Girls Grammar School Cover to Communal Deck').



Figure 41. The tensile membrane structure at Melbourne Girls Grammar, South Yarra (Source: LSAA.org).

In Bendigo, Y2 Architects designed two structures at Catholic College, Bendigo (2015). The main tensile membrane structure covers a large courtyard area, while a second, smaller canopy provides shelter for a stage space (LSAA, 'Catholic College Bendigo').



Figure 42. The main and secondary (stage) canopies at Catholic College, Bendigo (Source: LSAA.org).

Tensile membrane structures used on service stations

Within the wider Australasian context, in addition to the use of tensile membrane technology at the West Gate Service Stations, there is one other known example of this technology applied to a service station.

In 1999 Challenge Service Stations in New Zealand applied tensile membrane technology at their service stations, providing weather protection over the bays of bowsers. Designed by architect Alex Ross & Associates in collaboration with Structurflex Limited, the clients requested a distinctive look for their brand, and a quick construction time (Structurflex, 'Challenge Gas Service Station').

A single large canopy is formed by a perimeter truss and four masts, creating four peaks, covered with polyester reinforced PVC fabric. Lighting into the canopy creates a glow-in-the-dark effect at night, the canopy

as a whole having a landmark effect for the company (Structurflex, 'Glow-in-the-dark visibility for New Zealand petrol stations').



Figure 43. A Challenge service station canopy, c1999
(Source: Structurflex, 'Challenge Gas Service Station').



Figure 44. A Challenge service station canopy, c1999
(Source: Shelter-Rite Architectural fabrics).

Conclusion

Lightweight architecture grew in popularity, and its applications broadened, from its initial key development phase in Australia in the 1970s. The late 1980s saw a dramatic increase in the application of membrane architecture in Australia as the industry expanded. As published in the 1990 Membrane Structures Association of Australasia newsletter, *Warp & Weft*, industry expert Professor Vinzenz Sedlak wrote in summary of the 1990 Achievement Awards:

... membrane structures have arrived as a major new construction type in Australian building and have finally achieved a high level of acceptance amongst architects and clients alike.

Australian membrane structure's display a high degree of maturity in fabrication and execution and a solid knowledge base has been secured with many successful examples supporting their viability as a reliable construction method combined with their steadily increasing popularity (MSAA 1990).

The popularity of lightweight technology, and tensile membrane architecture, continued into the 21st century, in conjunction with the development of materials. Tensile membrane technology continues to be widely applied, creating innovative forms in architectural design.

Projects of all scales have taken advantage of the technology and its weather screening properties, with the technology applied to innumerable types of projects – both permanent and temporary – from small-scale to long-span. The technology has been applied to major sports stadiums, sports grounds and greens, swimming pools, churches, shopping centres and malls, public plazas and stages, plant nurseries, agricultural settings, playgrounds, carparks, parks and many other outdoor public and private spaces. Many of these projects have been award-winning for their technological innovation and design.

The technology demands specialist designers '*...who combine an intimate understanding of the medium with knowledge of form-finding laws, structural engineering, shape variation and manipulation, material fabrication and manufacturing methods and aesthetics*' (Picker & Sedlak 1982:2). Tensile membrane projects require the close co-operation of the entire project team – in design, fabrication and construction (Picker & Sedlak 1982:2).

Site History

New transport demands around Melbourne saw the construction of the West Gate Bridge between 1968 and 1978, opening on 15 November 1978. Toll sites were originally located on the Melbourne side of the bridge (Figure 45). Tom Roper MLA, Minister for Transport, stated (in hindsight in 1987):

Originally it had been intended to simply grow grass on the toll plaza area, but on a weekend drive it occurred to me that a service centre type development would be both better economically for the State and for the motoring public. I asked the RCA [Road Construction Authority] which at the time had a policy against service development on highways to consider the best use of the area (Tom Roper, 8 October 1987).



Figure 45. Looking east at the West Gate Bridge toll plaza in 1977, just prior to opening c.1978. The approximate locations of the West Gate service stations are indicated by the blue arrows (Source: Picture Victoria, ID 4861).

In 1986 the RCA invited expressions of interest from major oil companies and private developers to tender for the provision and operation of twin vehicular and motorist service facilities, one servicing the north carriageway and the other the southern carriageway. The successful tenderer would subsequently lease the government owned sites from the RCA (Dean & Law 1990). The major architectural requirements of the RCA brief were that the development should:

Achieve a standard of visual amenity commensurate with its proximity to the West Gate Bridge structure and the importance of the freeway as one of the major approach routes to Melbourne. The architectural style of the service buildings should consider the form and style of the adjacent bridge structure and should reflect in a general way such shape and form with the practical limits of the service functions that the centres are required to provide (Dean & Law 1990).

The development required provisions for fuelling facilities, take-away food, free public conveniences, telephones, tourist information, accommodation booking facilities, a 60-seat restaurant facility on the southern side, an automatic carwash on the northern side, an auto accessory shop, and carparking and road transport vehicle parking. The design was also required to consider the environs and relatively strong on-shore winds (Dean & Law 1990).

The Shell company approached architects Graeme Law and Associates Pty Ltd in 1986 to develop an architectural concept. They formulated 'the concept of sail like canopies, tension wires and structural towers' after observing 'the white sails of the craft on Hobson Bay and the cable stays to the bridge' during a site visit and drive over West Gate Bridge (Dean & Law 1990). Early concept designs were developed in collaboration

with Tract Consultants Australia and leaders in the field of tensile membrane technology, Spacetech Pty Ltd (McCready pers. comm., Aug 2021).

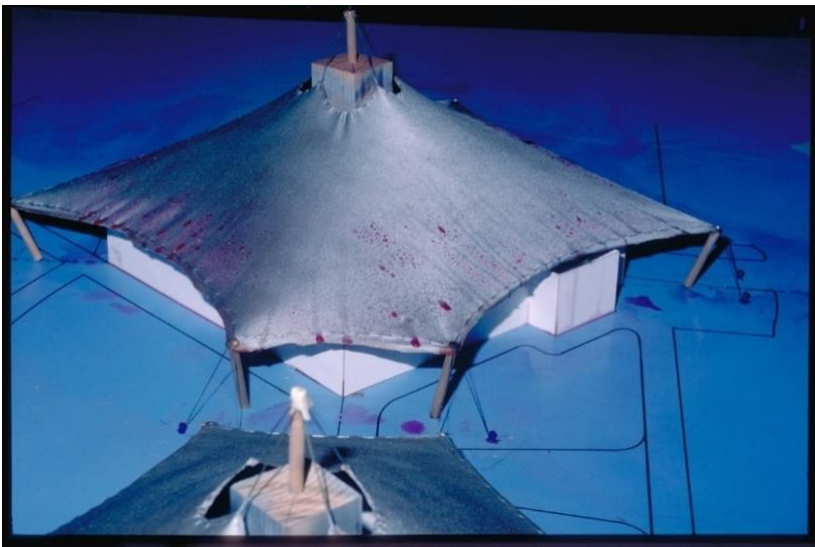


Figure 46. Early study model of the canopy structure (Source: Spacetech collection).

The proposal, submitted by Shell in December 1986, sought to set a precedent in the design of Australian service stations and departed from conventional garage architecture:

The site represents a unique and exciting development opportunity for the construction of two 'landmark' service centre facilities. The design ought to be a thoughtful and innovative response unfettered by existing corporate company design practices. It is our intention that this development proposal is not merely another service station (Breheny 1986).

In October 1987, Tom Roper, Minister for Transport, publicly announced the acceptance of the Shell tender (Roper 1987). In December 1987, the RCA and Shell signed an initial lease of ten years on the site, with three options for five year extensions (Dean & Law 1990).

A collaborative design approach was necessary between the architects, engineers and fabricators during the subsequent design phase, for the successful implementation of the project.

The canopy design engineers Connell Barrow McCready and Spacetech primarily designed the tensile membrane structures in accordance with the architect's brief (McCready, pers. comm., Aug 2021).

The design for the shape and form of the canopies evolved according to a number of issues within the brief and site constraints, which impacted upon the shape, such as the need to cover buildings of certain physical dimensions; the placement of petrol pumps and their required weather shelter; heights of articulated vehicles; points of entry/exit; and sight lines from cashier to petrol pumps. All of these issues pointed to the 'need for a lineal development with the form of the front canopy being cranked about the central axis to physically fit the development of the site' (Dean & Law 1990). The architect noted that 'there was also a need to create a building form which highlighted the location of this facility to the passing motorist and create a strong focal point which seduced the motorist into interrupting his journey' (Dean & Law 1990).

The built elements underneath the canopy were treated as 'simplistic gift boxes' or 'under canopy capsules', separate from the overhead canopy except for where they interlock at the major support towers, which penetrate the membrane through designed apertures. These tower masts 'were derived from communications network symbols' and intended to evoke the interconnectedness of this development with a larger, national Shell infrastructure. The Shell emblem originally surmounted the latticed masts to appropriately blazon the company image (Dean & Law 1990).



Figure 47. A sketch of a site
(Source: Spacetech collection).



Figure 48. Early model of the structures
(Source: Spacetech collection).

The extreme wind category of the site, with wind gusts of up to 180kph, directed that considerable attention be given to the canopy design and fabric, as well as structural load. After the final model was approved, five tent models made by the canopy design engineers, Connell Barrow McCready, were tested in the Vipac Boundary Layer Wind Tunnel at Port Melbourne in April 1988 (Connell Barrow McCready Pty Ltd, Apr 1988). John Connell, an Australian pioneer in lightweight structural design with experience dating from the 1970s, had been involved in the design and development of spaceframe systems and tensile fabric structures, and had worked on the prominent World Expo 1988 tensile exhibition structures in Brisbane. A range of fabric materials were researched for their durability and cost, leading Shell to finally select a PVC coated polyester fabric trademarked Polymar 6601 Grade III, which was acrylic lacquered on both sides (Catrice & Summerton 1997:86-90). For reasons of fabrication economy and erection procedure it was decided to subdivide the canopies into five separate membranes, two covering the north service station and three covering the south station (Dean & Law 1990). Because of the differing conditions on each site, the main 65m long bowser roofs required individual designs, so exact duplication of the buildings was not possible (Catrice & Summerton 1997:86-90).

Essentially, form followed function, and in a successful design process the final structures over the petrol bowser successfully echoed the form of the West Gate Bridge (McCready, pers. comm., Aug 2021).

Erection of the large canopies by Spacetech was a major task. The masts and fabric canopies were craned into position over the existing buildings, with the threat of wind damage resulting in night-time assembly (Dean & Law 1990).



Figure 49. Crane in the course of erecting the structures (Source: Spacetech collection).



Figure 50. Crane in the course of erecting the structures (Source: Spacetech collection).



Figure 51. Cranes and equipment in the course of erecting the structures (Source: Spacetech collection).





Figure 52. Cranes and equipment in the course of erecting the structures (Source: Spacetech collection).

Completed in 1989 at a cost of \$5.5 million, the Shell West Gate complex (now West Gate service stations) were called the “Opera House among Australian service stations” in ‘The Shell Report, 1989’ (Shell Australia, Jun 1989). Upon completion, the 1989 newsletter of the Membrane Structures Association of Australasia, *Warp & Weft*, reported:

The western approaches to Melbourne are largely funnelled across the spectacular long span Westgate Bridge, a bridge which is to Melbourne what the Harbour Bridge is to Sydney. Now sitting astride the freeway and framing this approach, five membrane structures of exquisite elegance have been designed and built for the Shell Company of Australia to shelter and roof their driveway areas, Shell Shops and Restaurant complex.

The freeform structures comprising approximately 7000 square metres of plan in entirety, embrace the best aspects of membrane structure design and construction in their detail and fabrication and as a bonus, the long span structure echoes the cable stayed configuration of the Westgate Bridge (MSAA, No. 7 1989).

Graeme Law, the project architect, reported on the reception of the completed project in 1990:

... the project has been most successful in that it has become a well known landmark and is seen as a fitting contribution to the Western Gateway to Melbourne. The Shell Company of Australia Limited have expressed their delight with the end product as has the Minister who instigated the site use proposal (Dean & Law 1990).

The separate drive-through food (formerly KFC) outlet on the north site with a conical membrane canopy was a later addition. Shell no longer operates the West Gate service stations. In 2021 the service stations were operated by United Petroleum.

The life expectancy of PVC materials is usually 12-15 years, and support system elements can deteriorate. Periodic replacement or rejuvenation of parts is expected with tensile membrane structures (McCready pers. comm., Aug 2021). As of September 2021, the West Gate canopy membranes and support system remain largely original. To date the canopy fabric has been repaired and reinforced in places, and a small number of parts of the support system have been replaced following vehicle accidents. Some elements of the West Gate structures have been rejuvenated (Spencely, pers. comm., Sep 2021).



Figure 53. Aerial view of the completed sites (Source: Spacotech collection).



Figure 54. The completed structures (Source: Spacotech collection).



Figure 55. The completed structures at the southern site, looking east (Source: Spacotech collection).



Figure 56. The completed structures (Source: Spacotech collection).





Figure 57. The structures at the northern site, looking south (Source: Spacetech collection).



Figure 58. Detail of the completed structures (Source: Spacetech collection).



Figure 59. Detail of the completed structures (Source: Spacetech collection).



Historical Themes

The West Gate Service Stations illustrate with the following theme and sub-theme described in *Victoria's Framework of Historical Themes, 2010*:

- 5 Building Victoria's industries and workforce
 - 5.4 Exhibiting Victoria's innovation and products

The place illustrates the following themes as outlined in *Thematic History – a History of the City of Melbourne's Urban Environment, 2012*:

- 5 Building a commercial city.

The place also illustrates the following theme and sub-theme as outlined in the *Postwar Thematic Environmental History 1945-1975, 2020*:

- 4 Creating a functioning city
 - 4.1 Planning for cars.

Description

Two service stations are located on opposite sides of the West Gate Freeway, on the Melbourne side of the West Gate Bridge at 1 West Gate Freeway, Port Melbourne (Lot 1 PS644562) and 2 West Gate Freeway, Port Melbourne (Lot 2 PS644562). Each site comprises a main canopy over the bowlers and a conical canopy over the petrol station buildings. On the south side there is an additional conical canopy over a food outlet.

The main canopies over the bowlers are PVC tensile membrane structures, approximately 65m by 20m in size. Each has a single, double-cranked steel-cable ridge supported on four tubular-steel main masts, with the canopy attached to catenary cut edge cables. The ends of the main masts are anchored to the ground by twin cables. The steel outer struts are supported by cable guy-wires are fixed to concrete ground anchors.

The canopies over the petrol station buildings are conical tensile membrane structures measuring approximately 30m by 25m. Steel lattice towers rise through the centre of the canopy, supporting it via teardrop looped cable connections. The towers extend higher than structurally necessary to carry corporate signage. The canopy over the restaurant on the southern site is of similar design but is larger measuring approximately 35m by 35m.

At the north site, a similar conical canopy supported by a tower structure (with a red membrane), built over a drive-through food outlet, is a later construction and is not significant.



Figure 60. West Gate service stations – south site in the foreground, north side in the background (GJM Heritage, August 2021).



Figure 61. The north site viewed from the east (GJM Heritage, August 2021).



Figure 62. The north site viewed from the west (GJM Heritage, August 2021).



Figure 63. The south site viewed from the south (GJM Heritage, August 2021).



Figure 64. The south site viewed from the east (GJM Heritage, August 2021).





Figure 65. The south site, showing the support struts, guy cables and ground anchors (GJM Heritage, August 2021).

Intactness

The structural system of steel lattice, struts, tensile cables and ground anchors are original and – while having undergone repair over its life – the tensile membrane fabric is thought to be original.

The service station shop and restaurant buildings are highly intact although internal fitout, signage and petrol bowsers have been altered; however, these elements are not significant.

Integrity

The tensile membrane structures at the north and south West Gate Service Stations retain a high degree of integrity to their 1989 construction. The structures, which includes the canopies and the supporting system (lattice steel masts, struts, cables and ground anchors) retain their original function.

Generally, PVC has a lifespan of as little as 12-15 years and the membrane fabric itself will require periodic replacement with similar fabric. This will not adversely affect the integrity of the place and should not be seen as detracting from its significance. Likewise, the steel support structure and cable system will need periodic renewal.

The smaller tensile membrane structure at the east end of the north site (over the drive-through food outlet) is a later construction, but does not detract from the original design.

Comparative Analysis

Lightweight architecture encompasses various technologies and materials, allowing for versatility in application and the creation of unique forms. Innovation and experimentation in the industry led to the development of prestressed and non-prestressed membrane structures, early cable net structures, spaceframes, pneumatic (air supported) structures, and tensile membrane structures, amongst others. They are lightweight, and are either temporary or permanent solutions for protection from the elements.

Lightweight architecture grew in popularity, and its applications broadened, from its initial key development phase in Australia in the 1970s. The late 1980s saw a dramatic increase in the application of membrane architecture in Australia, and by 1990 membrane structures were a major construction type and popular technology in the Australian building industry. The popularity of lightweight technology and tensile membrane architecture continued into the twenty-first century, in conjunction with the development of materials. Tensile membrane technology continues to be widely applied, creating innovative forms in architectural design.

This comparative analysis considered extant tensile membrane structures constructed in the late twentieth century within the City of Melbourne.

At the time of undertaking this assessment there were two examples of a lightweight structures dating from the twentieth century within the City of Melbourne included in the Victorian Heritage Register (VHR) or as part of a place included on the VHR: the Sidney Myer Music Bowl, The Domain, Melbourne (VHR H1772); and the food court at the Queen Victoria Market, West Melbourne (VHR H0734). As of January 2022, only the Sidney Myer Music Bowl remains extant.

Sidney Myer Music Bowl, The Domain, Melbourne (VHR H1772)

The 1959 Sidney Myer Music Bowl, Melbourne, designed by Yuncken Freeman Griffith Bros & Simpson in collaboration with engineer Bill Irwin, was among the earliest large-scale tensile cable net structures in the world, and is included in the VHR (VHR H1772). However, its construction as a mesh steel cable net structure with inserted plywood and aluminium sandwich panels is a forerunner to, and different from, the tensile membrane structures demonstrated at the Shell West Gate Service Stations.

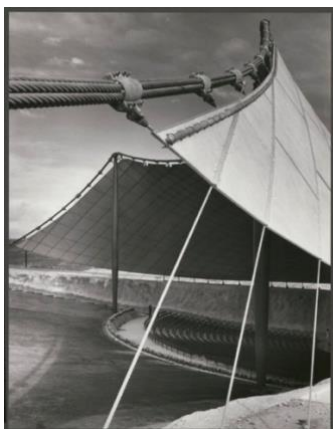


Figure 66. The Sidney Myer Music Bowl structure in 1959 (Source: Mark Strizic, via Docomomo Australia).



Figure 67. Sidney Myer Music Bowl (Source: Lovell Chen, 'Sidney Myer Music Bowl HMP').

Food Court, Queen Victoria Market, West Melbourne (VHR H0734)

The substantially smaller tensile membrane structure that formed the roof of the food court at Queen Victoria Market (VHR H0734) was constructed in 1994-95 (Lovell Chen, Apr 2017); this structure was demolished in early 2022 as part of the market renewal project. While included within the extent of registration for the heritage place the food court roof did not form part of the significance of the Queen Victoria Market.



Figure 68. Roof over the food court, Queen Victoria Market (demolished 2022) (Source: Peter Kneen collection).



Figure 69. Interior of the Queen Vic Market foodcourt roof (demolished 2022) (Source: ACLA Consultants).

There are no other known examples of tensile membrane structures included on the Heritage Overlay of the Melbourne Planning Scheme. The tensile membrane structures at the West Gate Service Station sites appear to have no other direct comparators in the municipality.

The West Gate Service Stations retain a high degree of integrity to clearly demonstrate tensile membrane technology of the late-twentieth century.

Assessment Against Criteria

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

Criterion B: Possession of uncommon, rare or endangered aspects of our cultural or natural history (rarity).

The West Gate Service Stations are rare examples of lightweight tensile membrane structures of the late twentieth century within the City of Melbourne and are the only known application of this technology to a service station in Victoria. The distinctive canopies are the largest freestanding examples of this type of structure in the municipality that date prior to 2000. The only known comparable example in the municipality was the much smaller and less visible roof to the food court at the Queen Victoria Market, Melbourne dating from 1994-95 (demolished in 2022). In comparison, the Sidney Myer Music Bowl (1959) in the Domain is a cable net lightweight structure.

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

The West Gate Service Stations, designed by architects Graeme Law & Associates and engineers Connell Wagner and Connell Barrow McCreedy, specifically respond to their setting by referencing the cable stay structure of the West Gate Bridge and the white sails of seacraft on Hobson Bay. The design represented a marked departure from standard service station design of the time and the tensile membrane canopies and the lattice steel masts were conceived – and function – as landmark elements for users of the West Gate Freeway as they enter Melbourne over the West Gate Bridge.

Criterion F: Importance in demonstrating a high degree of creative or technical achievement at a particular period (technical significance)

The tensile membrane canopies clearly demonstrate the technical opportunities and complex forms that could be achieved by tensile membrane lightweight structures at the time. Designed collaboratively by the architects, engineers and canopy fabricators Spacotech, these lightweight structures remain a prominent feature of the Melbourne West Gate Freeway on the Melbourne side of the West Gate Bridge.

Grading and Recommendations

It is recommended that the place be included in the Heritage Overlay of the Melbourne Planning Scheme as an individual heritage place.

Recommendations for the Schedule to the Heritage Overlay (Clause 43.01) in the City of Melbourne Planning Scheme:

External Paint Controls?	No
Internal Alteration Controls?	No
Tree Controls?	No
Outbuildings or Fences not exempt under Clause 43.01-4?	No
Prohibited Uses Permitted?	No

Aboriginal Heritage Place?	No
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It is recommended that an Incorporated Plan be prepared in accordance with Clause 43.01-3 to enable the replacement of the tensile membrane fabric and the management of the non-significant service station infrastructure.

Extent of the Recommended Heritage Overlay

To the extent of the boundary as shown in pink below:

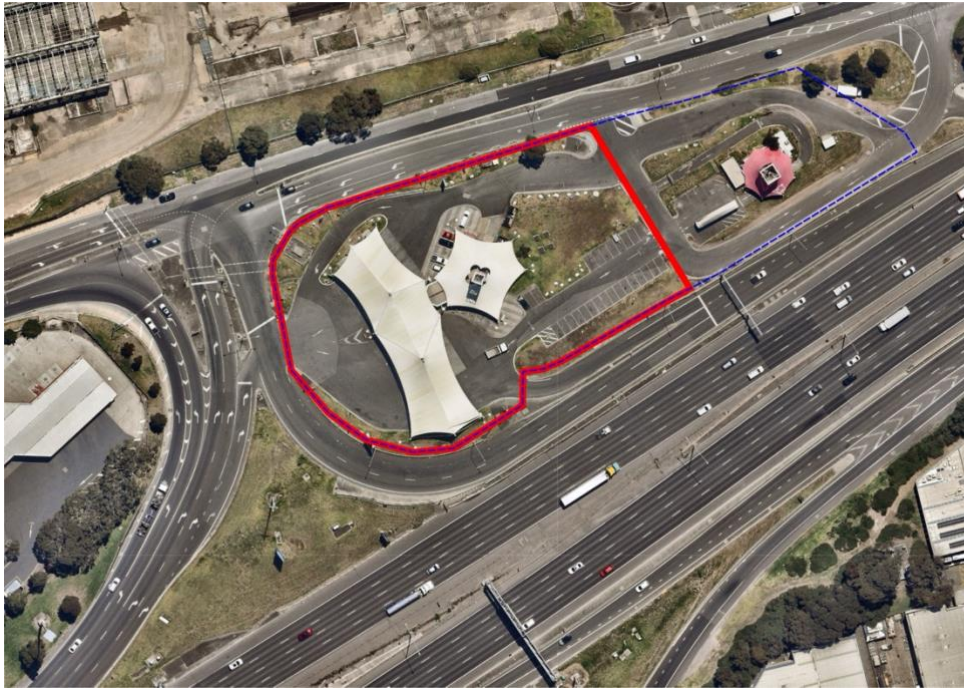


Figure 70. North site, 1 West Gate Freeway, Port Melbourne. Recommended Extent of Heritage Overlay (part Lot 1 PS644562) (boundary in red) (Basemap Source: nearmap, November 2023)



Figure 71. South site, 2 West Gate Freeway, Port Melbourne. Recommended Extent of Heritage Overlay (part Lot 2 PS644562) (boundary in red) (Basemap Source: nearmap, November 2023)



Previous Studies

<i>The Motor Garage & Service Station in Victoria – a survey, 1997</i>	Identified as potentially of State significance
<i>Southbank and Fishermans Bend Heritage Review, 2017</i>	Identified for further assessment
<i>Fishermans Bend In-Depth Heritage Review, 2021</i>	Recommended for inclusion on the Heritage Overlay

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- 'Canteen Canopy Extension'
- 'Catholic College Bendigo'
- 'Flemington Racecourse Meeting Point'
- 'Medium Fabric Structures'
- 'Melbourne Girls Grammar School Cover to Communal Deck'
- 'Membrane Structures'
- 'Mildura Riverfront Performance Venue'
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Vicplan.

Acknowledgements

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APPENDIX 2 – STATEMENT OF SIGNIFICANCE



West Gate Service Stations Statement of Significance

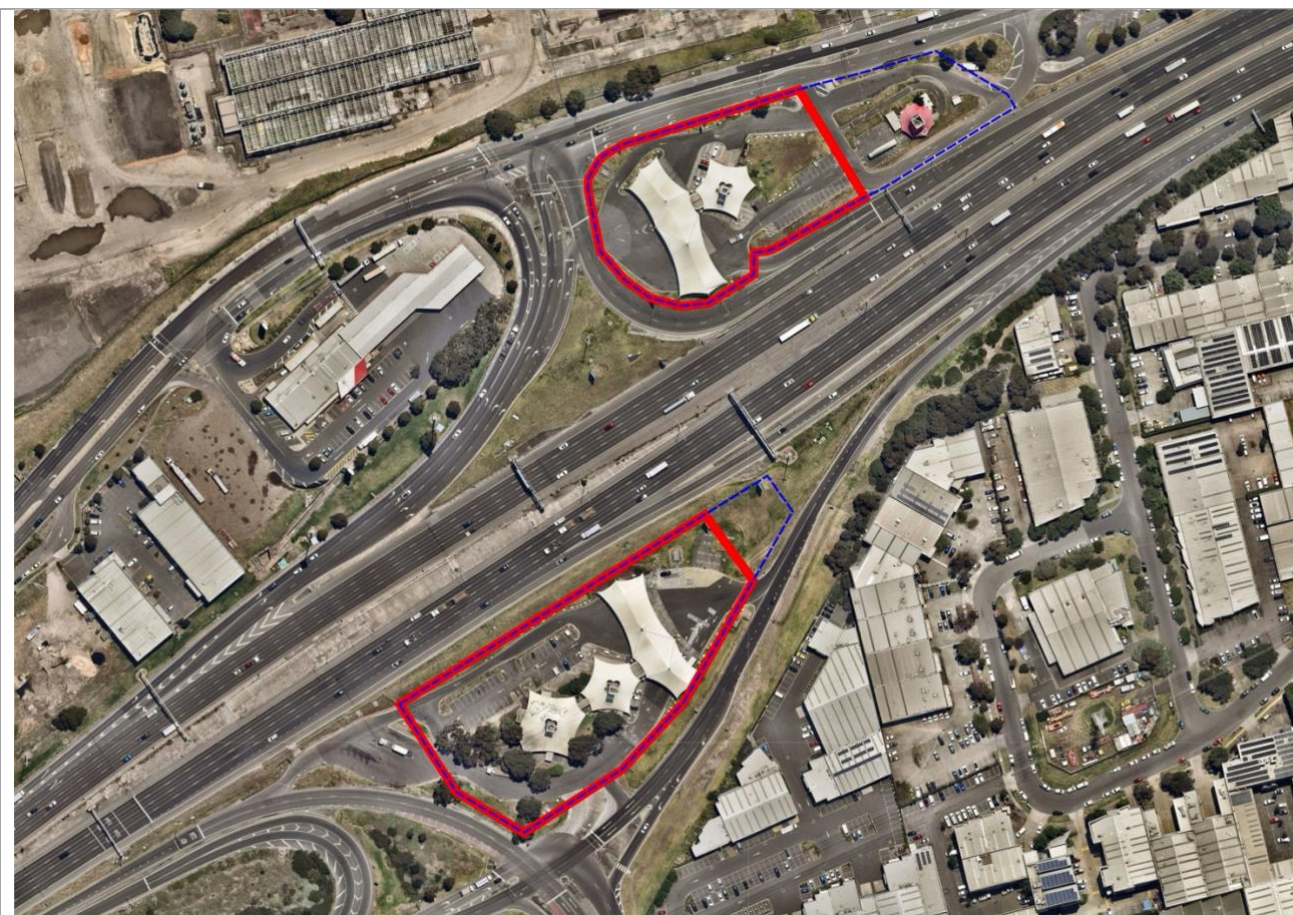
Heritage Place: West Gate Service Stations 1 & 2 West Gate Freeway, Port Melbourne	PS ref no: HO1380
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North service station site, 1 West Gate Freeway, Port Melbourne (GJM Heritage, August 2021).



South service station site, 2 West Gate Freeway, Port Melbourne (GJM Heritage, August 2021).



Aerial photograph showing extent of HO1380 (nearmap, November 2023).

What is significant?

The West Gate Service Stations at 1 & 2 West Gate Freeway, Port Melbourne, designed by architects Graeme Law & Associates with structural engineering design by Connell Wagner and canopy design by Connell Barrow McCready. Constructed by specialist lightweight structure fabricators Spacetech in 1989, the canopies form the roof of the petrol station shop and the canopy of the forecourts on the Melbourne side of the West Gate Bridge.

Elements that contribute to the significance of the place include (but are not limited to):

- The colour, form and technological system of the tensile membrane. Note: the membrane fabric itself will require periodic replacement with similar fabric which will not adversely affect the significance of the place;
- The central steel lattice masts; and
- The structural steel struts, steel cables and concrete ground anchors.

The shop/restaurants, bowsers, signage and other service station elements are not significant.

How is it significant?

The West Gate Service Stations at 1 & 2 West Gate Freeway, Port Melbourne are of local rarity, aesthetic and technical significance to the City of Melbourne.

Why is it significant?

The West Gate Service Station Canopies are rare examples of lightweight tensile membrane structures of the late twentieth century within the City of Melbourne and are the only known application of this technology to a service station in Victoria. The distinctive canopies are the largest freestanding examples of this type of structure in the municipality that date prior to 2000. The only known comparable example in the municipality was the much smaller and less visible roof to the food court at the Queen Victoria Market, Melbourne dating from 1994-95 (now demolished). In comparison, the Sidney Myer Music Bowl (1959) in the Domain is a cable net lightweight structure. (Criterion B)

The West Gate Service Stations, designed by architects Graeme Law & Associates and engineers Connell Wagner and Connell Barrow McCready, specifically respond to their setting by referencing the cable stay structure of the West Gate Bridge and the white sails of seacraft on Hobson Bay. The design represented a marked departure from standard service station design of the time and the tensile membrane canopies and the lattice steel masts were conceived – and function – as landmark elements for users of the West Gate Freeway as they enter Melbourne over the West Gate Bridge. (Criterion E)

The tensile membrane canopies clearly demonstrate the technical opportunities and complex forms that could be achieved by tensile membrane lightweight structures at the time. Designed collaboratively by the architects, engineers and canopy fabricators Spacetech, these lightweight structures remain a prominent feature of the Melbourne West Gate Freeway on the Melbourne side of the West Gate Bridge. (Criterion F)

Primary source

GJM Heritage, 'West Gate Service Station Canopies, 1 & 2 West Gate Freeway, Port Melbourne', February 2024.

This document is an incorporated document in the Melbourne Planning Scheme pursuant to section 6(2)(j) of the *Planning and Environment Act 1987*

APPENDIX 3 – INCORPORATED PLAN



Melbourne Planning Scheme

Incorporated Plan

West Gate Service Stations

1 and 2 West Gate Freeway, Port Melbourne

March 2024

West Gate Service Stations

1. Introduction

This document is an incorporated document in the schedules to Clause 43.01 Heritage Overlay (HO1380) and Clause 72.04 Incorporated Documents of the Melbourne Planning Scheme (scheme) pursuant to section 6(2)(j) of the *Planning and Environment Act 1987*.

This document applies to the land which is occupied by two service stations on the West Gate Freeway, comprising of land at 1 West Gate Freeway, Port Melbourne (north service station) and 2 West Gate Freeway, Port Melbourne (south service station).

This incorporated plan establishes planning permit exemptions in respect of the land.



Figure 1: map of north and south service stations with HO1380 extent shown in red.

2. Purpose

The purpose of this incorporated plan is to ensure that new development does not adversely affect the significance of the West Gate Service Station Canopies, while recognising the operational requirements of the facility and ensuring that it can continue to function safely, efficiently and appropriately.

3. Planning Permit Exemptions

This incorporated plan established planning permit exemptions, for the land, under the provisions of Clause 43.01-3 of the scheme.

The permit exemptions, set out in Clause 4 of this incorporated plan, prevail over any contrary or inconsistent provision in Clause 43.01 of the scheme.

4. Site specific exemptions under Clause 43.01-3

A planning permit is not required under Clause 43.01-1 of the scheme for the land at 1 West Gate Freeway, Port Melbourne (north service station) and 2 West Gate Freeway, Port Melbourne (south service station) to:

- Demolish or alter the freestanding under-canopy service station shops, restaurants and associated structures
- Remove, alter or install new fuel bowsers and associated infrastructure
- Remove, alter or install electric vehicle charging stations
- Remove, alter or install air, water and similar dispensing stations
- Lay new driveways and hard standings
- Resurface existing driveways and hard standings
- Remove, construct and display directional signage and all types of signage connected with the corporate identity of the service station operator including fuel price and promotional signage
- Undertake emergency and safety works to prevent damage to and injury to property and persons
- Install external security and fire detections services
- Install firefighting equipment
- Erection of temporary security fencing, scaffolding, hoardings for a period of no more than 30 days
- Replacement of below ground fuel tanks and associated ground works.