

Commonwealth Avenue Bridge Renewal Project

Heritage Impact Assessment

90% Design Development - September 2025

TZG Heritage+AdaptiveReuse



Australian Government
National Capital Authority

Acknowledgement of Country

TZG acknowledges the traditional owners and custodians of the land on which we work and pay our respects to Elders past and present. We are committed to a just, equitable and reconciled Australia and support the Uluru Statement from the Heart.

Always was, always will be.

Front Cover 2013. Commonwealth Avenue Bridge facing Parliament House, Capital Hill, ACT.

Source: Source: VSTYLE Photography, Flickr, 28 June 2015, <https://flic.kr/p/ukHenp>. (AU) Commonwealth Avenue Bridge, 20 October 2019

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Date	Version	Purpose	Issued By
26.06.2025	1	50% Detailed Design Submission - Draft	JM
30.06.2025	2	50% Detailed Design Submission	JM
12.09.2025	3	90% Detailed Design Submission - Draft	JM
18.09.2025	4	90% Detailed Design Submission	JM

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01 Introduction

1.1 Background

The Commonwealth Avenue Bridge was designed in the late 1950s, built in the early 1960s and opened in November 1963. The Bridge is an elegant, slim line structure with modernist architectural design character.

The Bridge is a critical component of the transport network of Canberra and the Australian Capital Territory overall and forms a major link in Canberra's active transport network. The existing Bridge currently presents considerable limitations both at present and in the future including vehicle design load limitations, shared pedestrian and cycleway path width limitations and vehicle and shared path safety barrier design limitations.

The National Capital Authority has undertaken the Commonwealth Avenue Bridge Renewal Project to widen and strengthen the existing Bridge in order to increase its load bearing capacity to reflect current and forecast traffic load demands, upgrade vehicle and pedestrian safety barriers, and to accommodate wider shared pedestrian and cycleway paths.

Aims

The Commonwealth Avenue Bridge Renewal Project will:

- (i) increase the load-bearing capacity of the Bridge to T44 bridge loading requirements to meet current and forecast traffic load demands, and to extend the bridge asset and functional design life (by at least 50 years) to match the load rating of the road network surrounding the Bridge;
- (ii) relocate services currently located in the Bridge structure;
- (iii) widen the shared pedestrian and cycleway paths on both sides of the Bridge to improve safety and comply with Austroads guidelines;
- (iv) replace all barriers on both bridge spans to meet code requirements and improve safety for all users of the Bridge including consideration of integrated lighting into proposed barrier solutions; and
- (v) make improvements to the Bridge approach ramps to provide better access to the Bridge for all users and to better integrate with the wider shared path network.

Heritage

Heritage considerations have underpinned the development of options for the Commonwealth Avenue Bridge Renewal Project. A report was prepared at the outset of the project which included all relevant heritage information related to the site and established a Heritage Framework to inform the design. It included a review of the history and significance of the site, identified heritage constraints and opportunities and provided guidelines for the design of new elements within this highly significant heritage context, with a focus on built heritage.

A separate Aboriginal Cultural Heritage Assessment was prepared by Navin Officer Heritage Consultants.

Key Design Elements

Key design elements identified in the brief include:

- (i) strengthen the Bridge to accommodate T44 loads;
- (ii) widen the existing road carriageway to 10.7 metres (comprising two 3.7-metre-wide outside traffic lanes and a 3.3-metre-wide centre traffic lane);
- (iii) widen the shared pedestrian and cycle paths by 2.6 metres from 2.4 metres to 5 metres clear width, consistent with Austroads standards;
- (iv) implement medium performance, low transmitted force barriers, with a design that has negated the need for additional strengthening of the carriageways;
- (v) upgrade access pathways to comply with the requirements of the DD Act and to integrate into existing path and road networks;
- (vi) upgrade and adjustment of the existing drainage, lighting and utility services that also consider future proofing of a light rail corridor and infrastructure impacts;
- (vii) prepare heritage and urban designs sympathetic to the existing Bridge and urban and landscape design; and
- (viii) prepare temporary works designs that consider traffic management and the minimisation of disruption to users, environmental management, safety during construction, integrity of the existing structure, construction staging impacts and visual amenity impacts during construction.

1.1 Study Area

The Commonwealth Avenue Bridge is located in Parkes, Canberra. The study area comprises the bridge, which spans Lake Burley Griffin, and includes the landscaped areas associated with the bridge on either side of the lake. On the northern side of the lake the study area includes land around Barrine Drive, part of which is known as Commonwealth Park, and to the south, it includes the landscaped area to the north of Flynn Place, to the west of Patrick White Terrace.

The bridge itself, and the area to the east of the bridge, are located on national land managed by the National Capital Authority, whilst the land to the west of the bridge is managed by the ACT Government.



Figure 1: Location Plan.
Source: GML Commonwealth Avenue Bridge Heritage Assessment, 2020.

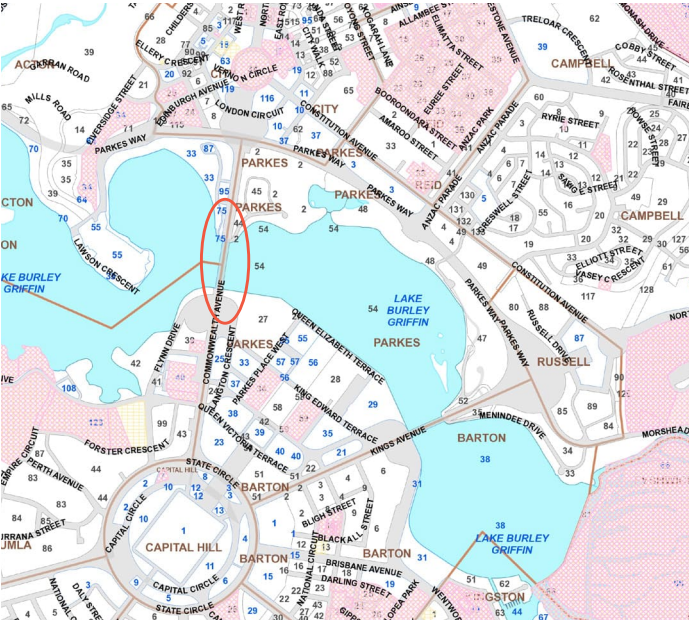


Figure 2: Block Plan with Commonwealth Avenue Bridge circled.
Source: ACT Government.



Figure 3: Study Area.
Source: Nearmaps.

1.2 Methodology

This Heritage Impact Assessment has been prepared in accordance with the 'self-assessment' process included in the EPBC Act Significant Impact Guidelines 1.2 for Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies (Significant Impact Guidelines 1.2). These guidelines enable a proponent to undertake a self-assessment of a proposed action to determine whether or not an action is likely to have a significant adverse impact on a matter protected under the EPBC Act, and understand if a referral needs to be submitted for an approval decision by the Minister for the Environment.

This report has been prepared in accordance with the following guidelines and requirements:

- EPBC Act and Regulations for the assessment of places against Commonwealth Heritage Criteria and Commonwealth Heritage management principles.
- Australia ICOMOS Burra Charter, 2013 (Burra Charter).
- Australian Heritage Commission (2002) Ask First: A Guide to Respecting Indigenous Heritage Places and Values; and
- Australian Heritage Council (2010), Identifying Commonwealth Heritage Values.

Heritage Conservation

Heritage conservation is the process of looking after important places so that their heritage values can be passed on to future generations. The Burra Charter provides a set of principles that guides conservation work in Australia. It advocates a cautious approach to change - to do as much as necessary to care for a place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained. If changes are made to a place, they should ideally be reversible, as once original fabric is gone it is lost forever.

A key principle of heritage conservation is the importance of understanding the significance of a place before making any decisions about its future. This ensures that the assessment process is as objective as possible and is based only on the intrinsic qualities of the place itself. It also ensures that work on heritage items is designed to retain the significance of the place.

Cultural significance

Cultural significance is defined by *The Burra Charter* as the aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.

The level of significance of a place and the type of impact proposed affects the statutory planning approval pathway of a project and the input required from a specialist heritage consultant. Heritage items can be of national, state or local significance.

The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013

In order to achieve a consistency in approach and understanding of the meaning of conservation by all those involved, a standardised terminology for conservation processes and related actions has been adopted. The terminology in *The Burra Charter* is a suitable basis for this.

The following terms apply to the historic fabric of the site and are included here to assist in understanding of the intent of the conservation requirements in this section.

Place means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Fabric means all the physical material of the place including components, fixtures, contents, and objects.

Conservation means all the processes of looking after a place so as to retain its cultural significance.

Maintenance means the continuous protective care of the fabric and setting of a place, and is to be distinguished from repair.

Repair involves restoration or reconstruction.

Preservation means maintaining the fabric of a place in its existing state and retarding deterioration.

Restoration means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.

Reconstruction means returning the place to a known earlier state and is distinguished from restoration by the introduction of new material.

Adaptation means modifying a place to suit the existing use or a proposed use.

Use means the functions of a place, as well as the activities and practices that may occur at the place.

Compatible use means a use, which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

Setting means the area around a place, which may include the visual catchment.

Related place means a place that contributes to the cultural significance of another place.

Interpretation means all the ways of presenting the cultural significance of a place.

1.3 Key Documents and References

This report builds on the extensive archive of reports and studies, prepared by others, related to the Commonwealth Avenue Bridge and its surrounds, which are listed below.

Reports

Australian Heritage Commission 2002, *Ask First: a guide to respecting Indigenous Heritage Values and Places*, Australian Heritage Commission, Canberra.

CCJ Architects, *Commonwealth Avenue Bridge Handrail & Barrier Options, Concept Design Report*, October 2016.

Duncan Marshall, Dr Sandy Blair (Context Pty Ltd), Craig Burton, Alistair Grinbergs and Roslyn Russell, *Heritage Management Plan for Canberra Central Parklands*, prepared for the National Capital Authority, 2009.

Duncan Marshall, Chris Betteridge, Navin Officer Heritage Consultants, Dr Warren Nicholls, Prof Robert Freestone and Dr Michael Pearson, *Certain Roads of National Lands in Central Canberra, Commonwealth Heritage Assessment*, prepared for the National Capital Authority, 2014.

Duncan Marshall, Craig Burton (CAB Consulting), Alistair Grinbergs, Chris Johnston and Jackie Donkin (Context Pty Ltd), Dr Warren Nicholls, Brendan O'Keefe and with assistance from Dr Robert Boden, Robert Freestone (University of NSW) and Alison Rowell, *Parliament House Vista Heritage Management Plan, Volumes 1 & 2*, for the National Capital Authority, 2010.

Duncan Marshall, *Heritage Impact Statement, Proposed Strengthening and Upgrade Works to Commonwealth Avenue Bridge Upgrade*, 2019.

Godden Mackay Logan Pty Ltd, *Lake Burley Griffin Heritage Assessment*, prepared for the National Capital Authority, June 2007.

Godden Mackay Logan Pty Ltd, *Commonwealth Avenue Bridge Heritage Assessment*, prepared for the National Capital Authority, September 2020.

Godden Mackay Logan, *Lake Burley Griffin and Adjacent Lands—Heritage Management Plan, Volumes 1-4, Lake Burley Griffin—Final Report*, October 2009.

Lahz Nimmo, *Commonwealth Avenue Bridge Upgrade, Urban Design + Architectural Concept Design Report*, Final Report, November 2019.

National Capital Authority, *Asset Management Strategy*, unpublished report for the NCA, 1995.

National Capital Authority, *The Griffin Legacy*, National Capital Authority, Canberra National Capital Authority 2004.

National Capital Authority, *Central National Area Western Foreshores and Environs, A Draft Planning Framework Study*.

National Capital Authority, *Lake Burley Griffin Recreation Policy 2005*, National Capital Authority, 2005.

National Capital Development Commission, *Lake Burley Griffin Canberra Policy Plan*, published by National Capital Development Commission, Commonwealth of Australia, 1988.

National Capital Planning Authority, *Lake Burley Griffin Management Plan*, published by NCPA, Commonwealth of Australia, 1995.

National Capital Authority, *Kings & Commonwealth Avenues Draft Design Strategy*, 2017.

Navin Officer Heritage Consultants, *Draft Cultural Heritage Assessment, Commonwealth Bridge*, Parkes, ACT, 2023.

Tonkin Zulaikha Greer Heritage, *Commonwealth Avenue Bridge Renewal Project, Heritage Framework*, October 2022.

Websites

Online Image Sources

ACT Heritage

National Archives of Australia

National Library of Australia, Trove

1.4 Limitations

Assessments of cultural significance made by others have been adopted for certain items in this report. In the opinion of the authors, the recommendations in this report would not be materially altered by any further primary research.

02 Statutory Context

2.1 Heritage Statutory Context

2.1.1 Statutory Listings

Commonwealth Avenue Bridge is not individually listed as a Heritage Item. It is, however, located within the curtilage of Lake Burley Griffin and Adjacent Lands and forms the western boundary of the Parliament House Vista. It is also noted that the land to the west of the bridge, and on either side of the lake is managed by the ACT Government and hence subject to different regulations.

Commonwealth Heritage List

The Commonwealth Heritage List was created under the *EPBC Act*. This statutory list recognises places of Commonwealth Heritage value which are owned by the Commonwealth Government.

Name of Item	Place No.
Lake Burley Griffin and Adjacent Lands	105230
Parliament House Vista	105466

ACT Heritage Register

The ACT Heritage Register legally recognises and protects significant heritage places within the Australian Capital Territory. The following places are on the ACT Heritage Register or have been nominated and accepted under the previous ACT heritage legislation. It is noted that where places are located on National Land, under the control of the Commonwealth, the ACT Heritage Register does not legally apply.

Name of Item	ID No.
Captain Cook Water Jet	Nominated

2.1.2 Non Statutory Listings

A listing on non-statutory registers does not provide any legal protection to heritage items or sites, but does demonstrate the recognised heritage value. Non-statutory heritage registers include the *Register of the National Estate* and those maintained by the Australian Institute of Architects, Engineers Australia and other organisations with an interest in heritage.

Register of the National Estate

The *Register of the National Estate* is a list of some 13,000 places of natural, Indigenous and historic significance throughout Australia that was originally established under the Australian Heritage Commission Act 1975. *The Register of the National Estate* ceased to be a statutory register in 2012 and is now maintained on a non-statutory basis as a publicly available archive and educational resource.

Name of Item	ID No.
Lake Burley Griffin Conservation Area	101595
Parliament House Vista	13371

Register of the National Trust of Australia (ACT)

The National Trust of Australia (ACT) maintains a Register of Significant Heritage Places. National Trust listing is not a statutory listing and has no legal effect, but is a good indication of community concern for a place or item.

Name of Item
Lake Burley Griffin and Foreshores
Captain Cook Water Jet
The Parliamentary Triangle

2.2.2 Previous Heritage Assessments

The following heritage assessments have been carried out which assess the significance of the Commonwealth Avenue Bridge and Commonwealth Avenue.

Commonwealth Avenue Bridge, Heritage Assessment, 2020

In 2020, GML Heritage prepared a heritage assessment to determine the level of significance of the Commonwealth Avenue Bridge. The assessment was prepared in accordance with the requirements of the EPBC Act and Regulations. Section 10.03A of the EPBC Regulations provides nine Commonwealth Heritage criteria for identifying and assessing the Commonwealth Heritage values of a place.

The assessment concluded that the Commonwealth Avenue Bridge met the Commonwealth Heritage List threshold for eight of the nine values and is eligible for nomination to the Commonwealth Heritage List.¹

The assessment did not result in the listing of the bridge.

Certain Roads of National Land in Central Canberra Commonwealth Heritage Assessment, 2014

Commonwealth Avenue, the road which traverses the bridge, was assessed as part of the Certain Roads of National Land in Central Canberra Commonwealth Heritage Assessment in 2014. The assessment did not result in a listing of the road.

1: GML Heritage, Commonwealth Avenue Bridge - Heritage Assessment, September 2020, p.43.

2.2 Legislative Framework

2.2.1 Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth Avenue Bridge is located on Commonwealth land and is managed by a Commonwealth agency, (the National Capital Authority (NCA)). It is therefore subject to the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* and its regulations.

The *EPBC Act* is the federal government's central piece of environmental legislation. Under the *EPBC Act*, a Commonwealth agency that owns or controls a place that has, or might have, one or more Commonwealth Heritage values must take all reasonable steps to assist the Minister and the Australian Heritage Council in the identification, assessment and monitoring of the place's Commonwealth Heritage Values (s341Z). For best practice, all heritage aspects should be evaluated, including historic, natural and indigenous, and the assessments should be undertaken against the Commonwealth Heritage criteria set out in Section 10.03A of the EPBC Regulations.²

For Indigenous values and engagement, '*Engage Early Guideline 2016*' and '*Ask First*' should be referred to.

The *EPBC Act* provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places - defined in the *EPBC Act* as '*matters of National Environmental Significance*' (MNES).

Under this Act, an action will require approval from the Minister if the action has, or will have, or is likely to have, a significant impact on a MNES or Commonwealth land.

2: Commonwealth of Australia 2019, Working Together Managing Commonwealth Heritage Places, A Guide for Commonwealth Agencies, p.6. in GML Heritage report.

2.2.3 National Capital Plan

The National Capital Plan (NCP) forms the strategic planning framework for Canberra and the ACT. In accordance with Section 10(1) of the Australian Capital Territory (Planning and Land Management) Act 1988 (Cwth), the NCP sets out detailed conditions for planning, design and development to ensure that 'Canberra and the Territory' are planned and developed in accordance with their national significance'.

The NCP specifies areas of land that have 'special characteristics of the National Capital' to be Designated Areas. The NCA has responsibility for determining detailed planning policy and the provision of Works Approval to ensure development is consistent with the NCP. Designated Areas are divided into a series of precincts, with detailed conditions of planning, design and development - Precinct Codes and General Codes - outlined for each precinct.

Commonwealth Avenue Bridge is located within the boundaries of the Lake Burley Griffin and Foreshores Precinct Code, and Commonwealth Avenue is identified as one of the main avenues of the Main Avenues and Approach Routes Precinct Code.³

Impacts on Heritage Values and Self Assessment Process

The NCA acts in accordance with the *EPBC Act* to ensure that it does not take any action that has, will have or is likely to have an adverse impact upon the identified heritage values (National and/or Commonwealth) of any place in its ownership or control. The NCA's established procedures and guidance for works proposals that take into account the heritage values of places included in the CHL and NHL are included in the NCA's Heritage Manual.

The Heritage Manual, which refers to the Significance Impact Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies, 2012 (prepared by the Department responsible for the *EPBC Act*) informs staff how to identify the nature of an impact on a place with Commonwealth Heritage values, using the guidelines as the basis of its self-assessment process to reach a view on whether the impact is significant, with an adverse impact on heritage values of a place and if an *EPBC Act* referral is needed. The Heritage Manual provides examples of how to reach judgements, and the importance of taking a cautious approach.⁴

The process for National Capital Authority Works Approval

As with all actions proposed for Commonwealth Heritage Places in Designated Areas, the NCA's consideration of proposals is based on the relevant provisions of the National Capital Plan. Primarily, the NCA is obliged to comply with the works approval process for development proposals in Designated Areas.

The proposed works to Commonwealth Avenue Bridge require Works Approval and a submission to the NCA.⁵

3: GML Heritage, Commonwealth Avenue Bridge Heritage Assessment, September 2020, p.3.

4: National Capital Authority Heritage Strategy, 2010-2013, in GML Heritage Memorandum, Commonwealth Avenue Bridge Handrail Upgrades - October 2016, pp.9-10.

5: Under the National Capital Plan, see NCA website. <https://www.nca.gov.au/planning/works-approval>

03 Historical Context

3.1 Historical Overview of Commonwealth Park

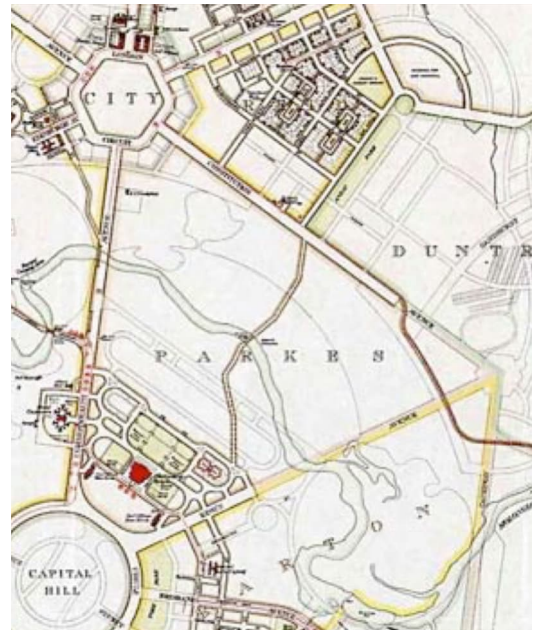
The history of the development of Commonwealth Park is outlined in the Canberra Central Parklands Heritage Management Plan, Prepared by Duncan Marshall, Dr Sandy Blair (Context Pty Ltd), Craig Burton, Alistair Grinbergs and Roslyn Russell for the National Capital Authority in 2009. Key historical plans, sourced from this document, are included for reference.



1918 Figure 4: Detail of Griffins' 1918 Plan as Gazetted in 1925.
Source: Reid 2002, p. 179.



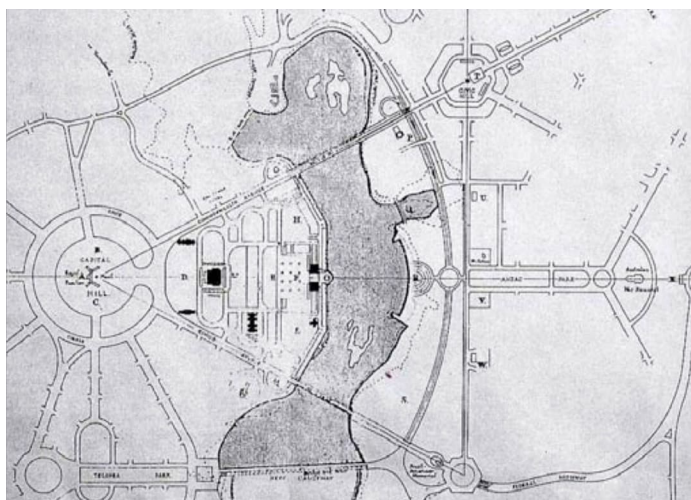
1945 Figure 5: Air photo of the Commonwealth Park area, 1945.
Source: Reproduced in Gray 1996.



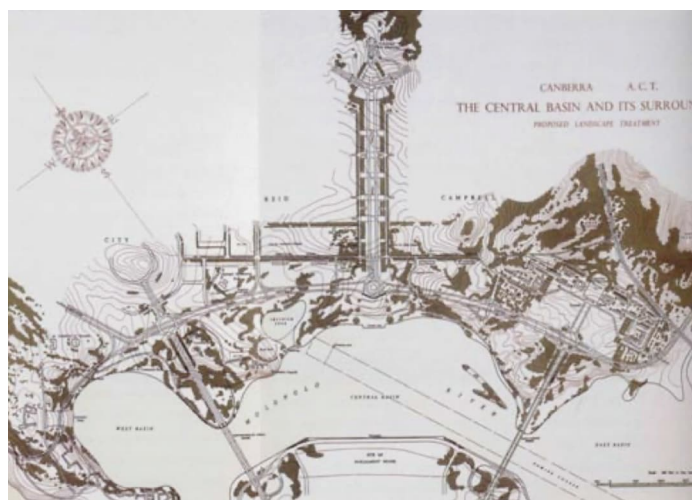
1933 Figure 7: Detail of 1933 Plan of Canberra showing extent of development.
Source: Detail of 1933 Map of Canberra prepared by the Property & Survey Branch of the Department of the Interior, National Library of Australia..



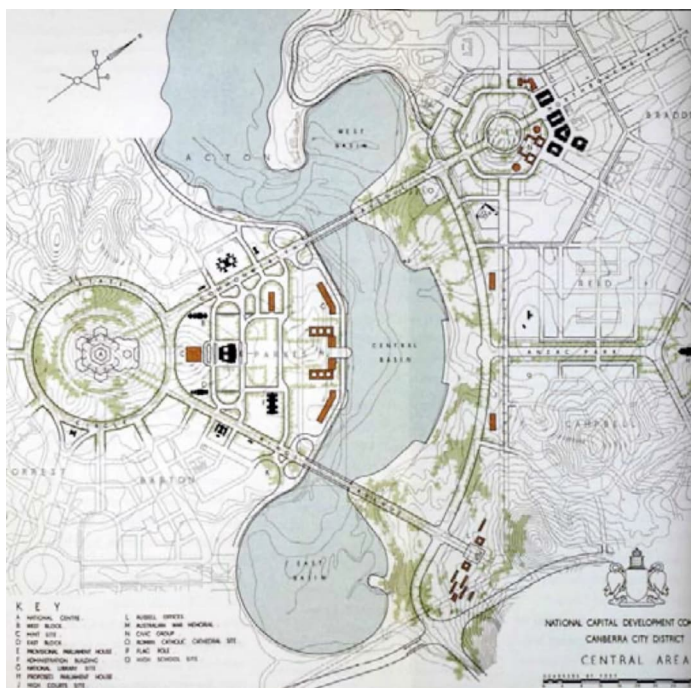
1949 Figure 6: Plan by Pryor for Commonwealth Park, 1949.
Source: Reproduced in Gray 1994.



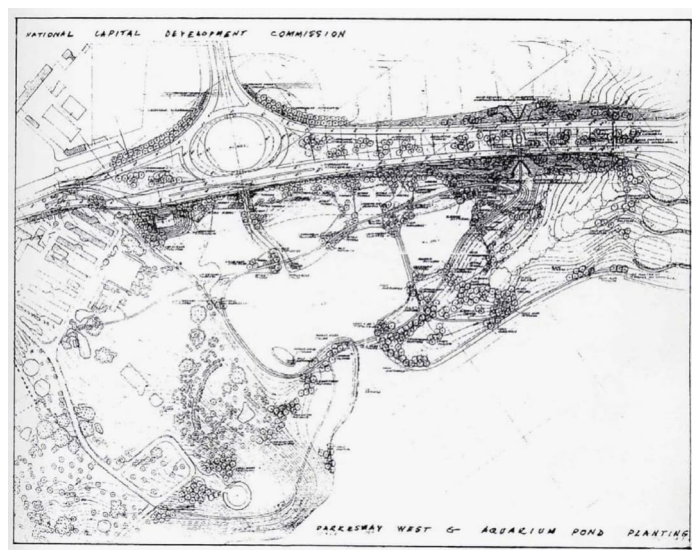
1957 Figure 8: Holford's Plan of 1957.
Source: Reid 2002, p. 240.



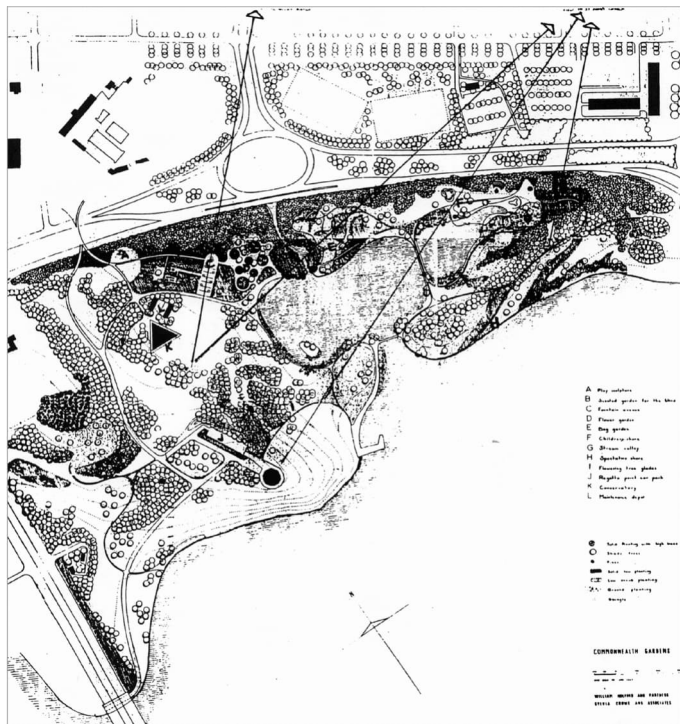
1961 Figure 9: NCDC Landscaping Plan of 1961.
Source: Reid 2002, p. 272.



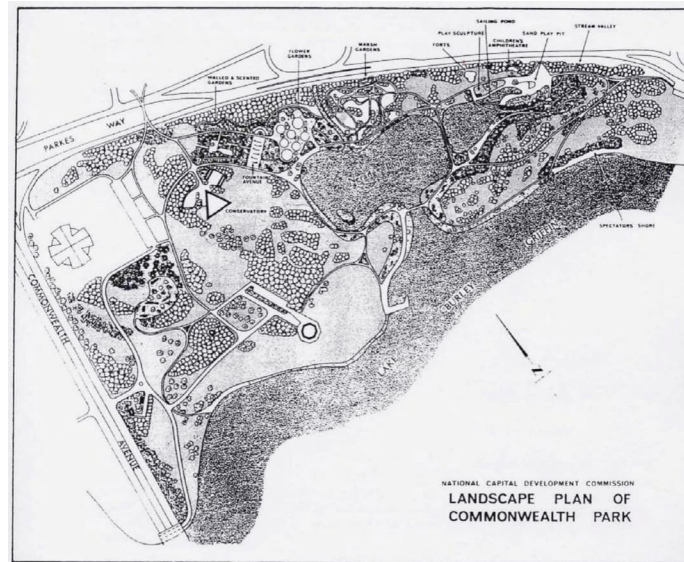
1959 Figure 11: NCDC Plan of 1959.
Source: Reid 2002, p. 264.



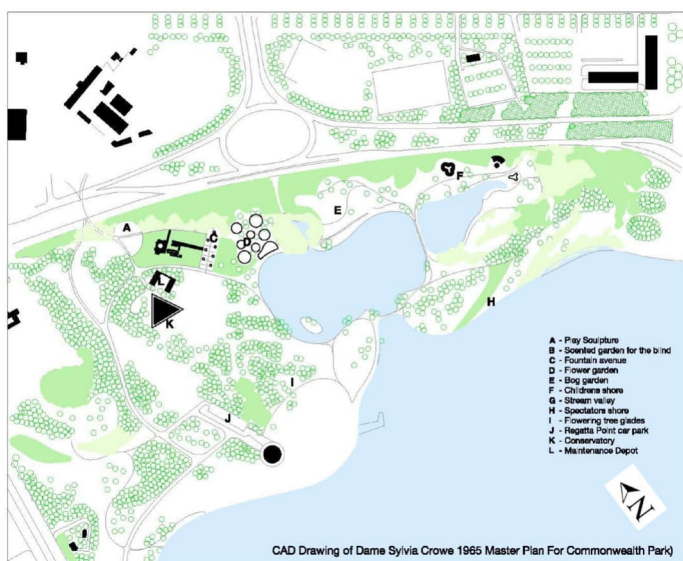
1963 Figure 10: Plan of Commonwealth Park by Clough for the NCDC, 1963.
Source: Gray 1994.



1965 Figure 12: Dame Sylvia Crowe's Plan for Commonwealth Park (Original).
Source: NCA.



1968 Figure 14: NCDC Plan for Commonwealth Park, 1968.
Source: Gray 1994.



1965 Figure 13: Dame Sylvia Crowe's Plan for Commonwealth Park (Modern Re-Drawing).
Source: NCA.

3.2 Historical Overview of the Commonwealth Avenue Bridge

The following historical chronology is based on the history contained in the Commonwealth Bridge Heritage Assessment prepared by GML Heritage in 2020, along with additional research.

YEAR	EVENT
Pre 1788	Home of the Ngunawal people.
Molonglo River Crossings	
	Scott's Crossing near Blundell's Cottage - low level ford only passable in dry weather.
1911	Lennox Crossing Bridge constructed.
1912	Commonwealth Avenue was an original element of Walter Burley Griffin's plan for the Federal Capital, forming the western edge of the National Triangle and providing a major organisational axis within the city, linking Capital and City Hills. Symbolically, Commonwealth Avenue was intended to represent the legal and political connection between Great Britain as the mother country and Australia as a member of its empire.
1913	Departmental Board Design for Canberra and Griffin Plan. ⁶
1916	First Commonwealth Avenue Bridge constructed with restricted funding. Timber trestle and beam bridge.
1920	Commonwealth Avenue one of first roads built under Griffin plan.
1922	Contract awarded for construction of timber bridge on Kings Avenue.
July 1922	Molonglo River flooded - Commonwealth Avenue Bridge damaged. Timber proposed for Kings Avenue Bridge diverted to construct bridge immediately south of Commonwealth Bridge known as Billabong Bridge. (Proposed timber Kings Avenue Bridge not constructed.)
October 1924	Second Commonwealth Avenue Bridge opened. More substantial, higher and with longer spans than before. Concrete piers and composite 'Leychester' trusses which incorporated steel in the lower chords.
May 1925	Torrential rains fell and rivers rose above 1922 level. The new bridges on Commonwealth Avenue (both the Billabong Bridge and the second Commonwealth Avenue Bridge) were damaged, and washaways occurred on the embankment and bridge approaches.
1926	Repairs carried out including raising roadway and bridge deck by almost a metre and adding a further truss span.
May 1927	Repairs completed.
1929	Scott's Crossing upgraded from a ford to a low level timber bridge with substantial concrete piers.
Planning of Bridges over Lake Burley Griffin	
1951	Remedial works carried out to Commonwealth Avenue Bridge.
1957	National Capital Development Commission established. Planning of lake commenced. Prime Minister Menzies invited the British architect, Sir William Holford, to advise on planning and aesthetic aspects of a modified version of the Griffin Plan (the gazetted 1925 Griffin Plan). His advice focused on the roads, bridges and landscape within the central and parliamentary areas, retaining the essential features of the Griffin Plan's parliamentary triangle flanked by Commonwealth and Kings Avenues.
	Hydrological studies and model testing was undertaken by the Department of Works before the location of the associated bridges was determined.
	National Capital Development Commission (NCDC) invited the London firm of engineering consultants, G. Maunsell and Partners to submit a bridge design for the Kings Avenue Bridge in association with architectural firm W. Holford and Partners.
October 1959	Construction contract awarded for Kings Avenue Bridge to the Australian civil engineering firm M.R Hornibrook Pty Ltd, under the supervision of the Commonwealth Department of Works.
February 1962	Kings Avenue Bridge completed.

6: GML Heritage, Commonwealth Avenue Bridge Heritage Assessment, 2020.

YEAR	EVENT
Bridge Construction, 1961–1963	
	G. Maunsell and Partners and W. Holford and Partners designed a second bridge, broadly similar but more prestigious in appearance, for the major ceremonial thoroughfare of Commonwealth Avenue whilst Kings Avenue Bridge under construction.
Construction Contract	
1960	Tenders called for the construction of the Commonwealth Avenue Bridge.
January 1961	Contract awarded to same contractor as for Kings Avenue Bridge - M.R Hornibrook Pty Ltd - in association with Henry J Kaiser of the USA.
1961-1963	Construction was supervised by the Commonwealth Department of Works, with Graeme Kelleher as the site supervising engineer.
	Inspection notes prepared for the National Association of Australia State Road Authorities (NAASRA)symposium on bridges held in Canberra in 1969 summarised below: <i>The construction of the twin structure for the bridge was carried out on the dry flat, located south of the diverted Molonglo River. Concrete for in situ casting of the piles, piers and abutments was ready mixed and delivered to the site in trucks. After the piers and abutments were cast, heavily braced timber falsework was erected on concrete pads along the length of the bridge, with variations in height to follow the curve of the underside of the bridge superstructure in preparation for the placement of precast box segments.</i> <i>For the precast box segments, a casting yard was established on the flat to the East of Pier 1 and across from the Billabong Bridge (near the current site of the National Library of Australia). The concrete used was mixed on site in an adjacent horizontal pan mixer and delivered to the casting yard in an automatic hopper mounted on a mono-rail. The box segments were cast in steel moulds on a prepared base in which the intricate reinforcement for each four-web box was placed. When hardened, the 50 ton concrete box segments were moved from the beds and erected on the timber falsework in three movements by two overhead gantries on rails, one of which spanned the casting yard and the other both bridge superstructures. One-hundred-and-two box segments were placed end-to-end. After erection and final adjustment of the box segments and completion of the in situ pier diaphragms and anchor blocks, the box segments were jointed and each span was partially stressed, starting from the north end.</i> <i>Final stressing was then carried out using 80 full-length high tensile steel tendons 28mm in diameter. Loads of 64 tonnes were simultaneously applied at the end of each tendon. This was at that time the longest single length of tendon that had been stressed. Further details of the stressing are provided in Appendix B.</i> <i>On completion of the stressing, the false work was disassembled, the protective concrete around the cables was poured, and the cantilevered footways and road kerbs were constructed. The handrails, parapet lighting, pipe lines and exposed aggregate panels were then placed and bituminous hot mix laid on the bridge decking.</i> <i>The timber trestles forming the falsework were removed in March 1963, allowing the river to be diverted under the new bridge and earthworks to proceed on the northern approach.</i>

YEAR	EVENT
Completion and Opening	
August 1963	Eastern carriageway opened to traffic.
Nov 1963	Western carriageway opened to traffic.
February 1964	Granite blocks from London's historic Waterloo Bridge were placed on the abutments at either end of the bridge.
17 Oct 1964	Prime Minister Sir Robert Menzies described the bridge as 'the finest building in the National Capital' at the inauguration of Lake Burley Griffin at the lakeside adjacent to the bridge.
Subsequent Changes to the Bridge	
1960s	Number of accidents where cars mounted the kerb on the bridge, crossed the footway and hit or broke through the handrail. Public pressure for increased safety.
1970	Crash rails about a third of the height of the aluminium hand rails were installed.
	Captain Cook Memorial Jet installed near bridge.
1998	Barriers installed immediately above the heavier tubular crash rails on eastern side of bridge (not on western side).
2017	After much lobbying by Pedal Power, an ACT cycling organisation, a temporary additional rail was made to the northbound bridge.
	Cycleway on western bridge widened by narrowing the roadway. Base of safety rails moved. Pathway construction insitu on eastern side and precast on western side. Cycleway on eastern side has also been widened at a different time.
9 Nov 1965	RG Menzies Walk opened - 4.5km walk along northern side of lake.
April 2018	Henry Rolland Park opened on the waterfront of Acton.
	Australians of the year walk opened.

04 Site and Fabric Assessment

4.1 Site Context

Commonwealth Avenue, Kings Avenue and Constitution Avenue form the three major axes of the National Triangle a core structural component of the Walter Burley Griffin plan for Canberra. Each avenue provides a direct link between key functional zones of Canberra, including Capital Hill (the Parliamentary precinct), City Hill (the Civic precinct) and Russell (the Defence precinct)

Commonwealth Avenue is the western axis of the National Triangle and Commonwealth Avenue Bridge (the Project site) is one of two major crossings over Lake Burley Griffin. Commonwealth Avenue Bridge provides a critical transport link across the lake for motor vehicles, cyclists and pedestrians with connections into the Lake Burley Griffin Circuit and lakeside recreational activities. The Bridge also offers expansive and spectacular views of the city, its heritage and cultural institutions and the surrounding mountain ranges.

Henry Rolland Park and Commonwealth Park straddle the northern approach to the Bridge whilst the southern approach is dominated by the Flynn Drive entry and exit ramps and open space.

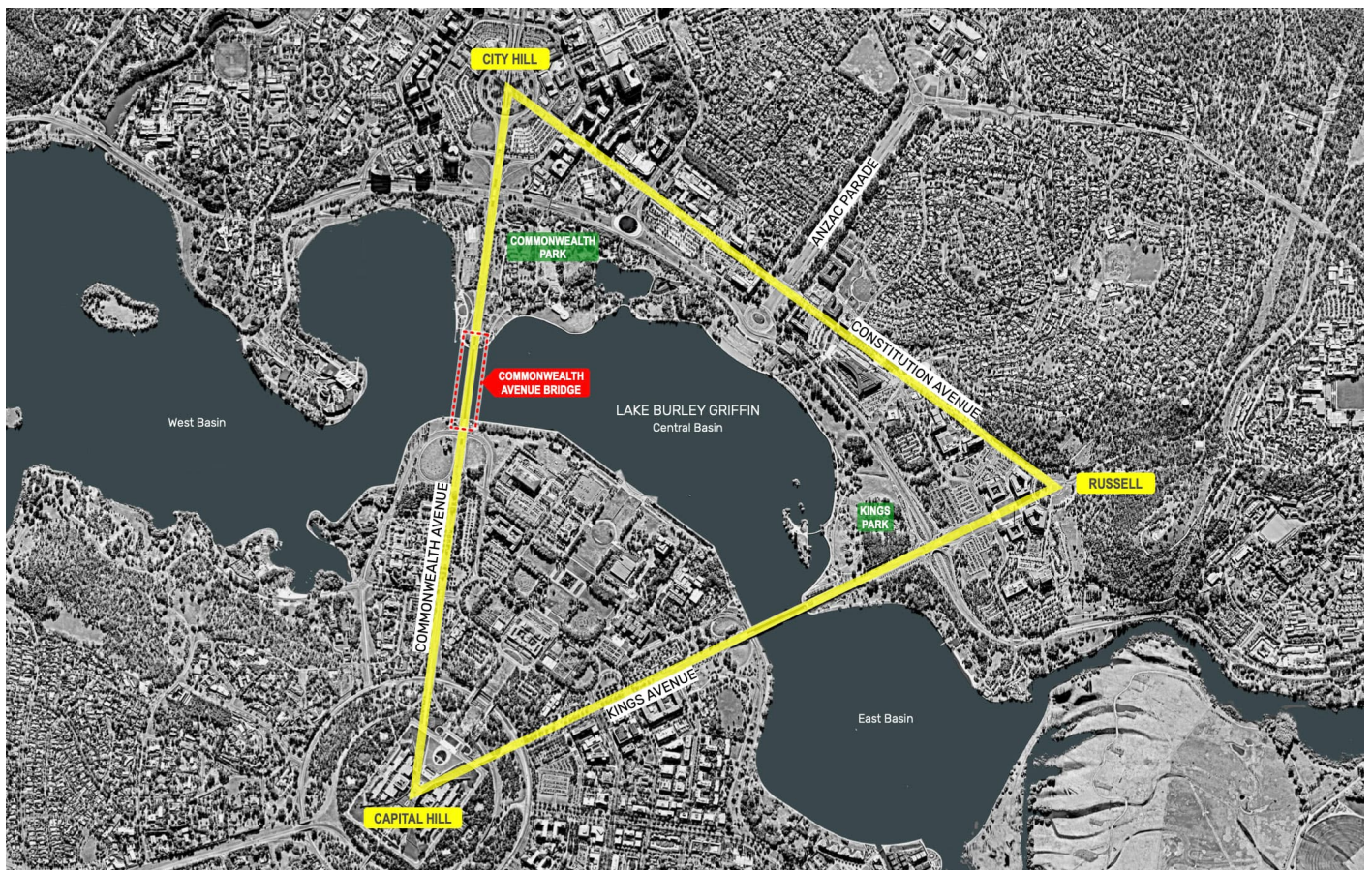


Figure 15: Location Plan showing Commonwealth Avenue Bridge in red and the National Triangle in yellow.

Source: SMM and TZG with SWC for Australian Government, National Capital Authority, 90% Detailed Design Report, Commonwealth Avenue Bridge Renewal Project, Rev B, September 2025.

4.2 Physical Description of Commonwealth Avenue Bridge

The Commonwealth Avenue Bridge is described in the *Commonwealth Avenue Bridge Heritage Assessment* prepared by GML Heritage in 2020, along with visual inspections conducted by the project team on September 16 and October 19, 2022.

Commonwealth Avenue Bridge forms a graceful low sweeping arch over Lake Burley Griffin. It is an integral part of the Commonwealth Avenue roadway (and broader National Land road network within central Canberra), and the unobstructed ceremonial entrance from central Canberra to the Parliamentary Zone and Parliament House. It is formed by two parallel reinforced concrete structures, separated by 10 metres to visually continue the avenue median.

Slender reinforced concrete piers that support each span are fixed rigidly on piled foundations. The superstructure is then supported on roller bearings at the top of each pier but fixed at the south abutment so that expansion movement is taken up at the north abutment. The height of the bearings was adjustable within limits to provide even support on each pier while following the curve of the superstructure.

The abutments are of massive box-like construction, supporting the ends of the bridge, the start of the roadway and associated earthworks. The two sides of each abutment are connected by a central terrace area reached by broad stairs from the underpass walkway and allowing service access to the end spans and services.

While the main bridge structure is formed with precast multi-webbed box segments, cantilevered footpaths incorporate handrails of anodized aluminium which include continuous strip lighting for the roadway and footpaths. The exposed aggregate panels which enclose the outer cells of the box girder are illuminated on the outer side of each bridge by continuous strip lighting concealed beneath the outer footway.

Art Deco pylons at each end of the bridge emphasise its importance while also being functional. Engineering services are carried through the hollow cross-section of the bridge, allowing clean lines when viewed from all directions, consistent with the high standard of precision and finish that was achieved during construction and maintained over its life.

The lines of the bridge are continued at the southern end to allow Flynn Drive to pass under Commonwealth Avenue as a cloverleaf for entering and exiting traffic. While appearing as part of the bridge, the overpass consists of four short, simply supported spans of precast pre-tensioned inverted 'T girders' placed in contact side. The reinforced concrete decks were poured in situ on top of precast girders. Piers are on each side of the Flynn Drive roadway and in the median.⁷

Condition and Integrity

The NCA conducts an ongoing capital works program, which involves replacing and upgrading assets on National Land under its management control. Assets are replaced and maintained in a manner fitting with their 'national significance'. 19 Framing the western flank of the Parliament House Vista, Commonwealth Avenue Bridge has both heritage and national significance and, due to the increased demand and associated safety issues, is one of the NCA's highest priorities for upgrade.

The NCA has undertaken a number of investigations into the condition of Commonwealth Avenue Bridge due to its age and the changes in bridge design standards since its completion. Commonwealth Avenue Bridge now requires upgrades to meet contemporary standards for bridge strength, safety barriers, lane widths, and safety improvements for pedestrians and cyclists with increases to path widths.

Overall, the integrity of the bridge is high with some safety alterations since construction including the addition of kerbside crash barriers, cyclist safety rails and narrowing of the roadway to increase the width of the cycleway.⁸

7: GML Heritage, Commonwealth Avenue Bridge Heritage Assessment, 2020, p.19-20.

8: GML Heritage, Commonwealth Avenue Bridge Heritage Assessment, 2020, p.25.



Figure 16: View from Barrine Drive looking south.



Figure 17: View from embankment between bridges towards Parliament House.

Refer to **Appendix A** for additional photographs of the Commonwealth Avenue Bridge and the adjacent foreshore.

05 Heritage Significance

5.1 Aboriginal Cultural Heritage Significance

The following assessment has been extracted from the Aboriginal Cultural Heritage Assessment prepared by Navin Office Heritage Consultants, which reads as follows:

A range of archaeological and historical data was reviewed for the project study area and its surrounds. This literature and data review was used to determine if known Aboriginal sites were located within the area under investigation, to facilitate site prediction on the basis of known regional and local site patterns, and to place the area within an archaeological and heritage management context. A site survey was undertaken by Navin Officer Heritage Consultants (NOHC) staff on 6 April 2023 (Nicola Hayes). This involved a walk over of the area proposed to be impacted by the project.

The project study area was highly modified during the construction of Lake Burley Griffin in the 1960s. A peninsular was created the northern section to carry the bridge over the lake. The project study area is devoid of any natural vegetation and consists of landscape plantings of introduced species. The area is dominated by infrastructure including pathways and the current Commonwealth Avenue Bridge infrastructure.

The Aboriginal people of the Canberra region continue to hold strong association with the area and take an active role in retaining their connection to their traditional lands.

RPS have prepared an assessment for the Canberra Light Rail Stage 2 (City to Woden) project (RPS 2018). The assessments included the following Aboriginal cultural sites and values:

- The Molonglo River Landscape which is now inundated with Lake Burley Griffin was identified as being of cultural significance and likely to contain Aboriginal sites.

A heritage assessment for Commonwealth Avenue bridge was

completed by GML Heritage in September 2020 (GML Heritage Services 2020). The assessment included consultation with the Representative Aboriginal Organisations. The following was summarised in the report:

- Wally Bell noted that the Canberra CBD areas, Acton and Western Basin, Commonwealth Park and all of the surrounding landscape were well known for having been occupied by Ngunnawal people prior to the arrival of colonial settlers... The crossing point over the Molonglo River in the nearby area was from the end of Acton Peninsula which provided access to the major ceremonial and meeting site at the current Australian Parliament House.
- Paul House: Commonwealth Avenue Bridge is located within part of the broader Kamberri/Ngambri cultural landscape... Cultural values associated with the general area around Commonwealth Avenue Bridge are long-term spiritual values associated with the landscape Paul stated that 'the spirits are in the land, they were there long before us and will continue to be there long after us'.

No Aboriginal sites have been identified within the Commonwealth Avenue Bridge project study area. Aboriginal objects have been collected from the areas surrounding the project study area, however the project study area has been highly modified meaning that the likelihood of there being any Aboriginal sites or objects within the project study area is very low.⁹

The report also contained the following recommendations:

- There are no Aboriginal archaeological heritage constraints to the project. The unanticipated discovery protocols outlined in Appendix 1 should be implemented for this project.
- The Aboriginal cultural values of the project areas should continue to be ascertained and documented through consultation on the draft of this document.
- A copy of this report should be provided to the relevant determining authority in the NCA for their review and comment.

9: Navin Officer Heritage Consultants, Aboriginal Cultural Heritage Assessment, Commonwealth Bridge, May 2023.

5.2 Matters of National Environmental Significance (MNES)

The following table identifies the Matters of National Environmental Significance as set out in the *Significant Impact Guidelines 1.1* under the *Environment Protection and Biodiversity Conservation Act 1999*.

MNES	No. in the vicinity of the site (1km buffer)
World Heritage Properties	None
National Heritage Properties	4
Wetlands of International Importance	None
Great Barrier Reef Marine Park	None
Commonwealth Marine Park	None
Listed Threatened Ecological Communities	None
Listed Threatened Species	None
Listed Migratory Species	None

The EPBC Protected Matters Report also identified other matters protected by the EPBC Act as follows (within a 1km buffer of the subject site):

Other Protected Matters	No. in the vicinity of the site (1km buffer)
Commonwealth Land	None
Commonwealth Heritage Places	10+
Listed Marine Species	None
Whales and Other Cetaceans	None
Critical Habitats	None
Commonwealth Reserves Terrestrial	None
Australian Marine Parks	None

5.2.1 Heritage Places in the Vicinity

The following table and diagram overleaf summarises heritage places, of varying levels of significance, in the vicinity of the Commonwealth Avenue Bridge.

Heritage Place	Heritage Status		
	NHL	CHL	ACT HR
Australian War Memorial and the Memorial Parade.	105889		
High Court - National Gallery Precinct.	105745	105557	
Old Parliament House and Curtilage.	105774	105318	
Australian Academy of Science Building.	105741		
Parliament House Vista		105466	
Lake Burley Griffin and Adjacent Lands		105230	
National Library of Australia and surrounds.		105470	
National Gallery		105558	
John Gorton Building.		105472	
National Rose Gardens.		105473	439
Old Parliament House Gardens.		105616	
Acton Peninsula Buildings.		Various	
University House and gardens.		105190	
Albert Hall			429
Hotel Canberra			437
National Rose Gardens			439
Lennox House			447
Captain Cook Water Jet			Nom.

Refer to **Appendix B** for a detailed list of heritage items within the vicinity of the study area.

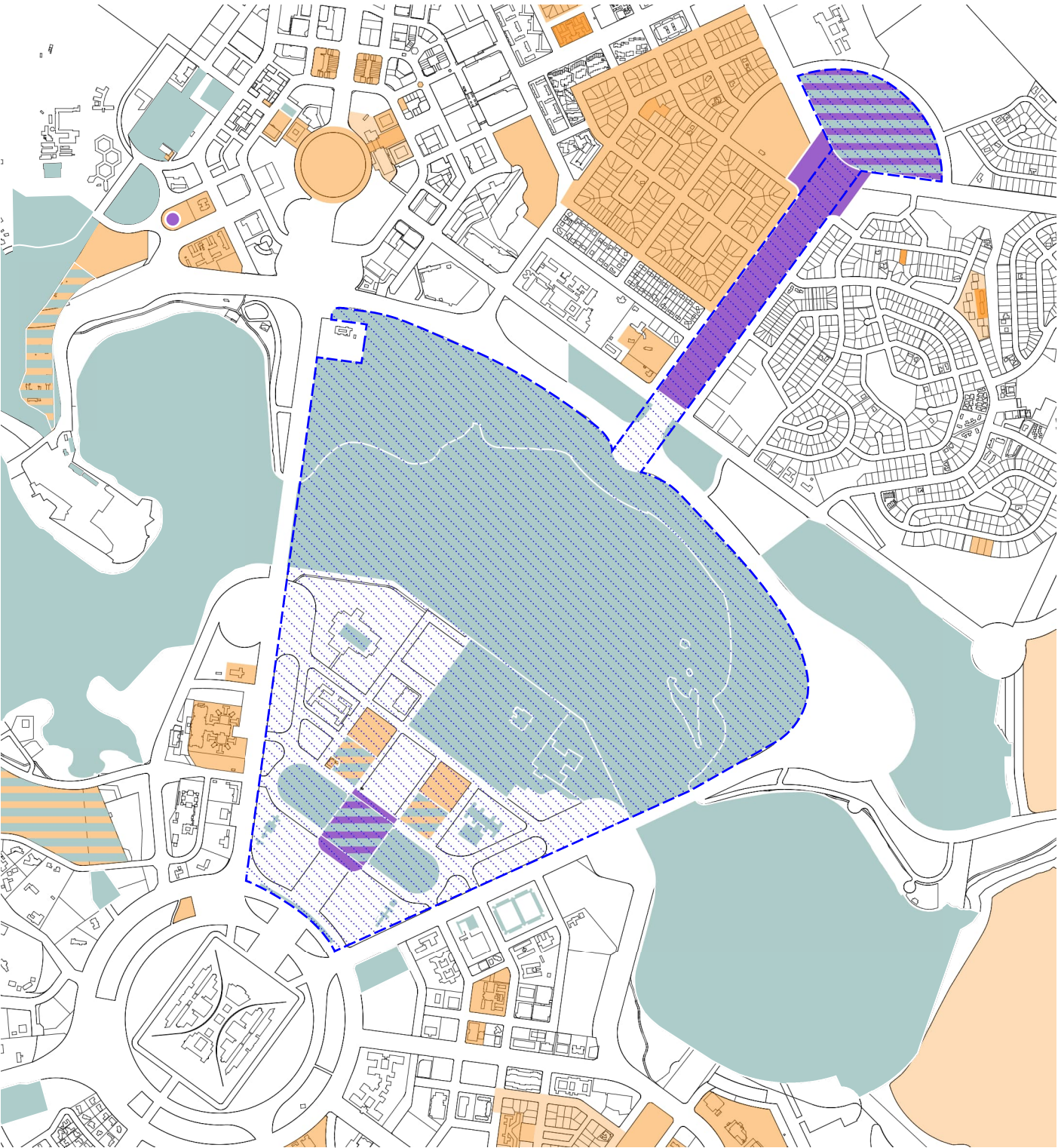


Figure 18: Heritage Listing summary diagram.

Source: TZG Architects, 2022.

Legend

- National Heritage List
- ACT Heritage Register
- Commonwealth Heritage List
- Commonwealth Heritage List Parliament House Vista

5.3 Heritage Values and Attributes

5.3.1 Lake Burley Griffin and Adjacent Lands

Commonwealth Heritage List, Place ID 105230

Lake Burley Griffin and Adjacent Lands is listed on the Commonwealth Heritage List and includes the Commonwealth Avenue Bridge, which lies within the curtilage of this listing.

In 2009, a Heritage Management Plan for the study area was prepared by GML Heritage which contained a summary of the heritage values relevant to the Commonwealth Avenue Bridge, as follows:

Lake Burley Griffin and all its components and places, including foreshore plantings, reflective qualities, activities on the lake, lakeside vegetation, natural habitat areas, relationship to views and vistas of surrounding lands, particularly Mount Ainslie, Black Mountain and the Parliament House Vista, the dam, bridges, islands, relationships to the land axis, the designed foreshore parklands and important foreshore developments, meet the threshold for Commonwealth and National Heritage value.¹⁰

As part of the significance assessment for the Lake Burley Griffin and Adjacent Lands HMP the Commonwealth Avenue Bridge was found to contribute to the assessment of the Lake against criteria A, B, C, E, F, G, H for Commonwealth Heritage Value.

Significant attributes of Commonwealth Avenue Bridge include the elegant, designed form of the bridge, including its slim octagonal piers, spaced to provide views to West Basin, aluminium railings with strip lighting, the white colour of the precast concrete and the Waterloo Bridge stones. The bridge provides some of the most important views of Lake Burley Griffin, including surrounding near and distant topography, to both pedestrians and motorists.¹¹

The bridge was also identified in the heritage assessment as an important element of Lake Burley Griffin as follows:

Elements of creative and technical excellence constructed as part of Lake Burley Griffin include Scrivener Dam, Commonwealth Avenue Bridge and Kings Avenue Bridge, the Carillion, the Captain Cook Water Jet, Commonwealth Park, the islands and the lake's retaining walls.¹²

The success and accuracy of the construction of the lake dam and the aesthetic qualities of the bridge are crucial to producing the image of Canberra as a highly sophisticated national capital - the equal of its international counterparts.¹³

The Commonwealth Heritage Listing for Lake Burley Griffin and Adjacent Lands is contained in **Appendix B**.



10: GML Heritage, Lake Burley Griffin Heritage Management Plan, Vol1, p.5.

11: The views from Commonwealth Avenue Bridge are mapped in Figure 8.15 in the GML, June 2007, Lake Burley Griffin Heritage Assessment.

12: GML Heritage, Lake Burley Griffin Heritage Assessment, 2009, p.111.

13: Ibid, p.153.

5.3.2 Parliament House Vista

Commonwealth Heritage List, Place ID 105466

Parliament House Vista has been included on the Commonwealth Heritage List since June 22, 2004. It comprises the area bounded by the northern alignment of State Circle, the western alignment of Kings Park, the southern alignment of Parkes Way and the eastern alignment of Commonwealth Avenue.

The Commonwealth Avenue Bridge is located outside of the Parliament House Vista area however, it plays an important role in defining the eastern boundary.

The heritage values and attributes of the Parliament House Vista with any relevance or associations with Commonwealth Avenue Bridge have been extracted from the Commonwealth Heritage Listing, as follows:

Criterion (e): Aesthetic Characteristics

The place has high aesthetic significance due to the visual impact of the extensive open sweeping vista along the land axis that can be experienced in two directions, the designed axes set within natural features of forested hills, patterns and textures of architectural massing accentuated by planned open spaces, water planes and tree plantings that are arranged across the area. The vista is significant for its visual drama with its ability to engage viewers in the visual perspective of the sweeping vista to the terminal features. The aesthetic significance is also a result of the large scale qualities of the axes, including the open green spaces, combined with patterns and symmetrical characteristics of the road networks and numerous designed smaller attributes. These include the rose gardens, the Old Parliament House Gardens, Commonwealth Park, the street tree plantings, the lake-land interface and the Sculpture Garden of the National Gallery, and many intimate spaces rich in texture, colour, fragrance and in some cases, art works and water features.

Attributes

The extensive vista along the land axis, the forested hills, patterns and textures of architectural massing accentuated by planned open spaces, water features and tree plantings, art works, the terminal features plus the interplay of scale and texture in the designed landscape.

Criterion (f): Technical Achievement

The Parliament House Vista is the central designed landscape of Canberra, that expresses the core of the Walter Burley Griffin design vision for Canberra. It is highly significant for its symbolic representation of the democratic interchange between the people and their elected representatives and its use of the natural landforms to generate a strong planning geometry. It expresses a masterly synthesis and ordering of topographical features and administrative functions to meet the needs of a national capital. The vista landscape embraces the central land axis and part of the water axis and most of the Parliamentary Triangle including the area known as the Parliamentary Zone. The significance incorporates Walter Burley Griffin's vision for the area, as the focus of Commonwealth parliamentary and governmental activity as well as national cultural life... Despite being modified to a lesser degree to accommodate the impact of wars on Australians, the Vista now presents as a philosophical concept expressed in urban planning, landscape and architecture, to achieve a grand vision of a symbolic, unified and visually dramatic place.

Attributes

The whole of the vista, including all elements and features contained within it, as well as the natural wooded hills beyond.

Criterion (h): Significant People

The central national area has a special association with its designer, Walter Burley Griffin. Griffin is an important figure in Australia's cultural history for his overall design of Canberra as the Nation's Capital. The special association between the central national area and Griffin results from the area being the centrepiece of the planning geometry for Canberra and perhaps the only part of his Canberra plan to survive relatively intact. The area has a strong association with Marion Mahoney Griffin who prepared the perspective drawings of the Vista. The Vista area has a strong association with numerous architects and planners, in particular John Smith Murdoch, Chief architect of the Commonwealth Government, and Thomas Charles Weston, Superintendent of Parks, Gardens and Afforestation in Canberra, and notable planners of the National Capital Development Commission such as Sir John Overall, Peter Harrison and Paul Reid.

Attributes

The whole of the vista, its planned layout, and the view from the top of Mount Ainslie which illustrates the realisation of Marion Mahoney Griffin's perspective drawing.

The Commonwealth Heritage Listing for the Parliament House Vista is contained in **Appendix B**.

5.3.2 Parliament House Vista

Commonwealth Heritage List, Place ID 105466

Parliament House Vista has been included on the Commonwealth Heritage List since June 22, 2004. It comprises the area bounded by the northern alignment of State Circle, the western alignment of Kings Park, the southern alignment of Parkes Way and the eastern alignment of Commonwealth Avenue.

The Commonwealth Avenue Bridge is located outside of the Parliament House Vista area however, it plays an important role in defining the eastern boundary.

The heritage values and attributes of the Parliament House Vista with any relevance or associations with Commonwealth Avenue Bridge have been extracted from the Commonwealth Heritage Listing, as follows:

Criterion (e): Aesthetic Characteristics

The place has high aesthetic significance due to the visual impact of the extensive open sweeping vista along the land axis that can be experienced in two directions, the designed axes set within natural features of forested hills, patterns and textures of architectural massing accentuated by planned open spaces, water planes and tree plantings that are arranged across the area. The vista is significant for its visual drama with its ability to engage viewers in the visual perspective of the sweeping vista to the terminal features. The aesthetic significance is also a result of the large scale qualities of the axes, including the open green spaces, combined with patterns and symmetrical characteristics of the road networks and numerous designed smaller attributes. These include the rose gardens, the Old Parliament House Gardens, Commonwealth Park, the street tree plantings, the lake-land interface and the Sculpture Garden of the National Gallery, and many intimate spaces rich in texture, colour, fragrance and in some cases, art works and water features.

Attributes

The extensive vista along the land axis, the forested hills, patterns and textures of architectural massing accentuated by planned open spaces, water features and tree plantings, art works, the terminal features plus the interplay of scale and texture in the designed landscape.

Criterion (f): Technical Achievement

The Parliament House Vista is the central designed landscape of Canberra, that expresses the core of the Walter Burley Griffin design vision for Canberra. It is highly significant for its symbolic representation of the democratic interchange between the people and their elected representatives and its use of the natural landforms to generate a strong planning geometry. It expresses a masterly synthesis and ordering of topographical features and administrative functions to meet the needs of a national capital. The vista landscape embraces the central land axis and part of the water axis and most of the Parliamentary Triangle including the area known as the Parliamentary Zone. The significance incorporates Walter Burley Griffin's vision for the area, as the focus of Commonwealth parliamentary and governmental activity as well as national cultural life... Despite being modified to a lesser degree to accommodate the impact of wars on Australians, the Vista now presents as a philosophical concept expressed in urban planning, landscape and architecture, to achieve a grand vision of a symbolic, unified and visually dramatic place.

Attributes

The whole of the vista, including all elements and features contained within it, as well as the natural wooded hills beyond.

Criterion (h): Significant People

The central national area has a special association with its designer, Walter Burley Griffin. Griffin is an important figure in Australia's cultural history for his overall design of Canberra as the Nation's Capital. The special association between the central national area and Griffin results from the area being the centrepiece of the planning geometry for Canberra and perhaps the only part of his Canberra plan to survive relatively intact. The area has a strong association with Marion Mahoney Griffin who prepared the perspective drawings of the Vista. The Vista area has a strong association with numerous architects and planners, in particular John Smith Murdoch, Chief architect of the Commonwealth Government, and Thomas Charles Weston, Superintendent of Parks, Gardens and Afforestation in Canberra, and notable planners of the National Capital Development Commission such as Sir John Overall, Peter Harrison and Paul Reid.

Attributes

The whole of the vista, its planned layout, and the view from the top of Mount Ainslie which illustrates the realisation of Marion Mahoney Griffin's perspective drawing.

The Commonwealth Heritage Listing for the Parliament House Vista is contained in **Appendix B**.

5.3.3 Commonwealth Avenue Bridge Heritage Assessment

The heritage assessment prepared by GML Heritage in 2020 determined that the Commonwealth Avenue Bridge met eight of the nine criteria for Commonwealth Heritage Values and recommended the Bridge was eligible for nomination and inclusion on the Commonwealth Heritage List.

The Heritage Assessment, however, did not result in the listing of the Commonwealth Avenue Bridge.

The Summary Statement of Significance contained in the GML Heritage Assessment states:

Commonwealth Avenue Bridge is a place of Commonwealth Heritage value.

The assessment in Section 5.3 determines that Commonwealth Avenue Bridge meets criteria (a) historic processes, (b) rarity, (c) research potential, (d) characteristic, (e) aesthetic, (f) creative or technical achievement, (g) social and (h) significant people, and is eligible for nomination and inclusion in the CHL. In meeting eight of the nine criteria, the bridge is an individual element of heritage significance. It is also an integral component of the broader designed landscape setting of the Central National Area.

Commonwealth Avenue Bridge is historically significant for its development by the NCDC as part of the Lake Burley Griffin Scheme and represents a significant part of Canberra's planning history, landscape design and development.

The bridge is representative of early development of major segmented and prestressed concrete bridges in Australia, and of a class of design in modern bridges characterised by long slender spans, and a 'smooth-lined' and 'uncluttered' approach.

Commonwealth Avenue Bridge is a rare example in Australia of a precast, post-tensioned, concrete bridge, embodying multi-web box segments. The bridge is rare for its design to have a symbolic pride of place in the national capital as part of the Lake Burley Griffin Scheme and for the integration of lighting within the handrail and parapet of the bridge in terms of bridge design within Australia.

Commonwealth Avenue Bridge has heritage value as an example of the advancement of structural engineering and bridge construction in Australia, particularly in the shift in material from steel to prestressed concrete in major bridge construction, and in the early use of digital computing in the design and structural analysis of its post tensioned concrete superstructure.

Aesthetically, Commonwealth Avenue Bridge is highly valued by the Canberra community for its distinctive qualities and architectural design which complements the surrounding landscape setting of the designed lake and central area of Canberra. The elegant and simple design of the bridge is appreciated both as a feature in its own right and as part of the broader designed landscape of the Central Canberra. Commonwealth Avenue Bridge is also valued as a key element in Canberra's design and planning and its visually distinctive and iconic qualities. The views to and from the bridge, both during the day and night, are widely enjoyed and valued by the Canberra community.

Commonwealth Avenue Bridge demonstrates a high degree of creative and technical achievement in Canberra's building and development by the NCDC in the 1960s, and more generally in Australia's progress in the Post World War II period of innovation and optimism. It was the first prestressed concrete bridge to employ multi-webbed precast box segments and is a very early example of the use of digital computers in bridge design and to analyse, and compute the structure and stress, influencing the physical design.

Commonwealth Avenue Bridge is valued by the Canberra community as a key element within Canberra's designed landscape and planning, that supports movement around the city and brings the community together through public and private experiences. Commonwealth Avenue Bridge is an important landmark within Canberra and is a key part of the National Sorry Day march route.

Commonwealth Avenue Bridge is important for its association with the NCDC, and well-known international and national identities from the engineering and architecture profession of the time, including the engineering design firm G. Maunsell and Partners, the architectural firm W. Holford and Partners, and Australian construction firm, M.R Hornibrook Pty Ltd.

Commonwealth Avenue Bridge does not have Indigenous or natural heritage values.¹⁴

14: GML Heritage, Commonwealth Avenue Bridge - Heritage Assessment, September 2020, p.41.

5.4.1 Roads in National Land, Commonwealth Avenue Heritage Assessment, 2014

Commonwealth Avenue, the road which traverses the bridge, was assessed as part of the Certain Roads of National Land in Central Canberra Commonwealth Heritage Assessment in 2014.

The Heritage Assessment did not result in the listing of Commonwealth Avenue.

Summary of Significance

The Heritage Assessment concluded with the following summary of significance:

Commonwealth and Kings Avenues have a range of heritage values related to historical associations, rarity, research potential, as good examples of wide tree-lined avenues, for their creative achievement, and special associations with Griffin and Weston. Some of these values arise from the contribution of the avenues to a larger heritage place.

Commonwealth and Kings Avenues are significant as an integral and major part of Walter Burley Griffin's 1911 plan for the national capital of Australia, and their realisation is associated with the evolution of the cultural landscape of the nation's capital. This landscape has influenced subsequent city planning and road design in Canberra and through the high standards being set for urban road construction elsewhere in Australia.

The initial design of the national capital is a highly significant part of Australia's and Canberra's history. Commonwealth and Kings Avenues are two of the three major avenues designed to bound the National Triangle – the heart of the national capital – and two of the major axes for the organisation of the new city.

5.4 Historical Archaeology

The Commonwealth Bridge Heritage Assessment includes the following discussion regarding historical archaeology:

The main historical occupation events in the study area were associated with the open paddocks and rural land around Blundells Cottage. That site was largely undeveloped until the construction of Kings Avenue Bridge and the formation of Lake Burley Griffin. Areas closely associated with the bridge might contain ephemeral historical archaeological remains associated with its construction period. However, most of these areas are outside the study area, apart from the Kings Avenue embankment, where the construction of new stairs is proposed.

Zones of archaeological sensitivity close to Blundells Cottage may contain tangible evidence of the ways of life of the early occupants of the house. However, the substantial reshaping of the study area to the south and west of Blundells Cottage will have destroyed any archaeological remains relating to this historical period.

Other landscapes in the study area have also been modified to such a degree that it is unlikely that any historical archaeological remains survive.¹⁶

15: Duncan Marshall, Chris Betteridge, Navin Officer Heritage Consultants, Dr Warren Nicholls, Prof Robert Freestone and Dr Michael Pearson, Certain Roads of National Lands in Central Canberra, Commonwealth Heritage Assessment prepared for the National Capital Authority, 2014, pp.133-139.

16: GML Heritage, Commonwealth Avenue Bridge Heritage Assessment, 2020, p.25.

5.5 Natural Heritage Values

5.5.2 Lake Burley Griffin and Commonwealth Avenue Landscape

Commonwealth Avenue Bridge spans Lake Burley Griffin from north to south. Lake Burley Griffin is central to the designed landscape first conceived by Walter Burley Griffin and Marion Mahony Griffin in their 1911 design competition entry for Australia's federal capital. The shallow lake, which covers 664 hectares, is approximately 9 kilometres long and varies in width. The distance around the shoreline is 40.5 kilometres. The lake is a key component of the nation's designed, symbolic landscape within the central Canberra. It comprises several separate bodies of water, including East Basin, Central Basin, West Basin, West Lake, Tarcoola Reach and Yarramundi Reach, each distinct in its shape and form, lake edge treatments and uses.

Commonwealth Avenue Bridge forms an integral element of Commonwealth Avenue, a major thoroughfare linking northern and southern Canberra. It is one of three original and major components of the Griffin Plan, forming the western edge of the National Triangle. As a wide tree-lined avenue, it contributes the overall planning and landscape of Canberra with a number of significant commercial, government, educational, religious and entertainment-related buildings and memorials addressing it, such as the Captain Cook Memorial Jet, the Catholic Archbishop's Residence, the National Library of Australia, Albert Hall, the Hyatt Hotel Canberra and the high commissions of the United Kingdom, New Zealand and Canada.

5.5.1 Parliament House Vista

The Parliament House Vista is a place included in the CHL and expresses the core of the Griffin Plan—the design vision for Canberra by Walter Burley and Marion Mahony Griffin. The landscape of the vista embraces the central land axis and part of the water axis (Lake Burley Griffin), and most of the Parliamentary Zone and National Triangle. The vista combines urban planning, landscape and architecture, to achieve a grand vision of a symbolic, unified and visually dramatic place.

Parliament House Vista is considered important for its design pattern, with large landscape and waterscape spaces framed by treed avenues and, at the lake, bridges. The vista terminates at the Australian War Memorial and Mount Ainslie at its northern end, and Parliament House on Capital Hill at its southern end. However, while the Parliament House Vista's CHL boundary covers the Australian War Memorial, it does not include Mount Ainslie or Parliament House.

The Parliament House Vista is also distinctive for the generally symmetrical organisation of monumental buildings in the landscape, the large body of water of Lake Burley Griffin, and the parklands and gardens contribute to the landscape setting of the broader vista area.

5.6 Intangible Heritage

Intangible heritage refers to the 'invisible' elements of culture that imprint on the identity of groups but cannot be perceived by touch, and is experienced through customs, history and values. The Commonwealth Avenue Bridge holds many intrinsic and intangible heritage values that should be respected and celebrated, including historic associations, stories, memories and meanings.

The community held aesthetic and social values of the bridge were assessed by GML Heritage in May 2020. This assessment included community engagement in the form of an online survey, focus group workshops and targeted interviews. Further consultation with key stakeholders and the community is recommended as the design for the Commonwealth Avenue Bridge Renewal Project develops to ensure that these values are respected.

The site of the Commonwealth Avenue Bridge was occupied by Aboriginal people for thousands of years prior to European settlement. Particular intangible values would be relevant to Aboriginal peoples cultural history, experiences and spirituality. These intangible values would be determined through consultation with knowledge holders.

The lasting high esteem in which the Commonwealth Avenue Bridge is held is demonstrated by its selection as the subject matter for many iconic photographs of Canberra. These depictions evidence the intangible heritage values of the place that have been captured and celebrated over time.

Whilst the Commonwealth Avenue Bridge holds many intangible heritage values, it should be emphasised that many of these are inextricably linked to the form, function and location of the bridge. This particularly relates to the Bridge's significant setting and context - The Bridge spans Lake Burley Griffin, connects the City to the Parliamentary Triangle and defines the western edge of the heritage listed Parliament House Vista.

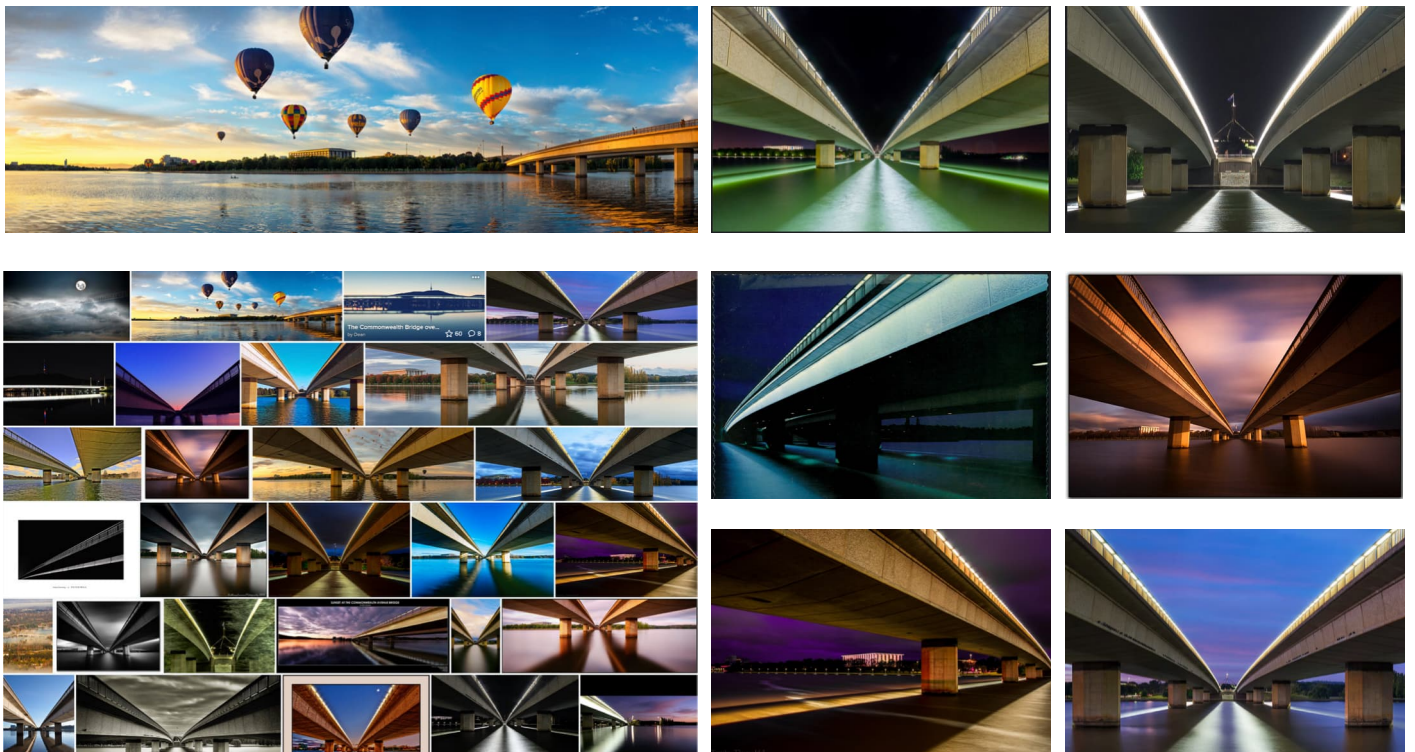


Figure 20: Photographs on Flickr evidencing the popularity of the Commonwealth Avenue Bridge as subject matter for iconic shots of Canberra.

Source: Flickr, <https://www.flickr.com/search/?text=%23Commonwealthbridge>

5.7 Conservation Policies

5.7.1 Lake Burley Griffin and Adjacent Lands - Heritage Management Plan

Volume 1 of the Heritage Management Plan contains General Conservation Policies for the Lake Burley Griffin and Adjacent Lands study area whilst Volume 4 focuses on the Dams and Bridges.

The Commonwealth Avenue Bridge is listed as a component within the Central Basin of the Lake Burley Griffin Study Area with the relevant conservation policies contained in the table below.

Refer to **Appendix C** for Volume 1 of the Heritage Management Plan: General Conservation Policies.

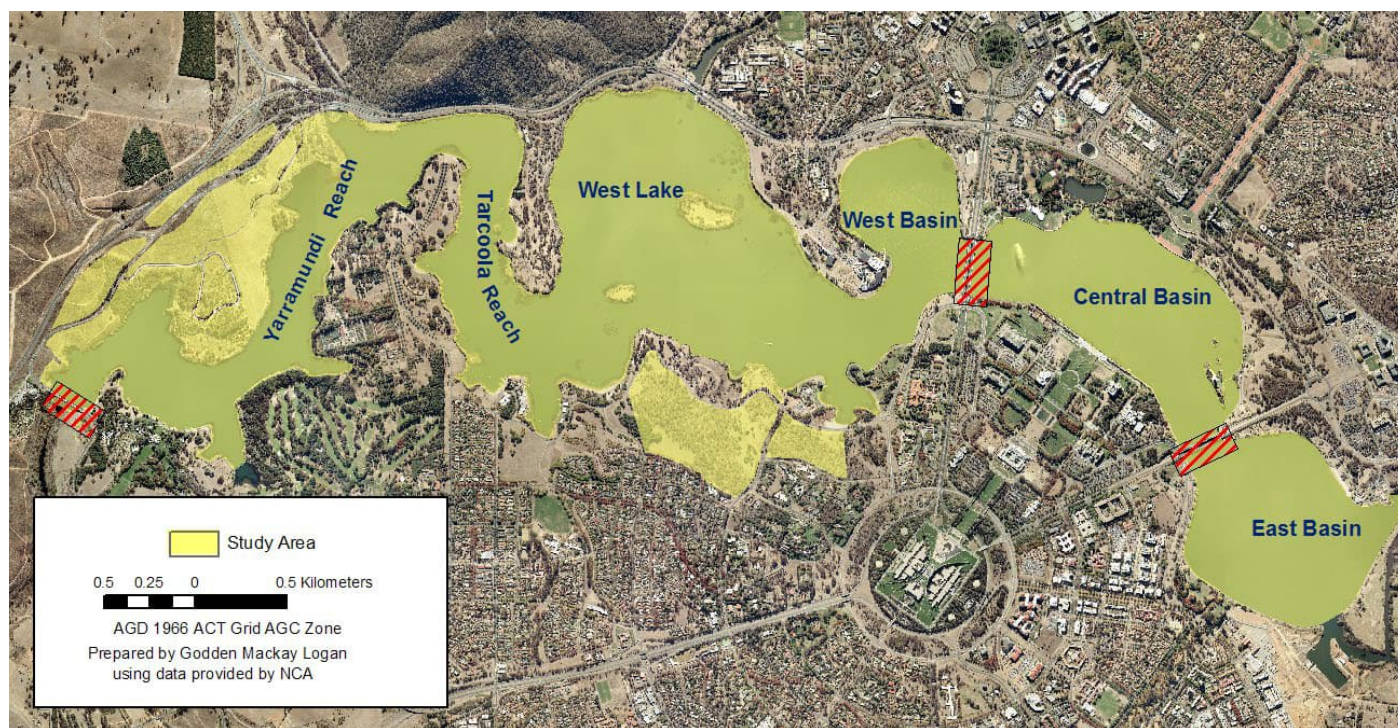


Figure 21: The Lake Burley Griffin Study Area with Scrivener Dam, Commonwealth and Kings Avenue bridge components hatched in red.

Source: GML, Lake Burley Griffin and Adjacent Lands Heritage Management Plan, Volume 4 - Dam and Bridges, Figure 1.1, p.4.

Policies	Actions
Component 2 - Commonwealth Avenue Bridge	
Heritage Conservation	
C2-1 Maintain the structural and design integrity of the bridge and its approaches, to ensure its long-term conservation as an integral aspect of the heritage values of the designed landscape of the Lake Burley Griffin study Area.	C2-1.1 Maintain the white colour of the concrete of the bridge—seek expert advice on appropriate cleaning methods/products for the concrete if require
	C2-1.2 Maintain strip lighting in the bridge railings in good working order
	C2-1.3 Maintain railings in good order to prevent cumulative degradation through corrosion—seek expert advice on appropriate cleaning methods/products for anodized aluminium to ensure cleaning does not inadvertently promote corrosion.
	C2-1.4 Undertake regular monitoring of the structural integrity of the bridge and the state of conservation of its component materials to identify areas where corrective or preventative action can be taken to delay degradation of materials.
	C2-1.5 Maintain good pedestrian and cycling access to the bridge, including good directional signage and links to pedestrian/cycling route
C2-2 Conserve and manage the significant views and vistas from the bridge to the surrounding landscape (see Figure 8.15 in the Heritage Assessment)	C2-2.1 Ensure that any new development within the visual catchment (defined in Figure 8.15 in the Heritage Assessment) of the bridge is assessed in terms of its potential for adverse impacts on the significant views from Commonwealth Avenue Bridge.
Interpretation	
C2-3 Interpret the heritage values of the bridge in the context of the Lake Burley Griffin Study Area.	C2-3.1 Determine appropriate locations on or near the bridge to install interpretive media. Use the bridge as a node for the location of low-key interpretive media
	C2-3.2 Deliver key messages about the heritage values of the bridge and its setting on Lake Burley Griffin, including the engineering values of the bridges and the lake and the history of their design and construction
	C2-3.3 Interpretation around Lake Burley Griffin should feature a consistent and distinctive graphic style to be integrated into an interpretive trail around the lake
Stakeholder Consultation and Involvement	
C2-4 Consult with stakeholder communities when change is proposed which might affect the heritage values.	C2-4.1 Seek the input of those involved in the design and construction of the dam and bridges in major decisions about their future management.
	C2-4.2 Undertake an oral history program to record the memories of those individuals involved in the design and construction of the dam and bridge

5.7.2 Parliament House Vista-
Heritage Management Plan

The two bridges, Commonwealth Avenue Bridge (1963) and Kings Avenue Bridge (1962), cross Lake Burley Griffin and define the symmetrical layout of the Parliamentary Triangle. The bridges are major structural features of the lake and also provide important vantage points for viewing the lake.¹⁸

Whilst the Commonwealth Avenue Bridge itself is technically outside the curtilage of the Parliament House Vista, the lakeside land at its base is included within the curtilage. The following table lists the relevant policies.

Refer to **Appendix C** for the detailed list of conservation policies.

#	Policy	Strategies
Landscape		
Policy 16	General conservation provisions for the landscape	16.3 Lombardy Poplar sentinels
		16.4 Trees at Commonwealth Place
Policy 17	Conservation provisions relating to specific components of the Parliament House Vista	17.1 Strengthening the evergreen framework plantings along main avenues
Built Elements		
Policy 33	Paths and paving	
Policy 34	Roads	
Setting		
Policy 42	Protection of the Setting	
Policy 43	Protection of views to and from the Area	
New Development		
Policy 49	General provisions relating to new development	
Policy 50	New landscaping, landscape structures and plantings	50.1 Commonwealth and Kings Parks additional plantings
Policy 59	Paths and paving	
Policy 60	Lighting	
Policy 61	Infrastructure	

17: GML Heritage, Lake Burley Griffin—Heritage Assessment—Final Report, October 2009, p.18.

06 The Proposal

6.1 Description of Proposed Action

In the EPBC Act, an 'action' is defined broadly and may include a project, a development, an undertaking, an activity or series of activities, or an alteration of any of these things. An action should be considered both at its broadest scope and all components of the action individually.

6.2 Rationale

The Commonwealth Avenue Bridge was designed in the late 1950s, built in the early 1960s and opened in November 1963. The Bridge is an elegant, slim line structure with modernist architectural design character.

The Bridge is a critical component of the transport network of Canberra and the Australian Capital Territory overall and forms a major link in Canberra's active transport network. The existing Bridge currently presents considerable limitations both at present and in the future including vehicle design load limitations, shared pedestrian and cycleway path width limitations and vehicle and shared path safety barrier design limitations.

The Commonwealth Avenue Bridge Renewal Project has been undertaken by the National Capital Authority to widen and strengthen the existing Bridge in order to increase its load bearing capacity to reflect current and forecast traffic load demands, upgrade vehicle and pedestrian safety barriers, and to accommodate wider shared pedestrian and cycleway paths.



Figure 22: Site plan showing extent of project boundary in red.

Source: SMM and TZG with SWC for Australian Government, National Capital Authority, 90% Detailed Design Report, Commonwealth Avenue Bridge Renewal Project, Rev B, September 2025, p.30.



6.3 Proposed Works

The current proposal includes the preferred options within the broad context up to the current 50% detailed design development.

The new network of paths aims to create a simplified, safer and more logical series of path alignments to assist users to easily navigate and enjoy their walk and/or cycle onto and off the bridge. These are divided into the four quadrants of the bridge approaches.



Figure 23: Commonwealth Avenue Bridge showing four major site approaches.

Source: SMM and TZG with SWC for Australian Government, National Capital Authority, 90% Detailed Design Report, Commonwealth Avenue Bridge Renewal Project, Rev B, September 2025, p.40.



6.3.1 Commonwealth Avenue Bridge Approaches

North Western Approach

Demolition

- Remove plinth around pylon down to the level of the bridge.
- Remove existing guard rail vehicle barrier along foreshore.
- Remove 2 off historic Waterloo Bridge stones for repositioning.

Alterations and additions

- Widen the existing shared path.
- New set of stairs which lead down to the embankment to Barrine Drive.
- Widened abutment creating a safer pathway around the existing bridge pylon including new cantilevered lookout over the lake with panoramic views of the National Museum of Australia and to the Brindabella Ranges in the distant.
- New terraced seating.
- Reduce the width of Barrine Drive in the undercroft space between the two bridges to create a larger foreshore pedestrian space.
- New large bench seating in undercroft space to act as slow speed barriers for vehicles.
- Install historic Waterloo Bridge stones on the foreshore centred beneath the two bridges.

North Eastern approach

Demolition

- Remove plinth around pylon down to the level of the bridge.
- Remove existing carpark.
- Remove existing tree adjacent the abutment.

Alterations and additions

- Realigned cycleway path network which separates pedestrian access from cyclists.
- Existing footpath widen and upgraded to provide a shared path connection.
- New shared path connections from Commonwealth Avenue to the Lake Burley Griffin foreshore shared path.
- New accessible footpath and stairs connection along the foreshore area including terraced bench seating integrated into the design of the stair.
- New stair along the abutment wall to Henry Rolland Park.
- Widened abutment creating a safer pathway around the existing bridge pylon including new cantilevered lookout over the lake.
- Barrine Drive is upgraded to a 'Shared Road' including a broad crossing area opposite the stairs and accessible footpath.
- Potential to provide accessible parking spaces, if required.
- New feature tree avenue along Barrine Drive.

South Western Approach

Demolition

- Remove plinth around pylon down to the level of the bridge.
- Remove existing narrow footpath.
- Remove 2 off historic Waterloo Bridge stones for repositioning.

Alterations and additions

- Widened abutment creating a safer pathway around the existing bridge pylon including new cantilevered lookout over the lake.
- Existing footpath widen and upgraded to provide a shared path connection. New accessible shared path ramp integrated into the existing landform.
- New planting along the embankments and shared path.
- New plaza space created at the intersection of the new shared path and the main foreshore including large bench seating.

South Eastern Approach

Demolition

- Remove plinth around pylon down to the level of the bridge
- Remove existing narrow footpaths.

Alterations and additions

- Widened abutment creating a safer pathway around the existing bridge pylon including new cantilevered lookout over the lake towards the National Capital Exhibition buildings and Mount Ainslie.
- New wide stairs to the avenue parallel to the lake edge.
- New accessible shared path.
- New retaining walls along the shared path ramp.
- New along the lake edge including seating, granite sett paving and formalised grove of trees.
- New widened footpaths aligned at angled intersections to improve pedestrian/cyclist safety.

The Proposal



Figure 24: General Plan - Northern approaches.

Source: SMM, CAB-SMM-UD-DRG-050011 - Rev. B, September 2025.



Figure 25: Plan - General Plan - Southern approaches.

Source: SMM, CAB-SMM-UD-DRG-050012 - Rev. B, September 2025.

LANDSCAPE ELEMENTS

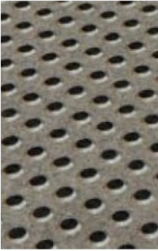
LANDSCAPE ELEMENTS					
CP Description Concrete footpath and shared path Location New footpaths and shared paths Specifications Material: In-situ concrete Aggregate: Cowra Quartz or approved equivalent Surface Treatment: Traverse broom finish		BP Description Basalt plaza pavers Location Foreshore plaza areas Specifications Material: Basalt paver 300x300xTHK40mm Surface finish: Calibrated Slip resistance: P5 Basalt paver in areas with vehicle traffic (parking area) to be THK60mm.		GR Description Decomposed granite gravel Location Informal pedestrian paths and resting areas Specifications Material: Decomposed granite gravel Colour: Natural To match existing decomposed granite gravel near Barrine Drive	
PS Description Stone pitching verge Location Barrine Drive underneath the bridge near abutment Specifications Material: Stone pitching Colour: Natural To match existing stone pitching in Barrine Drive adjacent to bridge abutment		SS Description Stepping stones Location Access from ramp to lawn in SW quadrant Specifications Material: 600x400xTHK40mm Wee Jasper stone paver		CR Description Concrete road finish Location Barrine Drive Specifications Material: In-situ concrete Surface Treatment: Light grit blasted exposed aggregate To match existing road finish on Henry Rolland Park	
SE Description Steel edge Location Garden beds Specifications Material: Stainless steel Colour: Grey To match existing edging used around Barrine Drive					
Description Stair risers Location New stairs Specifications Aggregate: Cowra Quartz or approved equivalent Surface Treatment: Light grit blasted exposed aggregate		Description Stair nosing Location New stairs Specifications Product: PEMKO® Pleat Edging 50x3 (DE0300B). Supplied by DTAC. Material: 6063 T5 extruded aluminium alloy. Colour/finish: Black anodised. Slip resistance: P5. Fixing: Adhesive or concealed screw fixed in accordance with the manufacturer's recommendations to suit the service conditions.		Description Handrail Location New stairs Specifications Material: 316 Stainless steel. Finish: satin/mat. Integrated handrail lighting: refer electrical drawings and specification for requirements and details. Design and installation: to AS1428.	
Description Full welded steel balustrade Location Accessible ramps Specifications Material: Steel Colour/finish: Powdercoat 'Textura Dark Bronze' or approved equivalent. To match new balustrade on bridge lookouts (BAL3)					
TGSI Description Tactile ground surface indicators Location New stairs and ramps, on concrete landings Specifications Material: 316 marine grade stainless steel tactiles with UV stabilised thermo plastic urethane insert (black). Spiked Black Top Classic Warning Tactiles (DT1020) Supplied by DTAC. Slip resistance: P5. Fixing: Drill and pressure fit, or diamond core and pressure fit, to manufacturer's recommendations. Setout: To AS1428.4 as indicated on the Landscape Drawings.		CRW Description Concrete retaining wall Location Northern side terraces Specifications Material: Concrete Finish: In-situ concrete Class 2, smooth-trowelled finish		SW Description Stone wall Location Terraces and resting areas Specifications Material: Wee Jasper Porphyry	
STW Description Sealing wall Location Terraces and resting areas Specifications Material: Hardwood Timber Battens 40x4 Eco-certified Darwin Stringybark (Eucalyptus tetrodonia) oiled Timber battens fixed to concrete retaining wall (CRW) or stone wall (SW)					
LIS10 Description Standard seats 1.8 & 2.1m Location Refer to Landscape plans Specifications Product: Linea Seat 1800 and Linea Seat 2100. Supplied by Street Furniture Australia. Material: 316 Stainless steel (frame) and eco-certified hardwood oiled timber (battens). Frame: 316 Stainless steel powder coated 'Textura Dark Bronze'. Battens: eco-certified Spotted Gum oiled timber. Sub-surface mounted to concrete slab as per manufacturer's detail.		LIB6 Description Standard bench 2.1m Location Refer to Landscape plans Specifications Product: Linea Bench 2100. Supplied by Street Furniture Australia. Material: 316 Stainless steel (frame) and eco-certified hardwood oiled timber (battens). Frame: 316 Stainless steel powder coated 'Textura Dark Bronze'. Battens: eco-certified Spotted Gum oiled timber. Sub-surface mounted to concrete slab as per manufacturer's detail.		LISS Description Standard sun lounge Location Refer to Landscape plans Specifications Product: Linea Sun Lounge. Supplied by Street Furniture Australia. Material: 316 Stainless steel (frame) and eco-certified hardwood oiled timber (battens). Frame: 316 Stainless steel powder coated 'Textura Dark Bronze'. Battens: eco-certified Spotted Gum oiled timber. Sub-surface mounted to concrete footing as per manufacturer's detail.	
BO Description Bollards Location Refer to Landscape plans Specifications Product: Timberform Contemporary Bollard Model No. 2179-01. Supplied by Moodie Outdoor Products. Material: 316 Stainless steel and eco-certified hardwood oiled timber. Frame: 316 Stainless steel powder coated 'Textura Dark Bronze'. Timber: eco-certified Spotted Gum oiled. Sub-surface mounted to concrete footing as per manufacturer's detail.					
CBR4-F Description Bicycle rack Location Refer to Landscape plans Specifications Product: Hoop Stand Product Code CBR4-F. Supplied by CORA or approved equivalent. Material: 316 Stainless steel. Sub-surface mounted to concrete slab or footing as per manufacturer's detail.		DF Description Drinking fountain Location Refer to Landscape plans Specifications Product: Prospect Drinking Fountain with bottle tap. Supplied by Botton + Gardiner. Material: 316 stainless steel. Frame: Electroplated marine grade 316 stainless steel, mirror polished select faces. Drainage grate: Cast aluminium with wire brush finish, secured with tamper proof screws. Sub-surface fixed. This design is AS1428.2 Australian Standards compliant, wheelchair accessible		RB Description Rubbish bin Location Refer to Landscape plans Specifications Product: Bondi Bin Enclosure 2x120L. Supplied by Botton and Gardiner. Material: - Body and chute: powder coated 'Textura Asteroid' zinc primed steel. - Panels: eco-certified (PEFC) Spotted Gum timber oiled. Surface fixed. Dimensions W1165 x D660 x H1190 mm	

Figure 26: Detail of Schedules.

Source: SMM, CAB-SMM-UD-DRG-050003 - Rev. B, September 2025.

The Proposal

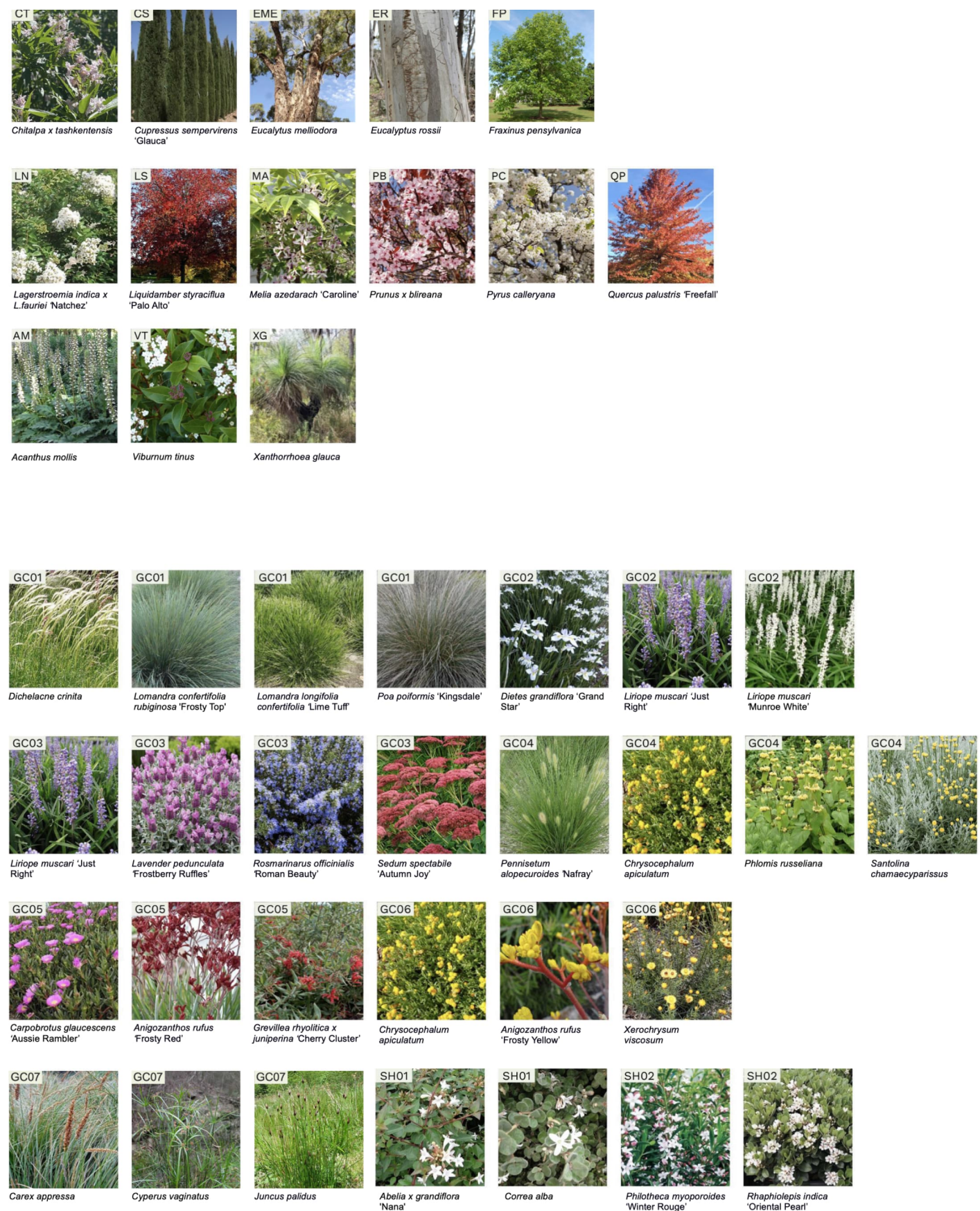


Figure 27: Detail of Planting Schedules.

Source: SMM, CAB-SMM-UD-DRG-050200 - Rev. B, September 2025.

6.3.2 Bridge Works

Commonwealth Avenue Bridge comprises a pair of mirror reversed matching elements which read together as one. The proposal involves widening the shared cycle paths on the outer edges of the pair of bridges. The form of the bridge extensions is a critical element in the overall design as it is required to be lightweight, durable and complementary of the existing Bridge structure.

To support increased (T44) traffic loads and enable construction of new five-metre-wide shared user paths on both sides of the Commonwealth Avenue Bridge, structural strengthening is required. This includes reinforcing the internal concrete webs, upgrading the internal diaphragms, and installing new post-tensioning elements. These strengthening works will be generally within the existing box girder and hidden from view once complete. The bridge bearings will also be replaced to accommodate increased loads and extend the structure's service life. The fluted aluminium cladding to the top of the piers will be replaced to match existing upon completion of the bridge bearing replacement.

On each side of the bridge, shared user paths extensions are proposed using precast concrete panels designed to complement the original bridge in form and finish. New safety barriers and balustrades will be installed which aim to preserve the clean visual lines of the bridge. The road barriers that run along the internal edges of the bridge require fixings through the soffit of the original bridge to meet code. These will be carefully co-ordinated and detailed to minimise visual impacts.

Expansion of the viewing platforms will be integrated into the shared paths at the widened abutments, with carefully designed handrails and transitions.

In summary, the proposed bridge works include the following:

- Strengthening works to the bridge and piers.
- Five metre extensions to the external side of each bridge to accommodate a widened shared user path.
- New bridge balustrades and traffic barriers. (Original balustrades are proposed to be retained and conserved between the bridges at each end in a 'U' shape.)
- Expansion of the viewing platforms at either end of the bridge adjacent to the abutments.
- Services upgrades.

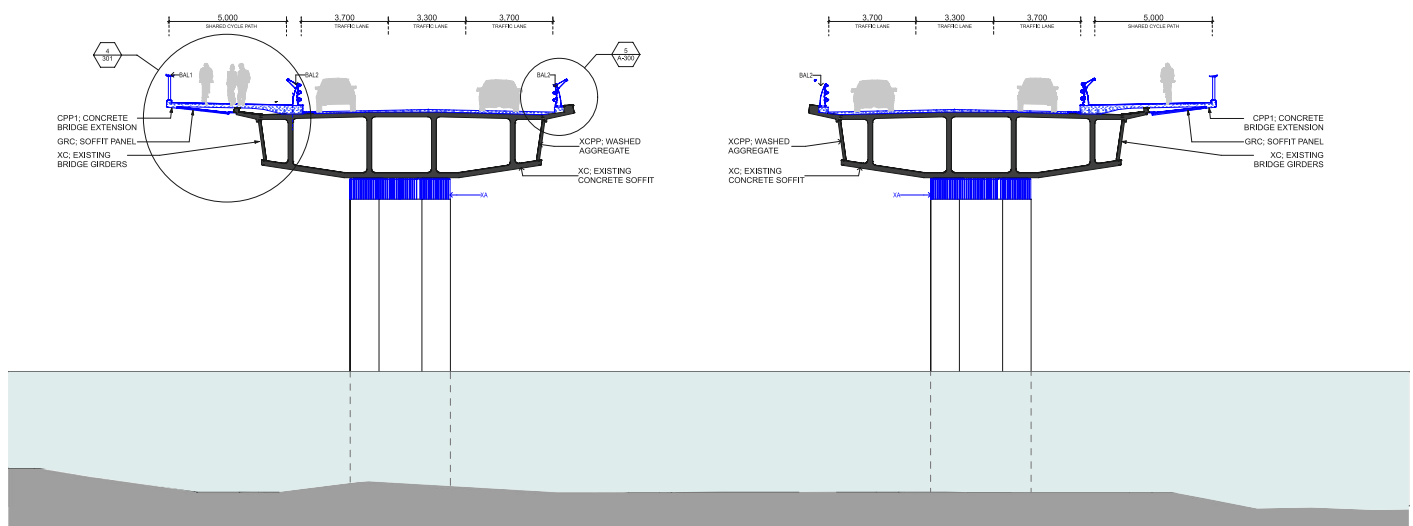


Figure 28: Proposed bridge cross section.

Source: SMM and TZG with Seymour Whyte for Australian Government, National Capital Authority - 90% Detailed Design, CAB-SMM-AR-DRG-060300 - Rev. B, September 2025.

The Proposal

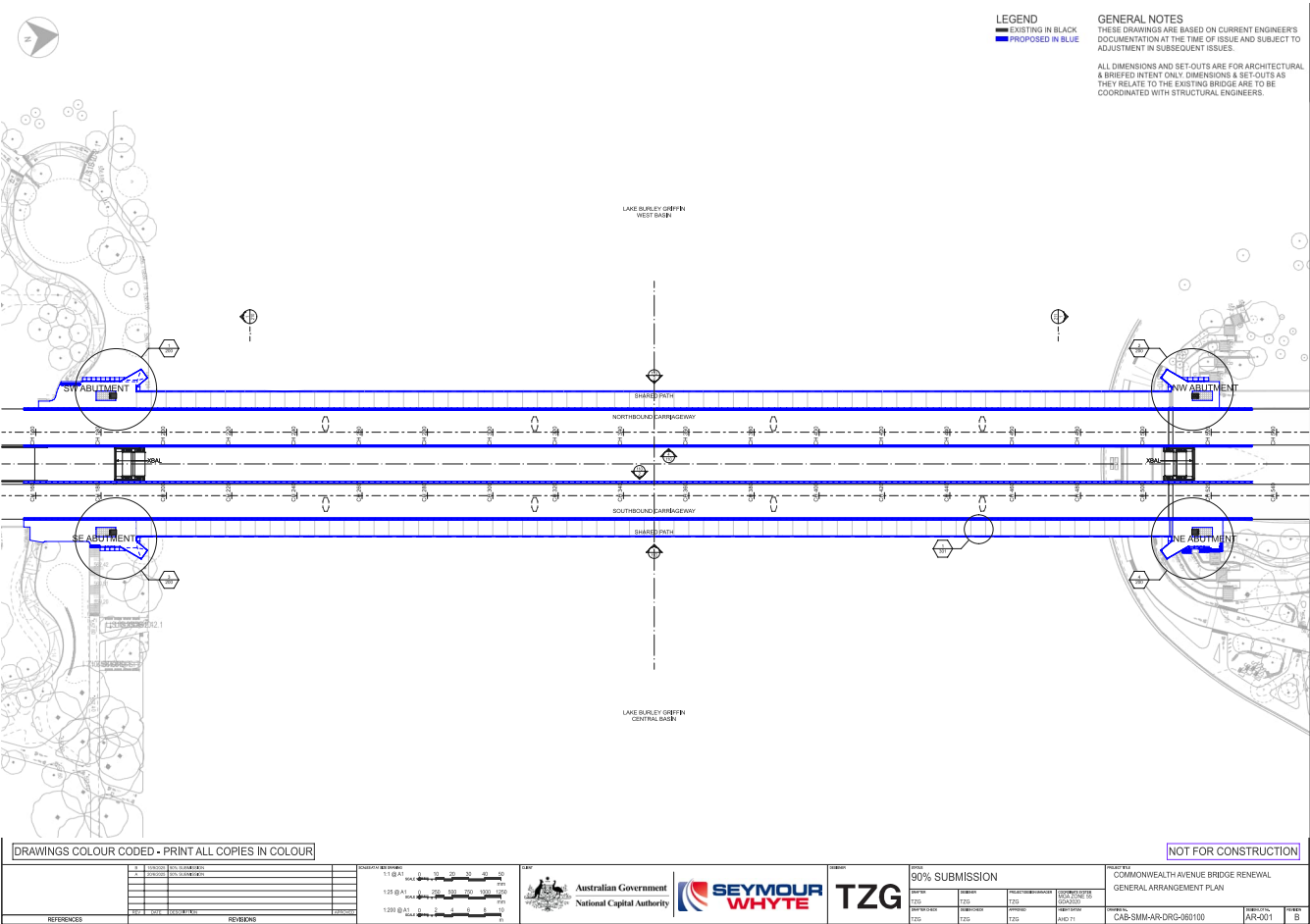


Figure 29: General Arrangement Plan.
Source: CAD-SMM-AR-DRG-060100 - Rev. B, September 2025.

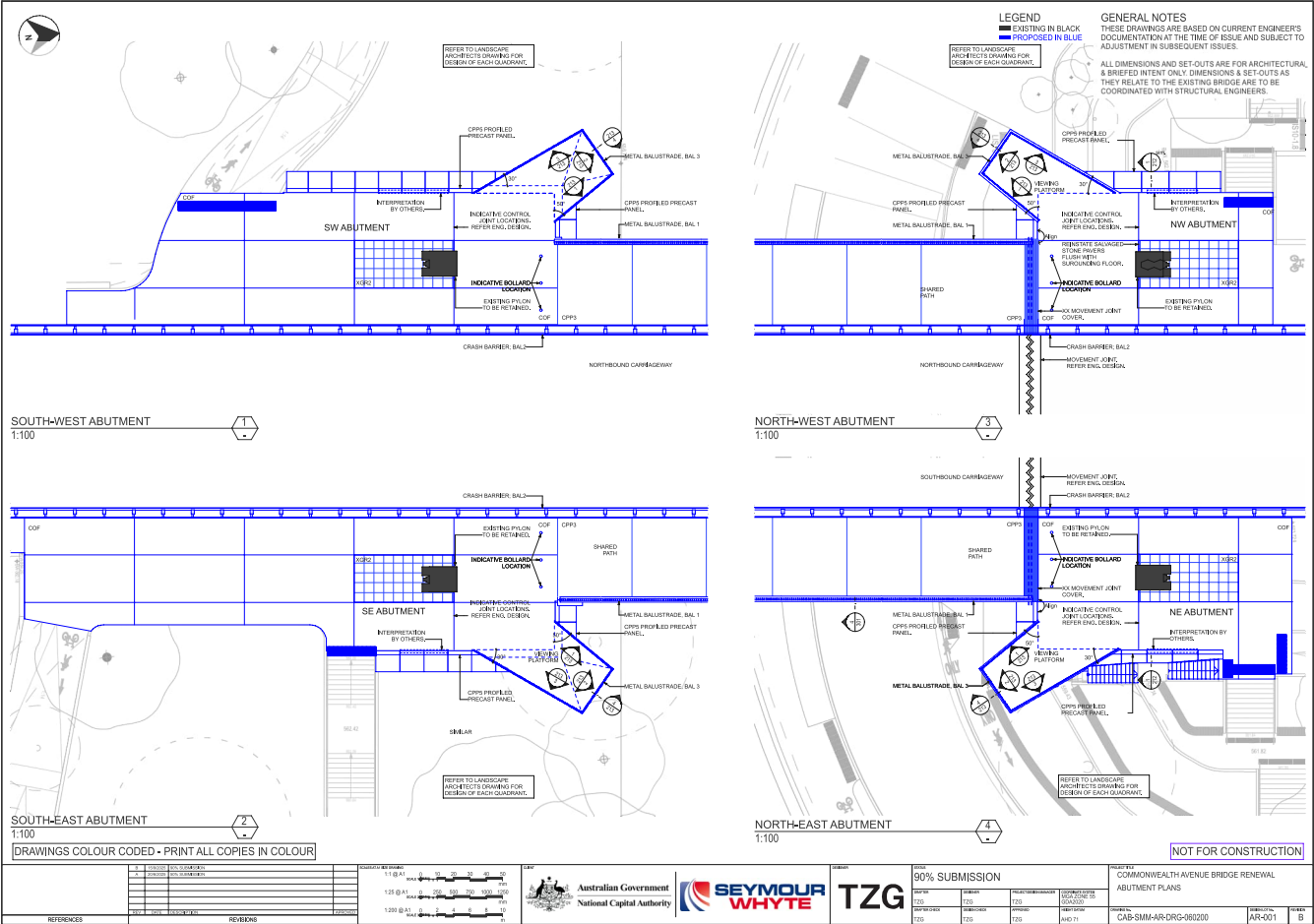


Figure 30: Abutment Plans.
Source: CAD-SMM-AR-DRG-060200 - Rev.B, September 2025.

The Proposal

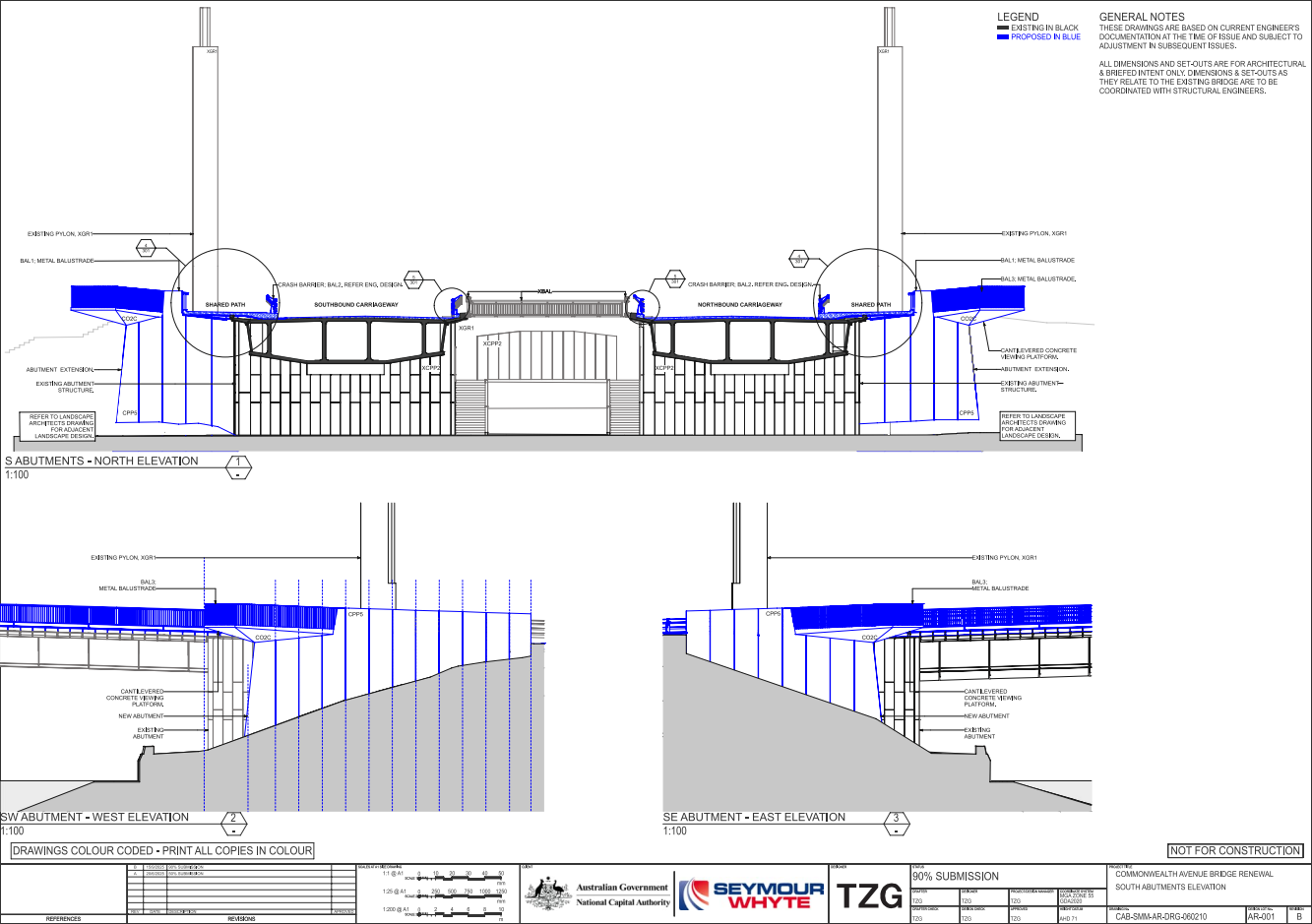


Figure 31: South Abutments Elevation.
Source: CAD-SMM-AR-DRG-060210 - Rev. B, September 2025.

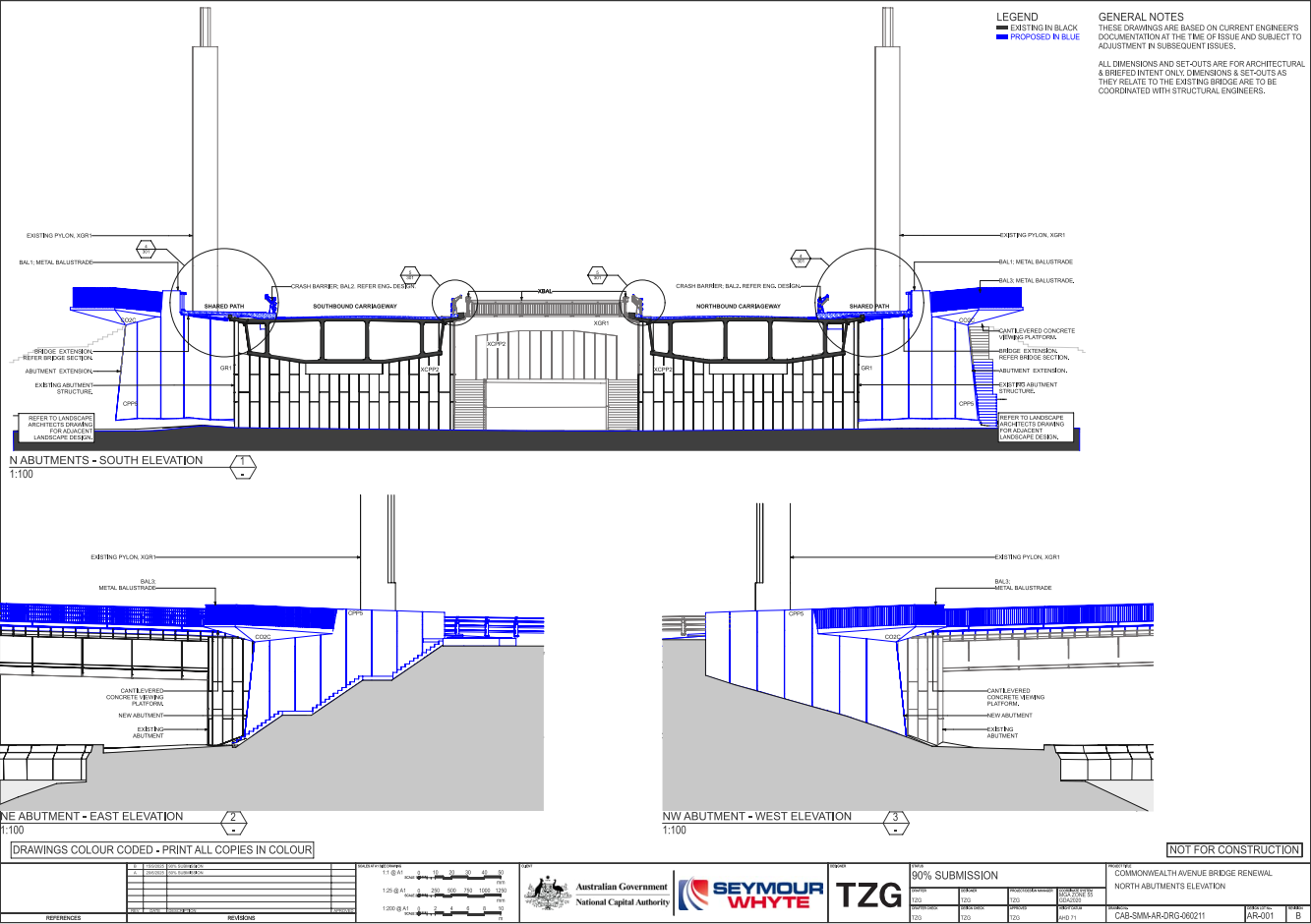


Figure 32: North Abutments Elevation.
Source: CAD-SMM-AR-DRG-060211 - Rev. B, September 2025.

The Proposal

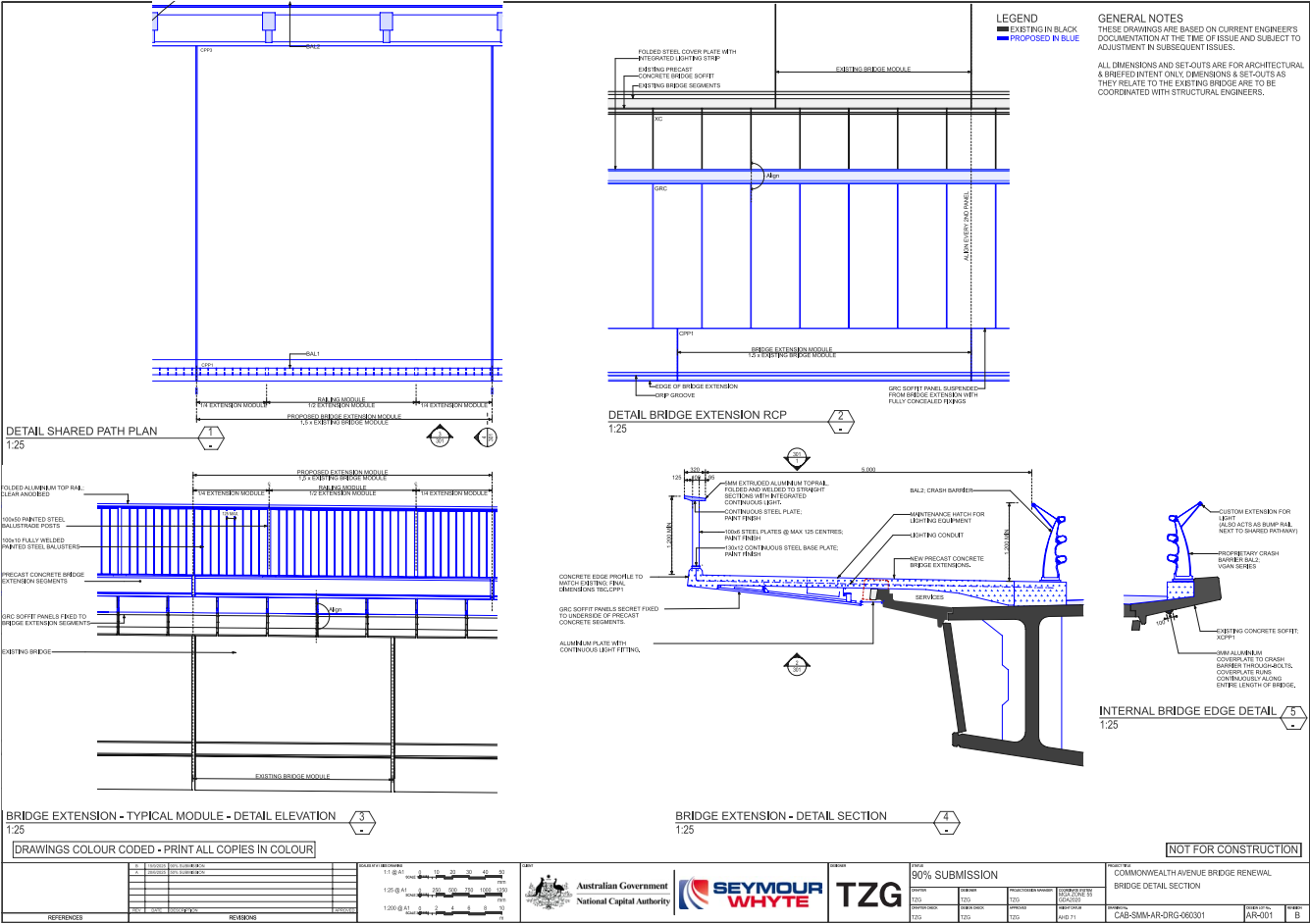


Figure 33: Bridge Detail Section.
Source: CAD-SMM-AR-DRG-060301 - Rev. B, September 2025.

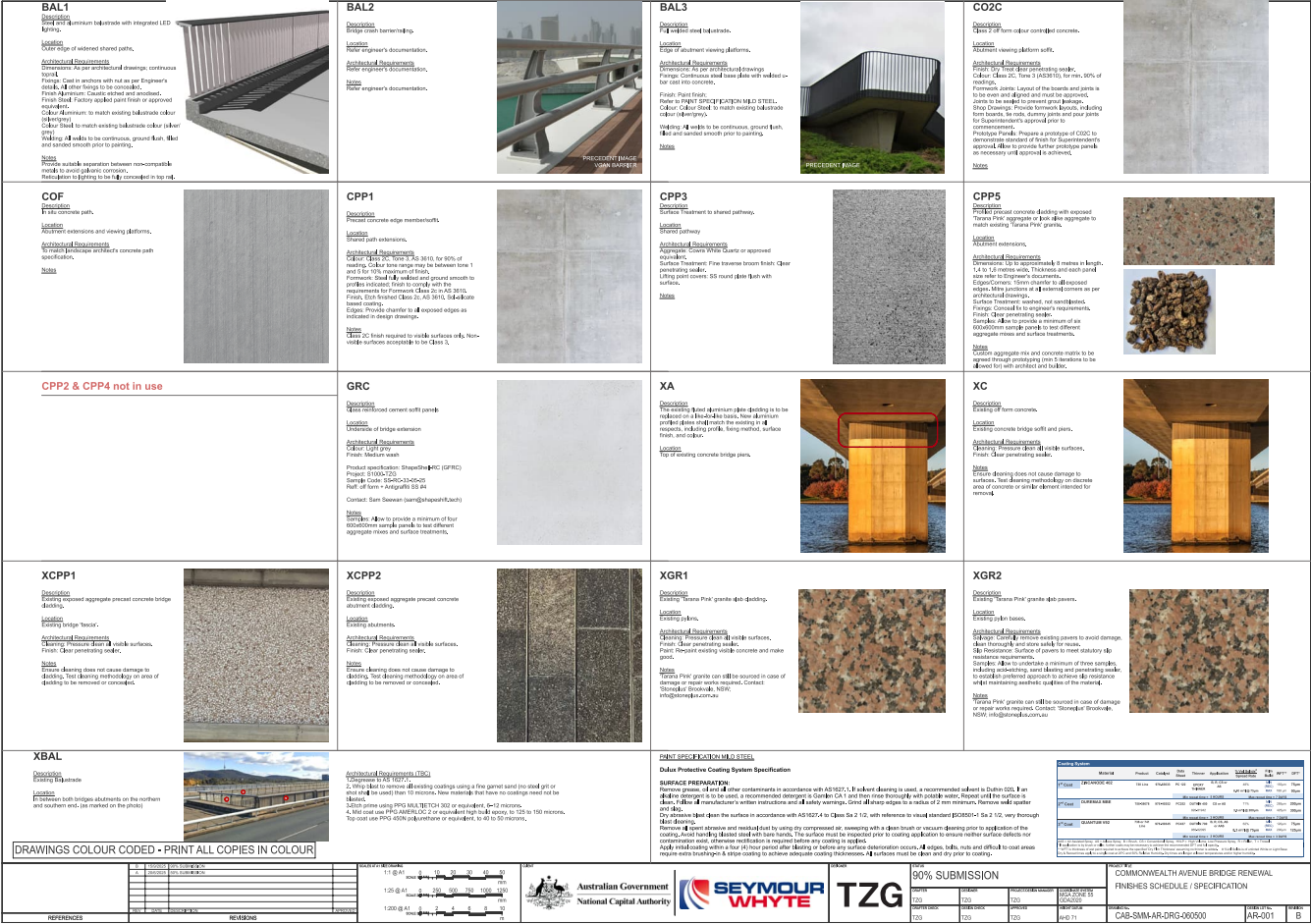


Figure 34: Finishes Schedule/Specification.
Source: CAD-SMM-AR-DRG-060500 - Rev. B, September 2025.



Figure 35: North abutment sketch perspective.
Source: TZG Architects, June 2025.

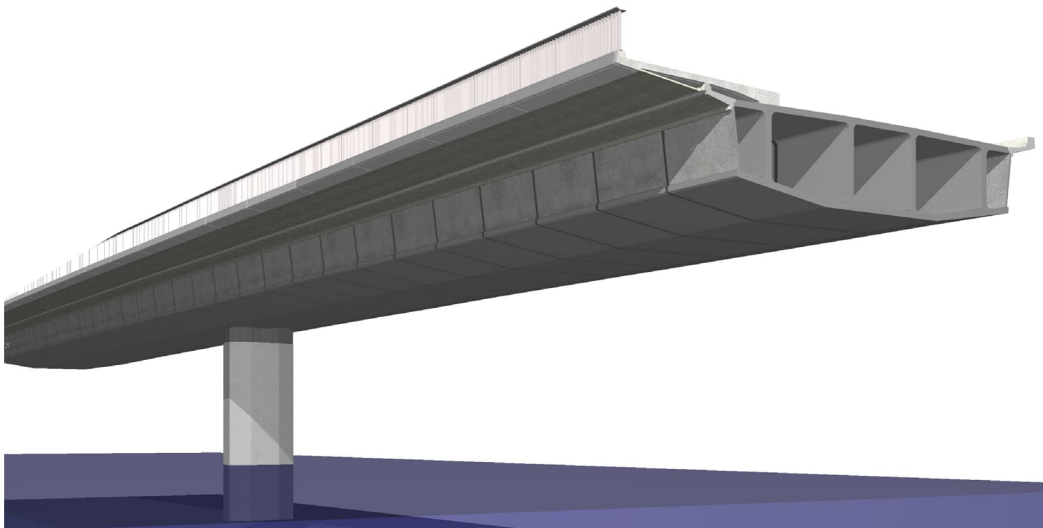


Figure 37: 3D Sectional perspective showing extension of the bridge.
Source: TZG Architects, June 2025.



Figure 36: South abutment sketch perspective.
Source: TZG Architects, June 2025.

6.4 Exploration of Alternative Concepts

Prior to the current proposal, the NCA had undertaken a number of investigations into the condition of Commonwealth Avenue Bridge due to the age of the Bridge, evolving Bridge design standards and growing demand for a variety of different modes of transport.

An Initial Business Case was prepared in 2018, followed by a Detailed Business Case in 2020, that sought to provide options and a proposed solution that would bring the Commonwealth Avenue Bridge up to the necessary engineering standards, whilst improving safety and capacity for all modes of transport.

In 2022, SMEC were engaged by the NCA, with SMM and TZG as subconsultants, to develop a scheme for the renewal of the Commonwealth Avenue Bridge and the surrounding landscape. At this time TZG Heritage prepared a Heritage Framework which established Heritage Design Principles that aimed to inform the design and minimise potential heritage impacts. The design was developed and costed in 2023, however, was found to be too expensive.

In 2024, Seymour Whyte were engaged by the NCA to further develop the design, with the aim of meeting the budgetary constraints. SMM and TZG were novated as consultants, along with BG&E Engineers. Sub-options considered during the development of the current design are shown on the following pages.

Extracts from the Detailed Business Case, 2023 scheme and other options considered are included in **Appendix 8.4**.

Bridge Extension Profile

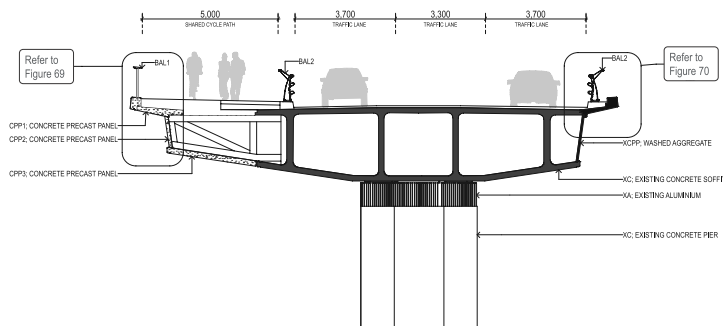
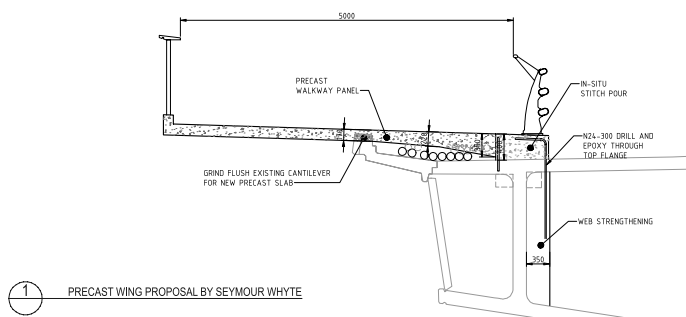
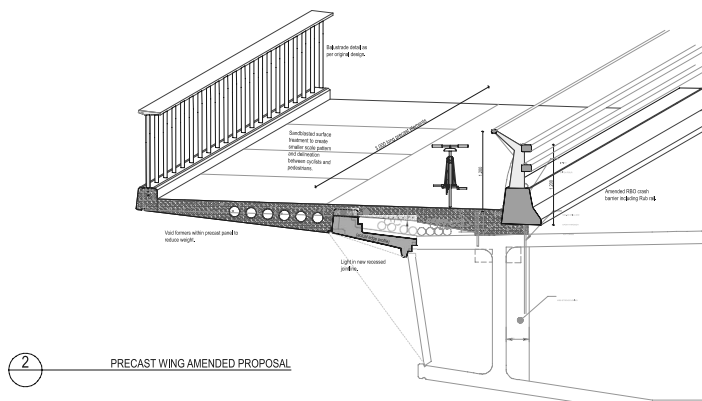


Figure 38: Proposed bridge cross sections 2023.

Source: SMM and TZG with SMEC for Australian Government, National Capital Authority - 30% Concept Design Report, Rev. A, May 2023,



PRECAST WING PROPOSAL BY SEYMOUR WHYTE



PRECAST WING AMENDED PROPOSAL

Proposal assessed against established Heritage Design Principles

POSITIVE

- 1) Retention of most of the original elements including the original precast panels is positive visually and has minimal heritage impact.

NEGATIVE

- 1) New proposal not fully complementary to the original built form.
- 2) Visually intrusive soffit. No consideration given on dialogue between old and new.
- 3) The proposed hob detail does not reflect a similar edge condition to the existing edge condition.
- 4) 4 meter wide precast panel do not align with any dimensions of the original bridge section.
- 5) Shadows cast on vertical precast panels of the existing bridge will change distance appearance of bridge and will make it look heavier.

POSITIVE

- 1) Retention of most of the original elements including the original precast panels is positive visually and has minimal heritage impact.
- 2) New proposed form of the continuation of soffit is complementary to the original built form with minimal visual and heritage impact.
- 3) Proposed box reflects similar edge condition to the existing condition with minimal visual and heritage impact.
- 4) A proposed 3meter wide precast panel considers the original bridge elements.
- 5) More linear and less cluttered road barrier is supported with 2 horizontal rails on road side and additional tuff rail.
- 6) No visual impact from connection of outer road barrier.

NEGATIVE

- 1) Shadows cast on vertical precast panels of the existing bridge will change distance appearance of bridge and will make it look heavier

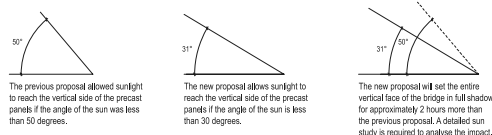


Figure 39: Bridge cross section options 2024.

Source: SMM and TZG with Seymour Whyte for Australian Government, National Capital Authority.

Bridge Extension Module

The existing bridge has joints at 10ft centres. A range of module widths were explored for the precast bridge extension elements. Joints to match existing were not possible due to engineering constraints. Double the width was not possible due to the weight of each panel. The preferred module was one and a half times the width of the original. In this way every second new joint aligns with every third existing joint.

The glass reinforced concrete soffit panels were then sized to align with the joints in the original precast edge profiles. (750mm)

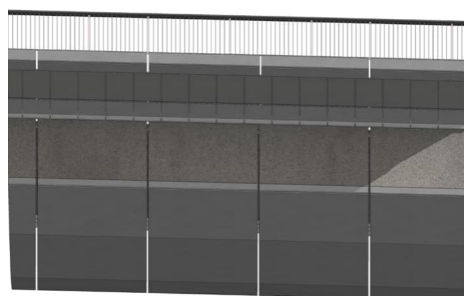


Figure 40: Spacing of joints to bridge extension to match existing.

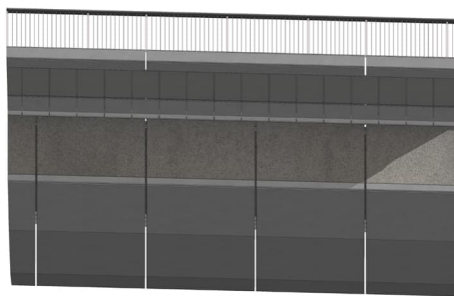


Figure 41: Spacing of joints to bridge extension double existing.

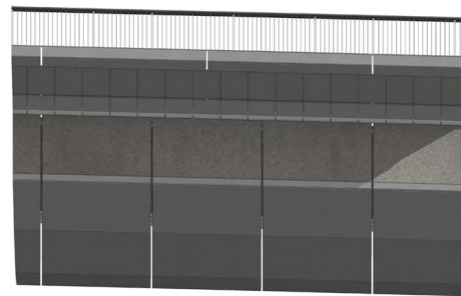


Figure 42: 2025 proposal. Spacing of joints to bridge extension one and a half times existing.

Inner Road Barrier Fixings

In order to achieve compliance, the inner road barriers are required to be bolted through the existing concrete soffit of the bridge. A range of options were explored, considering the existing joint lines, to minimise the visual impacts of this requirement. These included recessed bolts, a discontinuous cover plate, a continuous cover plate and a continuous recessed channel.



Figure 43: Proud bolt fixings. Current proposal.

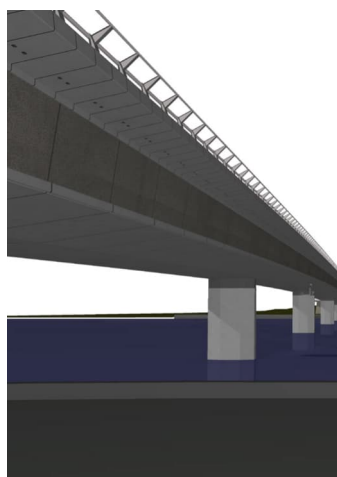


Figure 44: Recessed bolts fixings.



Figure 45: Discontinuous channel fixings.

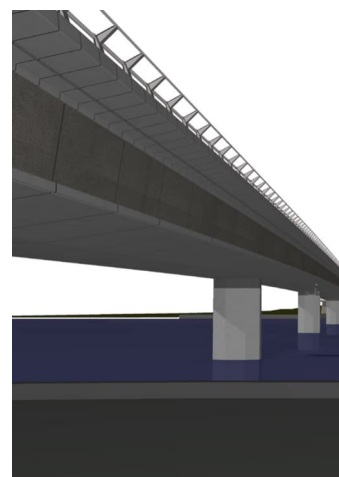


Figure 46: Continuous channel fixings.

Materials - Bridge Extension

A range of alternative materials were explored for the different bridge extension profiles.



Figure 47: Printed image.



Figure 48: Matte glass panels.



Figure 49: White precast concrete panel with exposed white Quartz aggregate.

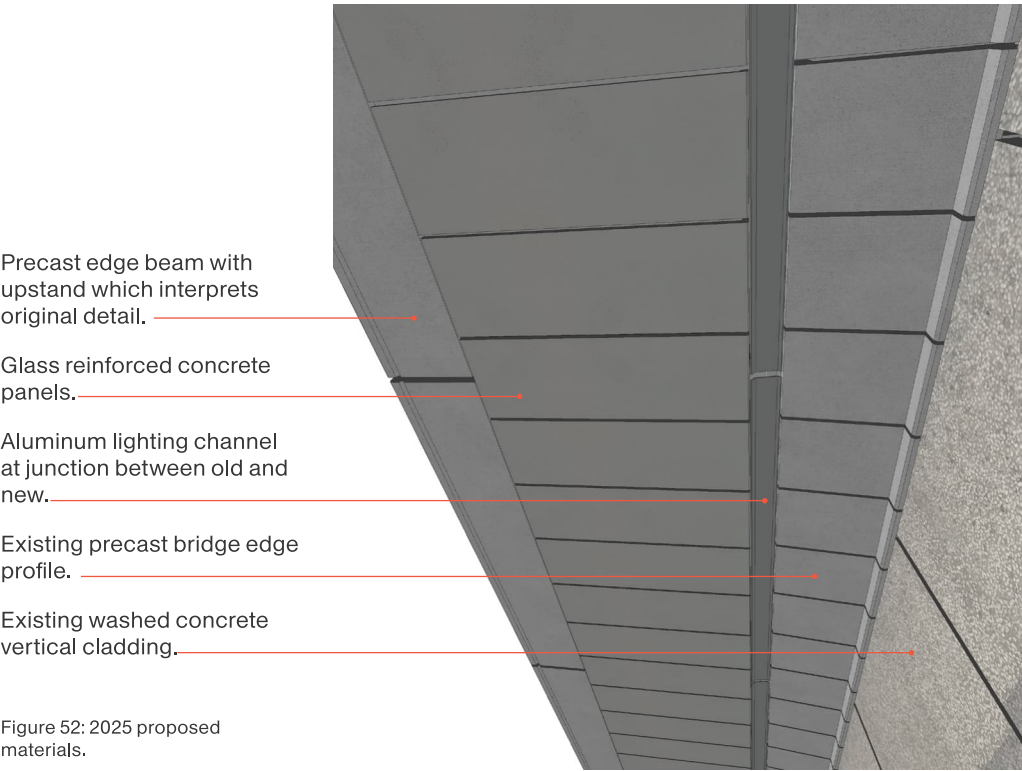


Figure 52: 2025 proposed materials.



Figure 50: Existing washed concrete vertical cladding.



Figure 51: Proposed glass reinforced concrete soffit panels.

External Balustrade

A range of balustrade details and spacings were considered.

Option 3 - 1.5m post spacing



Figure 53: External balustrade Option 3 - 1.5m post spacing - not preferred.

Option 4 - 2.25m post spacing - preferred

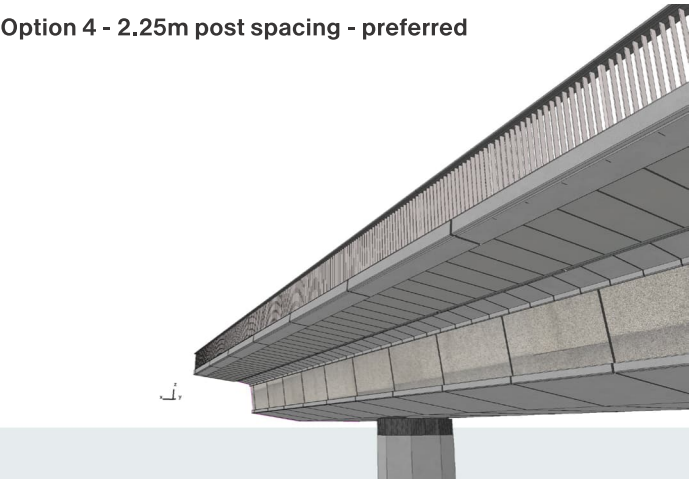


Figure 54: External balustrade Option 4 - 2.25m post spacing - preferred 2025.

Materials - Abutments



Figure 55: Tarana Pink Granite - original stone cladding.

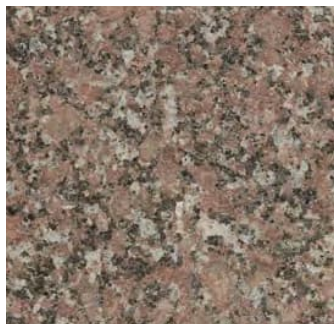


Figure 56: Desert Rose Granite - closest match to original stone cladding.

The original abutments are clad in Tarana Pink Granite which is no longer available to be quarried. Small quantities are available from a local supplier for repairs only.

The 2023 option proposed Desert Rose Granite cladding for the abutment extensions as it is the closest available match to the original stone. Use of this stone, however, proved to be prohibitively expensive.

In 2025, the decision was reached to use precast concrete panels for the cladding of the abutment extensions, in lieu of stone. The precast would be similar in colour and texture to the original Tarana Pink granite with carefully set out joints to minimise visual impacts, however would be recognisable as new upon closer inspection in accordance with Burra Charter principles.

The use of crushed Tarana Pink Granite for the aggregate is currently being investigated. If this is not possible an aggregate will be sought which matches that of the Tarana Pink Granite in colour.

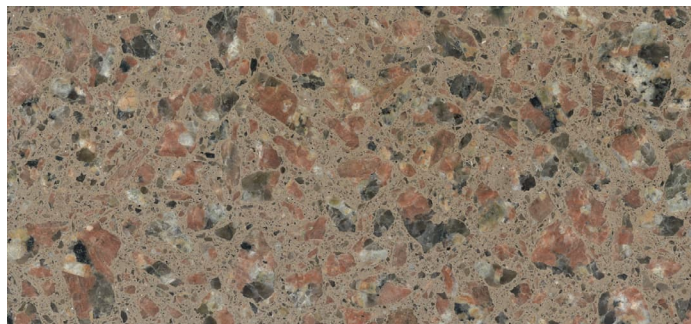


Figure 57: Precast concrete panels are proposed for the abutment extensions with a similar colouring to Tarana Pink granite. Samples are currently being tested to achieve the desired colour and aggregate mix.



Figure 58: Precast cladding sample trials.



Figure 59: Perspective sketch of abutment extension with precast cladding.

07 Assessment of Impact on Heritage Values

Commonwealth Avenue Bridge together with Kings Avenue Bridge, define the symmetrical layout of the Parliamentary Triangle. The bridges are major structural features of the lake and also provide important vantage points for viewing the lake.

7.1 Methodology for Assessing Heritage Impacts

7.1.1 EPBC Act Significant Heritage Impact Method

A 'significant impact' is an impact which is important, notable, or of consequence, having regard to its context or intensity. The factors to be considered for determining whether or not an action is likely to have a significant impact depend upon the sensitivity, value, and quality of the environment that is impacted, and upon the intensity, duration and magnitude of the impacts.¹⁸

The following criteria are relevant in determining the severity of the potential impacts which include:

Scale

The scale of the action and its impacts is a fundamental consideration when predicting the severity of impacts. Generally, a larger-scale action with widespread impacts is more likely to have a significant impact on the environment than a smaller-scale action with localised impacts. However, it is important to consider scale in conjunction with the intensity and duration/frequency of the impacts.

Intensity

Intensity refers to the strength and concentration of the impacts. Open cut mining, which involves comprehensive modification of the environment, is an example of an action with high intensity impacts. Low density grazing of livestock on native pastures is an example of an action with low intensity impacts in most circumstances.

Timing, duration and frequency

An action may consist of a continuous activity or it may consist of a series of periodic activities. The starting point is to consider the duration and frequency of each component of an action. However, it is most important to consider the duration and frequency of the impacts. It is necessary to consider the long term and indirect impacts of the proposal on the environment as well as the immediate impacts. Impacts may persist long after an action ceases, or may be irreversible. In order to assess the severity of impacts you should consider the total impact that can be attributed to the whole action over time. The timing of the activity may also be relevant when environmental elements have seasonal characteristics (for example migration, breeding seasons, etc) or when seasonal weather conditions affect impacts (for example periods of high rainfall or high winds).

The following graded scale of impact has been adopted, using the language from the Significant Impact Guidelines 1.2 and applied for this impact assessment. The guidelines assist in distinguishing between different relative levels of severity of potential heritage impacts as follows:

Severe (Significant): Severe (or 'significant') impacts generally have two or more of the following characteristics: permanent/irreversible; medium–large scale; moderate–high intensity. This level of impact is the threshold for making a referral under the EPBC Act.

Moderate: Moderate impacts generally have two or more of the following characteristics: medium–long term; small–medium scale; moderate intensity.

Minor: Minor impacts generally have two or more of the following characteristics: short term/reversible; small–scale/localised; low intensity.

¹⁸: Department of the Environment, 2013, Matters of National Environmental Significance. Significant Impact Guidelines 1.1, Environment Protection and Biodiversity Conservation Act 1999, p 2.

7.2 Discussion of Potential Impacts on Listed Heritage Values

7.2.1 Lake Burley Griffin and Adjacent Lands, Commonwealth Heritage Listing

Lake Burley Griffin and Adjacent Lands is listed on the Commonwealth Heritage List and includes the Commonwealth Avenue Bridge, which lies within the curtilage of this listing.

Criterion	Statement of Heritage Value	Discussion of Impacts
Criterion (a) Historic Processes	The Lake's design reflects the influence of three major urban design movements including the City Beautiful movement, the Garden City movement and International Modernism. The use of City Beautiful and Garden City theories and ideas is reflected in the use and design of the lake to fulfill aesthetic, open space and outdoor recreation functions. The lake also forms part of the water axis and has been designed in parts to include symbolic, ceremonial, formal and informal and active and passive recreation space. The design influences of International Modernism can be seen in the engineering works within the place including the fish belly flap gates of Scrivener Dam, Commonwealth Avenue Bridge and Kings Avenue Bridge ... Features which express the significant historic values of the place include, but are not limited to: the lake as a whole including its edge treatments, the Captain Cook Water Jet, the Commonwealth and Kings Avenue bridges, Scrivener Dam, lake islands, the Lake's contribution to the geometry of Griffin's plan for Canberra; the remnant historic plantings of Cupressus sempervirens trees located on part of the hill known as Roman Cypress Hill; the remnant historic plantings within the Lindsay Pryor Arboretum; the site and remnant structures of the former Westlake settlement; the No 1 sewer vent in Stirling Park and the layered historic landscape of Stirling Park representing the Indigenous, pastoral and early capital city periods of Canberra.	The proposed upgrade works to the Commonwealth Avenue Bridge have been carefully designed to complement the International Modernist influences displayed in the original design. The proposed additions to the outer edges of the bridge emphasise and complement the strong horizontal lines of the original form, including the symmetry of the mirrored pair of bridges. The new bridge barriers and balustrades are simple repetitive elements which have a high-degree of transparency, and have been designed to read as secondary elements.
Criterion (b) Rarity	Lake Burley Griffin is an important exemplar design site which can demonstrate design and planning devices characteristic of the two most important town planning movements of the twentieth century; the City Beautiful and Garden City movements. Canberra is one of the few planned twentieth century cities in Australia and in the world. The city's national capital function provided planners and designers, like Griffin, with an opportunity to use their best and most innovative planning ideas drawing from the town planning practices of their time. In particular, the lake forms part of the water axis which Griffin used to arrange city elements and connect surrounding natural features. The grand scale of lake vistas along the water axis and in other areas gifts the National Triangle and city a sense of grandeur and beauty ... The lake also integrates the northern and southern sides of the central city. The formal areas of the lake also provide a water setting for national institutions which are showcased on its foreshore.	The landscaped approaches to the Commonwealth Avenue Bridge are not equitable and the quality of their design has been eroded over time. The proposal aims to improve the accessibility of the approaches to the bridge. It also seeks to enhance the presentation of the landscape, which is currently degraded, so that it is closer to the intent of the Canberra design principles. To minimise impacts, the landscaped approaches have been carefully designed to respond sympathetically to the differing character and conditions on each side of the Lake, respecting the exemplar design and planning concepts within the context of the Lake Burley Griffin and adjacent lands. The new viewing platforms, adjacent to the abutments at either side of the bridge, provide new vantage points to enjoy the significant views of both the lake and other key features within Canberra. The viewing platforms have been designed as distinctly contemporary, yet complementary, elements in accordance with the principles of the ICOMOS Burra Charter.

Criterion	Statement of Heritage Value	Discussion of Impacts
Criterion (c) Research Potential	Lake Burley Griffin and its many 'design layers' is a source of information about key theories, practices and histories associated with urban planning, architecture and landscape architecture. Evidence of the work of key practitioners including Walter Burley Griffin, Marion Mahoney , John Sulman, Charles Weston, Lindsay Pryor, Sir William Holford, Dame Sylvia Crowe , Richard Clough, Peter Harrison, Trevor Gibson, and John Overall are also evident and are a valuable historic resource for further study and examination. The fish belly flap gates of Scrivener Dam and the two major bridges also provide the opportunity for further research and teaching potential associated with engineering practice and design technologies.	The proposal will have no impact on the significant associations with Walter Burley Griffin and other special associations including William Holford who did extensive work on the design of the Commonwealth Avenue Bridge and Sylvia Crowe who was involved in the landscape development of Commonwealth Park. Interpretation will further enhance the heritage values of the bridge in the context of the Lake Burley Griffin and adjacent lands study area. There are opportunities for interpretation adjacent to the viewing platforms at bridge level and adjacent to the relocated Waterloo looses stones beneath the bridge.
Criterion (d) Characteristic	-	
Criterion (e) Aesthetic	Lake Burley Griffin is recognised as a beautiful feature of Canberra. In particular the Lake provides an attractive water setting for national institutions, lakeside parklands and lakeside memorials. Lake Burley Griffin is also featured in many promotions of Canberra to the extent that it has become a landmark and signature element of the city and its presentation as the capital of Australia ... Lake Burley Griffin is appreciated by Canberrans as a beautiful part of their city. Its visual appeal during the day and night is appreciated as an essential part of their city and as a 'signature' element of Canberra as a place.	The landscaped approaches to the Commonwealth Avenue Bridge have been carefully designed to improve the accessibility of the bridge for pedestrians and cyclists and to respond to the differing character of each landing location, respecting the relationship of the bridge to the foreshore of Lake Burley Griffin. Significant trees and plantings are retained to ensure that the new landscape is harmonious with the treatment of the adjacent foreshore lands. The new viewing platforms, adjacent to the abutments at either side of the bridge, provide opportunities to enjoy significant views of the lake and other Canberra landmarks. These have been designed to read as distinctly contemporary, yet complementary, elements. The proposed bridge extensions will have a minor impact on views of the lake, however, these have been minimised through careful design. The lighting channel at the junction between the original bridge soffit and bridge extension will enable lighting of the original vertical face of the bridge. The new balustrades and road barriers incorporate lighting to achieve a similar lighting effect to the original.
Criterion (f) Technical Achievement	Lake Burley Griffin also demonstrates a high degree of technical achievement in engineering. The construction of the two bridges and Scrivener Dam were projects which demonstrated high levels of achievement in their time. The features which express these values include but are not limited to the lake as a whole, Scrivener Dam, Commonwealth and Kings Avenue bridges, the islands within the lake and the lake's function as part of the water axis.	The proposed bridge extensions adopt a simple, elegant aesthetic with complementary materials, colours and detailing which emphasise the long slender spans of the original bridge. The proposed bridge extensions interpret the profile of the original concrete edge condition and have tapered soffits. The junction between the old and new is clearly expressed as a shadow line which houses lighting to create a similar lighting effect on the vertical faces of the original bridge fabric to the existing. The removal of the original railings and barriers, required in order to improve pedestrian and cyclist access of the bridge, will have a moderate heritage impact on the bridge itself. However, the new railings are simple repetitive elements, with a high degree of transparency, which reference the original to minimise impacts on views of the Commonwealth Avenue Bridge within the Lake Burley Griffin study area.

Criterion	Statement of Heritage Value	Discussion of Impacts
Criterion (g) Social Value	Lake Burley Griffin and Adjacent Lands place is important to various communities as a landmark and as a signature element of Canberra ... The lake also connects Canberrans to Canberra's function and purpose as the nation's capital as the lake is a central design element in the construction of the national capital. Canberrans are proud of the lake as a significant construction achievement. The unification of two parts of the city at completion of the lake is remembered.	The proposal will enhance the accessibility of the Commonwealth Avenue Bridge and improve pedestrian and cyclist connections to either side of the Lake. The proposal will have minimal impact on the landmark qualities of Lake Burley Griffin, which unifies the two parts of the city.
Criterion (h) Significant People	Lake Burley Griffin and Adjacent Lands place has significant associations with people of importance in Canberra's history of development. These associations include the following. Important people involved with the creative and technical aspects of the design and construction of Lake Burley Griffin include Walter Burley Griffin, Marion Mahony Griffin, Charles Scrivener, Sir William Holford, Dame Sylvia Crowe, Richard Clough and the National Capital Development Commission (NCDC). Lake Burley Griffin also has strong associations with Sir Robert Menzies who played pivotal role in the implementation of the lake's construction. His support is associated with the final push towards the lake's completion.	The proposal will have no impact on the significant associations with Walter Burley Griffin and other special associations including William Holford who did extensive work on the design of the Commonwealth Avenue Bridge and Sylvia Crowe who was involved in the landscape development of Commonwealth Park. Interpretation will further enhance the heritage values of the bridge in the context of the Lake Burley Griffin study area. There are opportunities for interpretation adjacent to the viewing platforms at bridge level and adjacent to the relocated Waterloo stones beneath the bridge.

Summary of Heritage Impact

The Commonwealth Avenue Bridge and its approaches contributes to the heritage values of the designed landscape of the Lake Burley Griffin study area.

The proposal, which includes removal of some original fabric, extensions to the bridge and landscape upgrades in order to improve accessibility, will have a moderate impact on the Commonwealth Avenue Bridge, however, will only have a **minor** impact on the heritage values of the Lake Burley Griffin and adjacent lands.

To minimise impacts on key views of the lake and adjacent lands, the proposed bridge extensions and improvements to the landscape adopt simple, modern forms and utilise a contemporary, yet complementary, palette of materials and colours.

7.2.2 Parliament House Vista, Commonwealth Heritage Listing

The Commonwealth Avenue Bridge is located outside of the Parliament House Vista area however, it plays an important role in defining the eastern boundary. Whilst the Commonwealth Avenue Bridge itself is technically outside the curtilage of the Parliament House Vista, the lakeside land at its base is included within the curtilage.

Criterion	Statement of Heritage Value	Discussion of Impacts
Criterion (a) Historic Processes	The central national area of Canberra is strongly associated with the history of politics and government in Australia and the development of Canberra as the Australian National Capital. It is significant as the home of the Commonwealth Parliament, the focus of the Federal Government since 1927, initially in the Old Parliament House and from 1988 in the new Parliament House. The various government buildings in the area reinforce the association with Australian government and political history, including East and West Blocks, the Administrative Building, the Treasury Building and the High Court. The latter, being set apart from Parliament House but facing it is symbolic of the judicial role of the High Court as a physical representation of the separation of powers. Attributes The concentration of buildings, parklands and gardens that support Commonwealth parliamentary and governmental activity as well as, to some extent, national cultural life.	The Commonwealth Avenue Bridge defines the western edge of the Parliament House Vista. The proposal will have a minor impact on the historic values of this vista. The proposed additions on the outer edge of the bridge have been carefully designed as contemporary elements which complement the original design of the bridge and reinforce its slimline appearance and horizontal expression. The approaches to the bridge are proposed to be renewed with landscape treatments that respond sympathetically to the differing conditions on each side of the Lake, respecting the layers of natural history, planning concepts and human use.
Criterion (b) Rarity	-	
Criterion (c) Research Potential	-	
Criterion (d) Characteristic	-	

Criterion	Statement of Heritage Value	Discussion of Impacts
Criterion (e) Aesthetic	The place has high aesthetic significance due to the visual impact of the extensive open sweeping vista along the land axis that can be experienced in two directions, the designed axes set within natural features of forested hills, patterns and textures of architectural massing accentuated by planned open spaces, water planes and tree plantings that are arranged across the area. The vista is significant for its visual drama with its ability to engage viewers in the visual perspective of the sweeping vista to the terminal features. The aesthetic significance is also a result of the large scale qualities of the axes, including the open green spaces, combined with patterns and symmetrical characteristics of the road networks and numerous designed smaller attributes. These include the rose gardens, the Old Parliament House Gardens, Commonwealth Park, the street tree plantings, the lake-land interface and the Sculpture Garden of the National Gallery, and many intimate spaces rich in texture, colour, fragrance and in some cases, art works and water features. Attributes The extensive vista along the land axis, the forested hills, patterns and textures of architectural massing accentuated by planned open spaces, water features and tree plantings, art works, the terminal features plus the interplay of scale and texture in the designed landscape.	The proposal will have a minor impact on the aesthetic values of the Parliament House Vista. The proposal will provide improved accessible shared pathways whilst maintaining the strong horizontal lines of the Commonwealth Avenue Bridge, including the symmetry of the mirrored pair. The outer edge of the bridge extension references the original bridge design, whilst the balustrades have been designed as simple repetitive elements with a high degree of transparency to minimise visual impacts on the extensive open sweeping vista. The new viewing platforms, adjacent to the abutments at either side of the bridge, provide new vantage points to enjoy the significant views of both the lake and other key features within Canberra. The viewing platforms have been designed as distinctly contemporary, yet complementary, elements in accordance with the principles of the ICOMOS Burra Charter. The landscape design aims to achieve a harmonious composition with the adjacent landscape spaces which relate to the surrounding parkland and foreshore of Lake Burley Griffin. The approaches to the bridge have been carefully designed to provide an appropriate scale and setting to the Commonwealth Avenue Bridge within this highly significant heritage context.
Criterion (f) Creative or Technical Achievement	The Parliament House Vista is the central designed landscape of Canberra, that expresses the core of the Walter Burley Griffin design vision for Canberra. It is highly significant for its symbolic representation of the democratic interchange between the people and their elected representatives and its use of the natural landforms to generate a strong planning geometry. It expresses a masterly synthesis and ordering of topographical features and administrative functions to meet the needs of a national capital. The vista landscape embraces the central land axis and part of the water axis and most of the Parliamentary Triangle including the area known as the Parliamentary Zone. The significance incorporates Walter Burley Griffin's vision for the area, as the focus of Commonwealth parliamentary and governmental activity as well as national cultural life... Despite being modified to a lesser degree to accommodate the impact of wars on Australians, the Vista now presents as a philosophical concept expressed in urban planning, landscape and architecture, to achieve a grand vision of a symbolic, unified and visually dramatic place. Attributes The whole of the vista, including all elements and features contained within it, as well as the natural wooded hills beyond.	The proposed changes to the landscape of the approaches to the Commonwealth Avenue Bridge are required to improve the accessibility of the bridge. These represent the next layer of planning and urban design and are required to meet contemporary safety and accessibility standards. To minimise heritage impacts, the proposed bridge extensions reinforce the horizontal emphasis of the original bridge and reference the existing edge condition, whilst the landscape design of the approaches to the bridge respond sympathetically to the differing conditions on each side of the Lake. Located at the western edge of the vista, the proposal will have minimal impact on the vision of a symbolic, unified and visually dramatic place.
Criterion (g) Social Values	-	

Criterion	Statement of Heritage Value	Discussion of Impacts
Criterion (h) Significant People	The central national area has a special association with its designer, Walter Burley Griffin. Griffin is an important figure in Australia's cultural history for his overall design of Canberra as the Nation's Capital. The special association between the central national area and Griffin results from the area being the centrepiece of the planning geometry for Canberra and perhaps the only part of his Canberra plan to survive relatively intact. The area has a strong association with Marion Mahoney Griffin who prepared the perspective drawings of the Vista. The Vista area has a strong association with numerous architects and planners, in particular John Smith Murdoch, Chief architect of the Commonwealth Government, and Thomas Charles Weston, Superintendent of Parks, Gardens and Afforestation in Canberra, and notable planners of the National Capital Development Commission such as Sir John Overall, Peter Harrison and Paul Reid. Attributes The whole of the vista, its planned layout, and the view from the top of Mount Ainslie which illustrates the realisation of Marion Mahoney Griffin's perspective drawing.	The proposal will have no impact on the significant associations with Walter Burley Griffin and other special associations including William Holford who did extensive work on the design of the Commonwealth Avenue Bridge and Sylvia Crowe who was involved in the landscape development of Commonwealth Park.
Criterion (i) Indigenous Tradition	-	-

Summary of Heritage Impact

Although the Commonwealth Avenue Bridge is not located within the curtilage, the bridge and its approaches define the western boundary of the Parliament House Vista.

The proposed bridge extension and landscape design of the approaches will have a **minor** impact on the overall heritage values of the Parliament House Vista.

The proposal retains and enhances the slimline appearance and linear horizontal expression of the bridge and interprets the original edge condition. New elements adopt a simple, elegant aesthetic which complement the original design of the bridge to minimise visual impacts.

The landscape has been carefully designed to connect to the existing surrounds and is recessive in respect to the Parliament House Vista.

7.3 Consistency with relevant Heritage Management Plans

7.3.1 Lake Burley Griffin and Adjacent Lands - Heritage Management Plan

The Commonwealth Avenue Bridge, located in the Central Basin of the Lake Burley Griffin and Adjacent Lands study area, meets the threshold for Commonwealth Heritage Values for A, B, E, F, G & H.

The proposal is generally in accordance with the conservation policies contained in Volume 1 of the HMP. The specific policies and actions related to the Commonwealth Avenue Bridge are contained in Volume 4 and the potential impacts discussed in the table below.

Volume 4 - Dams and Bridges

Policies	Actions	Discussion of impacts
Component 2 - Commonwealth Avenue Bridge		
Heritage Conservation		
C2-1 Maintain the structural and design integrity of the bridge and its approaches, to ensure its long-term conservation as an integral aspect of the heritage values of the designed landscape of the Lake Burley Griffin study Area.	C2-1.1 Maintain the white colour of the concrete of the bridge—seek expert advice on appropriate cleaning methods/products for the concrete if require	The white colour of the concrete of the original bridge is retained. The bridge extensions adopt a similar materials and colour palette to minimise impacts.
	C2-1.2 Maintain strip lighting in the bridge railings in good working order	The proposal includes lighting to be integrated into the handrail.
	C2-1.3 Maintain railings in good order to prevent cumulative degradation through corrosion—seek expert advice on appropriate cleaning methods/products for anodized aluminium to ensure cleaning does not inadvertently promote corrosion.	The removal of the original railings and barriers is required in order to improve pedestrian and cyclist access of the bridge, however, this will have a moderate heritage impact. The new railings are simple repetitive elements with a high degree of transparency to minimise impacts on views of the Commonwealth Avenue Bridge from within the Lake Burley Griffin and adjacent lands study area.
	C2-1.4 Undertake regular monitoring of the structural integrity of the bridge and the state of conservation of its component materials to identify areas where corrective or preventative action can be taken to delay degradation of materials.	The maintenance of the bridge is the responsibility of the National Capital Authority, who engage service providers to deliver the maintenance on their behalf.
	C2-1.5 Maintain good pedestrian and cycling access to the bridge, including good directional signage and links to pedestrian/ cycling route	The proposal will improve pedestrian and cycling access to the bridge including good directional signage.
C2-2 Conserve and manage the significant views and vistas from the bridge to the surrounding landscape (see Figure 8.15 in the Heritage Assessment)	C2-2.1 Ensure that any new development within the visual catchment (defined in Figure 8.15 in the Heritage Assessment) of the bridge is assessed in terms of its potential for adverse impacts on the significant views from Commonwealth Avenue Bridge.	Minor - The landscaped approaches to the bridge have been carefully designed to minimise visual impacts on significant views from the Commonwealth Avenue Bridge within the context of the Lake Burley Griffin study area.

Policies	Actions	Discussion of impacts
Interpretation		
C2-3 Interpret the heritage values of the bridge in the context of the Lake Burley Griffin Study Area.	C2-3.1 Determine appropriate locations on or near the bridge to install interpretive media. Use the bridge as a node for the location of low-key interpretive media.	There are opportunities for interpretation adjacent to the viewing platforms at bridge level and adjacent to the relocated Waterloo stones beneath the bridge. It is recommended that a Heritage Interpretation Strategy is developed for the Commonwealth Avenue Bridge that captures the heritage values of the bridge in the context of the Lake Burley Griffin study area.
	C2-3.2 Deliver key messages about the heritage values of the bridge and its setting on Lake Burley Griffin, including the engineering values of the bridges and the lake and the history of their design and construction	
	C2-3.3 Interpretation around Lake Burley Griffin should feature a consistent and distinctive graphic style to be integrated into an interpretive trail around the lake	
Stakeholder Consultation and Involvement		
C2-4 Consult with stakeholder communities when change is proposed which might affect the heritage values.	C2-4.1 Seek the input of those involved in the design and construction of the dam and bridges in major decisions about their future management.	Stakeholder engagement has been undertaken throughout the design process.
	C2-4.2 Undertake an oral history program to record the memories of those individuals involved in the design and construction of the dam and bridge	This is the responsibility of others.

7.3.2 Parliament House Vista - Heritage Management Plan

The Heritage Management Plan for the Parliament House Vista contains an extensive suite of policies and strategies. The potential heritage impacts on the key policies and those associated with the CAB are discussed in the table below.

Parliament House Vista - Heritage Management Plan

Conservation Policies and Strategies	Discussion of Impacts
Landscape Policy 16 General conservation provisions for the landscape. The overall Parliament House Vista study area landscape character will be conserved as parkland with a balance of formal and informal elements. In particular:	
– conserve the underlying geometry of the area, including the major boundaries of Kings and Commonwealth Avenues, and Parkes Way, as well as the Land and Water Axes, and cross axes in the Parliamentary Zone, reinforced by the lake, buildings, plantings, parklands, gardens and road system;	The Commonwealth Avenue Bridge defines the western boundary of the Parliament House Vista and comprises a pair of mirror reversed bridges that read together as one. The proposed additions to the bridge conserve the symmetry of the mirrored pair and the underlying geometry of the Parliament House Vista.
– conserve the design pattern of large landscapes and waterscapes, treed avenues and bridges (although the bridges are currently strictly outside the formal boundaries of the area) providing framing elements, the landmark features along the Land Axis being the Australian War Memorial and Old Parliament House, and the Carillon and Captain Cook Memorial Water Jet as balanced vertical features in the water plane;	The proposed landscape design of the approaches to the bridge are recessive in respect to the Parliament House Vista. The new landscape respects the design pattern of large landscapes and waterscapes, and treed avenues and bridges and landmark features along the Land Axis.
– conserve places of reflection and contemplation (ie. the many parks and gardens);	The landscaped approaches respond sympathetically to the differing character and conditions on each side of the Lake, and respect the places of reflection and contemplation.
– conserve the accessibility of the area, as a gathering and meeting place, and as a beautiful place.	The proposal has been carefully designed to improve the accessibility of the Commonwealth Avenue Bridge for pedestrians and cyclists whilst responding to the differing character of each landing location.
The sweeping vistas will be maintained, including the sight lines along the Land and Water Axes – especially in both directions between Old Parliament House and the Australian War Memorial. The central part of the Land Axis corridor will be kept spatially open and free of structures, trees, visual or other impediments, unless related to temporary activities. The large scale of these views will be conserved.	The sweeping views including the sight lines along the Land and Water Axes will be minimally affected by the proposed alterations. The outer edge of the bridge extension references the profile of the original bridge. The new balustrades are simple repetitive elements with a high degree of transparency similar to the original balustrades to minimise impacts of views.
Particular care will be taken to manage the character of the tree canopy in the Parliament House Vista area regarding the evergreen/deciduous mix. The general aim will be to reinforce tree planting to continue an evergreen framework with contrast provided by plants displaying seasonal differences in foliage, texture, colour or flower characteristics. In addition to generally conserving the trees in the area, particularly conserve important trees and tree groups (eg. commemorative trees).	New trees proposed as part of the landscape design of the bridge approaches, including the new planting of feature trees along Barrine Drive, respect the character of the tree canopy within the Parliament House Vista and reinforce the established planting framework.

Parliament House Vista - Heritage Management Plan	
Conservation Policies and Strategies	Discussion of Impacts
Policy 17 Conservation provisions relating to specific components of the Parliament House Vista. Central Parklands (Commonwealth Park, Kings Park and the Rond Terraces): – conserve the vistas which help structure the spatial composition of the landscape (noted below); – conserve the vistas: – from the main spur of Regatta Point towards the lake and Commonwealth Avenue Bridge; – from the Regatta Point building to the lake; – to and from the east facing slopes of Regatta Point to the lake; – generally from the open areas of the parklands which have views to the Parliamentary Zone, especially along the lakeshore promenade.	The proposal will have minimal impact on the vistas of the Central Parklands including from the main spur of Regatta Point towards the lake and the Commonwealth Avenue Bridge. The landscape of the approaches to the bridge has been carefully designed to respond to the character of each landing area. Additions to the bridge, including the viewing platforms and abutment extensions, have been designed as distinctly contemporary, yet complementary, elements which respond to the architecture of the original bridge yet are identifiable upon closer inspection in accordance with ICOMOS Burra Charter principles. The new elements respect the clean lines and horizontal emphasis of the original mirrored pair of bridges to minimise impacts on views. The viewing platforms, adjacent to the abutments at either side of the bridge, will provide new vantage points to enjoy the sweeping vistas over Lake Burley Griffin.
Commonwealth Park: – conserve the surviving elements of the Crowe masterplan for Commonwealth Park including: – limited vehicle access and surface parking provision with primary access to be via foot or cycle; – areas of individual and distinct landscape and horticultural character along the north of Nerang Pool, linking the two main pedestrian entrances – framed views and vistas to points of special interest; – vistas from the main spur of Regatta Point towards the lake and Commonwealth Avenue Bridge, views from Regatta Point to the lake, vistas to and from the east facing slopes of Regatta Point to the lake; – conserve the surviving elements of the NCDC masterplan for Commonwealth Park as follows: – Rhododendron Garden (Shrub Glade) concept; – informal planting of willows, poplars and elms along the north – shore of the Central Basin; – higher levels of Commonwealth Park - informal groups of eucalypts with pine accents and extensive under planting of wattles; and – Commonwealth Avenue - formal deciduous tree plantings.	The landscape design conserves the surviving elements of the NCDC masterplan within Commonwealth Park. The existing carpark at the north-east approach is proposed to be removed to enhance the character of the parkland setting. If required, there is potential to provide accessible parking spaces. In relation to Commonwealth Park, surviving elements of the Crowe Masterplan and NCDC masterplan are retained unaffected.
Land Axis – conserve the use of native trees along the borders of the axis.	Not applicable.
Implementation Strategies 17.1 The NCA will seek to strengthen the evergreen framework tree plantings along Commonwealth and Kings Avenues in those sections where deciduous trees predominate.	Tree planting along Commonwealth Avenue is outside the scope of the project.

Parliament House Vista - Heritage Management Plan

Conservation Policies and Strategies

Discussion of Impacts

Built Elements

Policy 33 Paths and paving.

Paths and paved areas may generally be conserved or upgraded if desired. However, care will be taken if paths are widened or extended to maintain the overall dominance of soft landscaping (see Policy 59 regarding new paths or paving). In addition:

- careful consideration will be given to the palette of finishes for paths and paving including:
 - a sympathetic selection given the character of the landscaping in the vicinity of the paths or paving;
 - possible reconstruction of paths in cases where a significant landscape design exists but it has lost its paths as part of the significant design (eg. Commonwealth Park);
 - any hierarchy of paths; and
 - the differing landscape characters of component parts of the Vista;
-
- the section of path in the Bog Garden of Commonwealth Park containing round pre-cast exposed aggregate pavers will be maintained as evidence of the original Crowe design; and

There may be some advantage in consistent planning of pedestrian access between the Vista and Parliament House. The Department of Parliamentary Services is also interested in improved access for pedestrians and cyclists.

Policy 34 Roads.

Generally, maintain existing roads unless otherwise noted. Changes may be undertaken, however any adverse impact on heritage values will in all cases be no greater than any existing impact (eg. if replacing an existing service road, the impact of the new road should not be greater than the old road). The heritage values of road alignments which match the Griffins, Holford and NCDC designs will be carefully considered in any proposal to change such roads.

Minor service roads may be removed, or re-aligned subject to an impact assessment. The impact of such roads will at all times remain minimal, and landscape screening may be desirable to reduce any visual intrusion.

It is noted possible changes may include:

- changes to the entry points off Commonwealth and Kings Avenues to the parklands;
- changes to the character of King Edward Terrace, its connection to Commonwealth Avenue, and road widening of Commonwealth Avenue;
- loss of trees in the Commonwealth Avenue median strip (outside the study area – see Policy 42).

The proposed additions to the Commonwealth Avenue Bridge and the design of the landscaped approaches will improve accessibility. This includes generous spaces around the bridge pylons which connect to new viewing platforms and wider shared path connections to improve the safety for cyclists and pedestrians. The new shared paths for each bridge approach respond to the differing character of the surrounding landscape. The design aims to enhance the presentation of the landscaped area surrounding the bridge and to align it with the intent of the broader Canberra design principles.

The palette of finishes for paths and paving complies with this policy.

The proposal retains Commonwealth Avenue with upgrades to the bridge to meet contemporary safety and accessibility standards. To minimise the visual impact of the proposal, the bridge extensions to the outer edges interpret the profile of the original bridge and are separated from the original soffit by a recessed lighting channel.

No changes are proposed to the road entry points.

No loss of trees in the Commonwealth Avenue median strip are proposed.

Parliament House Vista - Heritage Management Plan

Conservation Policies and Strategies	Discussion of Impacts
Setting	
Policy 42 Protection of the Setting	
The NCA will protect the setting of the Parliament House Vista to the extent possible within its powers. Beyond this, the NCA will encourage such protection for those areas which fall outside its responsibilities.	The landscape approaches to the bridge have been carefully designed to respect the setting of the Parliament House Vista. The works will enhance the differing character and condition of the approaches on each side of Lake Burley Griffin.
The NCA will protect the forested character of the surrounding hills, and will protect or encourage protection of views to the hills from within the Parliament House Vista.	Changes to the bridge have been carefully designed to minimise visual impacts on the setting.
Policy 43 Protection of views to and from the Area	
The significant views to and from the Vista will be protected. The significant views include: – from Commonwealth and Kings Avenues, especially the bridges;	Significant views from Commonwealth Avenue, especially from the bridge, are minimally affected by the proposed alterations. The new viewing platforms adjacent to the abutments at either side of the bridge will provide new vantage points to enjoy significant views within the Parliament House Vista.
New Development	
Policy 49 General provisions relating to new development.	
The following general provisions will be implemented:	
– developments will generally maintain public access to parklands and open spaces, and will not close off spaces;	Public access is maintained to the adjacent parklands and open spaces.
– permanent intrusions which block or substantially intrude into significant views/vistas will not be permitted – proposals should carefully consider any visual impact	The proposed bridge extensions interpret the original profile of the bridge whilst the new barriers and balustrades are simple repetitive elements with a high degree of transparency to minimise visual impacts.
– temporary intrusions may be permitted however: – every effort will be made to maintain the values of the area during the period of the intrusion including the visual and aesthetic qualities, and including measures which can be taken during any down-time (eg. when an event has stopped for the day); and – every effort will be made to maintain access to the area affected.	Additional temporary intrusions will be required during construction, however, these will be removed upon completion.

Parliament House Vista - Heritage Management Plan

Conservation Policies and Strategies	Discussion of Impacts
Policy 50 New landscaping, landscape structures and plantings. New landscaping, landscape structures and plantings, not including replacement plantings, may be permitted subject to the following: – that it is consistent with the general landscape conservation provisions and provisions relating to specific components (see Policies 16 and 17); – that it respects the existing tree planting patterns within the area; and – that it is consistent with any management plan for the specific component affected.	The new landscaping and tree plantings proposed at the approaches to the Commonwealth Avenue Bridge respond sympathetically to the differing character and condition at both sides of Lake Burley Griffin. The proposal includes retention of significant trees and plantings in keeping with the general landscape conservation provisions for the Parliament House Vista.
Implementation Strategies 50.1 The educational and botanical interest of Commonwealth and Kings Parks may be enhanced by selective addition of closely related species not yet represented (eg. Dawn and Californian redwoods to complement existing Giant redwoods).	
Policy 59 Paths and paving Limited new paths and paving may be permitted provided that: – every effort is made to provide good quality paths or paving, consistent either for the overall area or within major precincts, or designed in sympathy with the immediate setting; – it is carefully sited, especially in the case of major vistas; – it pays careful regard to and is sympathetic with the geometry of the vicinity (eg. the strong rectilinear geometry of the Parliamentary Zone); – it responds to a substantial demonstrated need or requirement; and – it is consistent with the guidance provided in Policy 33.	New paths are required to provide compliant universal access to the Commonwealth Avenue Bridge. Paths and paving will comply with this policy. The landscaped areas adjacent to the bridge have been degraded over time. The approaches to the bridge are proposed to be renewed with high quality landscape treatments that respond sympathetically to adjacent landscaped spaces to achieve a harmonious composition and provide an appropriate scale and setting for the bridge within the context of the Parliament House Vista, more in keeping with the intent of the Canberra design principles.
Policy 60 Lighting Limited new lighting may be permitted provided that: – every effort is made to provide good quality lighting, either consistent for the overall area or within major precincts, or designed in sympathy with the immediate setting; – it is carefully sited, especially in the case of major vistas; – it responds to a substantial demonstrated need or requirement; and – it is consistent with the guidance provided in Policy 37, especially the proposed lighting plan for the Parliament House Vista.	New high quality lighting has been incorporated into the handrails of the new balustrades and road barriers along with lighting to the underside of the bridge that will achieve a similar lighting effect to the original using more compact, energy efficient luminaires.

Parliament House Vista - Heritage Management Plan

Conservation Policies and Strategies	Discussion of Impacts
Policy 61 Infrastructure Limited new infrastructure may be permitted provided that: – where possible, such infrastructure is included as part of existing or new buildings or other structures; – every effort is made to provide good quality publicly visible finishes for infrastructure, either consistent for the overall area or within major precincts, or designed in sympathy with the immediate setting; – it is carefully sited, especially in the case of major vistas; – it responds to a substantial demonstrated need or requirement; and – it is consistent with Policy 52 regarding any associated minor new buildings.	The proposed bridge extensions will have a minor impact on views of the lake, however, these have been minimised through careful design. The lighting channel at the junction between the original bridge soffit and bridge extension will enable lighting of the original vertical face of the bridge. The new balustrades and road barriers incorporate lighting to achieve a similar lighting effect to the original. The form of the bridge extension reinforces the linear, horizontal emphasis of the bridge with the balustrades and barriers designed as secondary elements that complement the long slender spans and symmetry of the mirrored pair of bridges. High quality finishes are proposed. The ability to maintain the bridge and strengthen the structure to meet current codes is evidence of the quality of the design of the original bridge and the inventiveness of the current proposal which seeks a sustainable outcome with minimal heritage impacts.

Summary of Heritage Impact

The Commonwealth Avenue Bridge defines the western boundary of the Parliament House Vista. The proposed alterations and additions to the Commonwealth Avenue Bridge and its landscaped approaches will have minimal impact on the heritage values identified in the Heritage Management Plan.

The proposed additions, which are limited to the outer edges of the bridge, maintain the linear horizontal emphasis whilst new elements including balustrades and barriers are recessive. The landscape design of the approaches and alterations to the abutments have been carefully sited to conserve major vistas, respond sympathetically to the character of the surrounding landscape and utilise a contemporary, yet complementary palette of materials.

7.4 Discussion of Potential Impacts on Heritage Values Identified in Other Heritage Assessments

The following heritage assessments did not result in the listing of the Commonwealth Avenue Bridge or Commonwealth Avenue, however, have been referenced for completeness.

7.3.3 Commonwealth Avenue Bridge - Heritage Assessment

The Commonwealth Avenue Bridge was recommended for inclusion in the Commonwealth Heritage List in the Heritage Assessment prepared by GML in 2020.

The heritage assessment did not result in the individual listing of the bridge.

Commonwealth Avenue Bridge - Heritage Assessment

Criterion	Statement of Heritage Value	Discussion of Impacts
Criterion (a) Historic Processes	Commonwealth Avenue Bridge is historically significant for its development by the NCDC as part of the Lake Burley Griffin Scheme and represents a significant part of Canberra's planning history, landscape design and development. Historically, Commonwealth Avenue Bridge is significant for its design and engineering significance within Australia.	The proposal respects the historical significance for its development of the NCDC as part of the Lake Burley Griffin Scheme. The Commonwealth Avenue Bridge renewal project will ensure the continued use of the bridge and improve accessibility and pedestrian and cyclist connections. The proposed alterations respect the engineering significance of the bridge within Australia. Removal of the historic Waterloo Bridge stones from their original location on the Commonwealth Avenue Bridge will have a moderate heritage impact, however, relocating them together on the northern foreshore, centred beneath the two bridges with interpretive signage, will strengthen their presence and make them more accessible to the public.
Criterion (b) Rarity	Commonwealth Avenue Bridge is a rare example in Australia of a precast, post-tensioned, concrete bridge, embodying multi-web box segments. The bridge is rare for its design to have a symbolic pride of place in the national capital as part of the Lake Burley Griffin Scheme and for the integration of lighting within the handrail and parapet of the bridge in terms of bridge design within Australia.	The Commonwealth Avenue Bridge defines the western edge of the Parliament House Vista. Although the proposal retains the bulk of the original precast, post-tensioned, concrete bridge, alterations are required to strengthen the bridge and to widen the existing footpath. This will have a moderate heritage impact. However, to minimise impacts, the new additions are restricted to the outer edges of the mirrored pair bridges and the design of the bridge extension interprets the original edge profile. The new balustrades will incorporate lighting within the handrail to achieve a similar lighting effect to the original.
Criterion (c) Research Potential	Commonwealth Avenue Bridge demonstrated the advancement of structural engineering and bridge construction in Australia, particularly in the shift in material from steel to prestressed concrete in major bridge construction, and in the early use of digital computing in the design and structural analysis of its post tensioned concrete superstructure.	Moderate - The proposal involves partial removal of elements of the original precast, post-tensioned, concrete bridge, however, this is limited to the outer edges. Strengthening works are also required to ensure that the bridge meets modern standards which will require some interventions into the original bridge fabric. These will generally be concealed from view. Archival recording is recommended prior to any demolition. There are opportunities for heritage interpretation adjacent to the viewing platforms at bridge level and adjacent to the relocated Waterloo stones beneath the bridge. Interpretation is recommended to highlight the research potential of the Commonwealth Avenue Bridge.

Commonwealth Avenue Bridge - Heritage Assessment

Criterion	Statement of Heritage Value	Discussion of Impacts
Criterion (d) Characteristic	Commonwealth Avenue Bridge is representative of early development of segmented and prestressed concrete bridges in Australia, and of a class of design in modern bridges characterised by long slender spans, and a 'smooth-lined' and 'uncluttered' approach.	Moderate - the form of the concrete, precast extensions to the Commonwealth Avenue Bridge have been carefully designed to minimise impacts on the characteristic qualities of the bridge. They have been designed as modular elements which relate to the layout of the original bridge to achieve a smooth lined, uncluttered union. The form of the precast extensions reinforces the long slender spans and symmetry of the mirrored pair of bridges. The outer edge of the bridge extensions interpret the profile of the original edge whilst the new sloped soffit meets the original bridge edge at a recessed lighting channel which defines the junction between the old and the new. The balustrades and barriers have been designed as secondary repetitive elements which have a high degree of transparency.
Criterion (e) Aesthetic	Aesthetically, Commonwealth Avenue Bridge is highly valued by the Canberra community for its distinctive qualities and architectural design which complements the designed surrounding landscape setting. The elegant and simple design of the bridge is appreciated both as a feature in its own right and as part of the broader designed landscape of the Central Canberra. Commonwealth Avenue Bridge is also valued as a key element in Canberra's design and planning and its visually distinctive and iconic qualities. The views to and from the bridge, both during the day and night, are widely enjoyed and valued by the Canberra community.	A detailed site analysis informed a set of heritage design principles relating to character, siting, scale, form, materials and colour, and detailing. These principles guided the development of the proposed alterations to the bridge and surrounding landscape to ensure that they respected the aesthetic values of the Commonwealth Avenue Bridge which is a key element within Central Canberra. Moderate - Views to and from the bridge, both during the day and night, will be minorly affected by the proposed bridge extensions which are required to improve its accessibility. These impacts have been minimised through careful design which respects the visually distinctive and iconic qualities of the bridge and its landscape setting. The outer edge profile of the bridge extension interprets the original edge profile whilst a lighting channel is housed in the recess at the junction with the original bridge edge which will light the original vertical face of the bridge. The new balustrades and road barriers incorporate lighting which will achieve a similar lighting effect to the original. The new viewing platforms adjacent to the abutments at either side of the bridge will provide enhanced opportunities to enjoy views of the bridge itself and other Canberra landmarks.
Criterion (f) Creative or Technical Achievement	Commonwealth Avenue Bridge demonstrates a high degree of creative and technical achievement in Canberra's building and development by the NCDC in the 1960s, and more generally in Australia's progress in the Post World War II period. It was the first prestressed concrete bridge to employ multi-webbed precast box segments and is a very early example of the use of digital computers in bridge design and to analyse, and compute the structure and stress, influencing the physical design.	Moderate - The proposal retains the bulk of the original precast, post-tensioned, concrete bridge with additional strengthening to achieve current code requirements. Alterations, required to widen the existing shared path, are restricted to the outer edges of the mirrored pair of bridges. The design of the bridge extension interprets the original edge profile and utilises a complementary palette of materials and colours to minimise visual impacts. A recessed lighting channel defines the junction between the old and the new elements to avoid confusion.

Commonwealth Avenue Bridge - Heritage Assessment

Criterion	Statement of Heritage Value	Discussion of Impacts
Criterion (g) Social Values	Commonwealth Avenue Bridge is valued by the Canberra community as a key element within Canberra's designed landscape and planning, that supports movement around the city and brings the community together through public and private experiences. Commonwealth Avenue Bridge is an important landmark within Canberra and is a key part of the National Sorry Day march route.	The proposal will enhance the accessibility of the Commonwealth Avenue Bridge and improve pedestrian and cyclist connections to either side of the Lake. Interpretation is recommended to further enhance the identified social values of the place.
Criterion (h) Significant People	Commonwealth Avenue Bridge is important for its association with the NCDC plus well-known international and national identities from the engineering and architecture profession of the time, including the engineering design firm G. Maunsell and Partners, the architectural firm W. Holford and Partners, and Australian construction firm, M.R Hornibrook Pty Ltd.	The proposal will have minimal impact on the significant associations with G. Maunsell and Partners, the architectural firm W. Holford and Partners, and Australian construction firm, M.R Hornibrook Pty Ltd.
Criterion (i) Indigenous Tradition	-	-

Summary of Heritage Impact

Commonwealth Avenue Bridge is not an individually listed item on the Commonwealth Heritage List.

The proposal involves partial removal of the original fabric in order to strengthen the bridge and improve accessibility. However, this will have a **moderate** impact on the heritage values identified in the GML Heritage Assessment. The bridge extensions and landscaped approaches have been carefully designed to respect the original design of the bridge and to mitigate potential impacts. The proposed additions to the outer edges of the bridge retain the linear horizontal emphasis whilst new elements including balustrades and barriers have been designed to read as secondary elements to the primary form of the bridge. The landscape design of the approaches and alterations to the abutments are recessive in respect to the bridge and are carefully sited to connect to the surrounding landscape. The alterations and additions utilise a contemporary, yet complementary palette of materials and colours to minimise visual impacts.

7.4.1 Roads in National Land - Commonwealth Avenue Heritage Assessment

Commonwealth Avenue, the road which traverses the bridge, was assessed as part of the Certain Roads of National Land in Central Canberra Commonwealth Heritage Assessment in 2014. The assessment, shown in the table below, did not result in a listing of the road.

Roads in National Land - Commonwealth Avenue Heritage Assessment

Criteria	Heritage Value	Discussion of Impacts
Criterion (a) Historic Processes	Commonwealth and Kings Avenues are significant as an integral and major part of Walter Burley Griffin's 1911 plan for the national capital of Australia, and their realisation is associated with the evolution of the cultural landscape of the nation's capital. This landscape has influenced subsequent city planning and road design in Canberra and through the high standards being set for urban road construction elsewhere in Australia.	The additions the outer edge of the Commonwealth Avenue Bridge are required to meet contemporary safety and accessibility standards. The additions have been designed as sympathetic, yet contemporary elements, that respect the history and evolution of the capital's cultural landscape.
	The initial design of the national capital is a highly significant part of Australia's and Canberra's history. Commonwealth and Kings Avenues are two of the three major avenues defining the edges of the National Triangle – the heart of the national capital – and two of the major axes for the organisation of the new city.	The approaches to the bridge are proposed to have renewed landscape treatments that improve the pedestrian and cyclist connections of Commonwealth Avenue as one of the defining edges of the National Triangle.
Criterion (b) Rarity	Commonwealth and Kings Avenues are significant being relatively rare as original and major parts of Griffin's design representing two sides of his planned National Triangle. They help to demonstrate the planning of a national capital which is an uncommon aspect of Australia's cultural history.	Located at the western boundary of the National Triangle, the proposed extensions to Commonwealth Avenue Bridge will have a minimal impact on rarity of Griffin's original design for the national capital.
Criterion (c) Research Potential	The cultural landscape of the national capital, including Commonwealth and Kings Avenues, is significant from a research aspect in providing, through an examination of records and landscape elements, information and an understanding of the landscaping of the capital's cultural landscape, including the potential for assessment of the performance of certain street tree species over time (eg. varieties of elm).	The proposal generally retains significant trees and plantings, along with their relationship to the foreshore of Lake Burley Griffin, and will have minimal impact on the understanding of the capital's cultural landscape.
Criterion (d) Characteristic	Commonwealth and Kings Avenues are significant as good examples in Canberra of an important type of landscape – wide tree-lined avenues – including the layout of the plantings and the mix of native and exotic trees, which are an important feature in Canberra's planning and landscape.	The approaches to the Commonwealth Avenue Bridge are proposed to be renewed with landscape treatments that respond sympathetically to the differing conditions found on each side of the Lake and the surrounding parkland, respecting the existing layout of plantings and the mix of native and exotic trees.
Criterion (e) Aesthetic	There is no evidence of value under this criterion.	-

Roads in National Land - Commonwealth Avenue Heritage Assessment

Criteria	Heritage Value	Discussion of Impacts
Criterion (f) Creative or Technical Achievement	Commonwealth and Kings Avenues are significant as major parts of a landscape/urban design that represented a paradigm shift in urban planning in Australia, and this has probably influenced many subsequent developments – noting that some of the infrastructure is more recent (eg. the bridges). They are an integral part of a place, the designed national capital, acclaimed for its design excellence, which is of importance in the history of Australia and its capital city. While the original design intent has not been fully realised, there are still strong creative values in the place which can be further enhanced. The achievement of the original designer, Walter Burley Griffin, is still apparent in the alignment of the roads and the layout and mix of species used in the plantings are surviving evidence of the major input of Charles Weston to the landscaping of the national capital.	The proposed bridge extensions adopt a simple, elegant aesthetic which emphasises the long slender spans of the original bridge. The form of the proposed bridge extension interprets the profile of the original concrete edge profile at the outer edge and has a tapered soffit. The junction between the old and new bridge elements is defined by a recessed lighting channel. A complementary palette of materials, colours and detailing will minimise the impacts of the bridge extension. The ability to maintain the bridge and strengthen the structure to meet current codes is evidence of the quality of the design of the original bridge and the inventiveness of the current proposal which seeks a sustainable outcome with minimal heritage impacts. Landscaped approaches to the bridge have been carefully designed to improve accessibility for pedestrians and cyclists. The new landscape responds to the differing character of each landing location and its relationship to the foreshore of Lake Burley Griffin and includes the retention of significant trees and plantings. This will ensure that the landscape is harmonious with the treatment of the adjacent foreshore lands.
Criterion (g) Social Values	Not researched.	-
Criterion (h) Significant People	Commonwealth and Kings Avenues are significant because they are major and integral parts of a town planning complex that has outstanding heritage value to the nation because of its special association with its designer, Walter Burley Griffin, a person of great importance in Australia's cultural history. Griffin is of importance because of his principal role in designing the nation's capital. Commonwealth and Kings Avenues are major and integral parts of that design, and Griffin has a special association with the Canberra design as his pre-eminent work in Australia. The avenues also have a special association with Charles Weston who is important because he was responsible for the initial plantings in the Canberra landscape, especially the Parliamentary Zone. The avenues are part of the landscape of the Parliamentary Zone, and share the special association with Weston.	The proposal will have no impact on the significant associations with Walter Burley Griffin and other special associations including William Holford who did extensive work on the design of the Commonwealth Avenue Bridge and Sylvia Crowe who was involved in the landscape development of Commonwealth Park. Interpretation would further enhance these heritage values.
Criterion (i) Indigenous Tradition	There is no evidence of value under this criterion.	-

Summary of Heritage Impact

Commonwealth Avenue is not individually listed as a heritage item however, it is a defining edge of the National Triangle. The proposed Commonwealth Avenue Bridge renewal is required to meet modern codes and improve accessibility. The proposed changes to the bridge have been designed to respect the horizontal emphasis of the original design and to read as secondary elements.

The landscape design of the approaches and alterations to the abutments are recessive in respect to the capital's cultural landscape, are carefully sited to connect to the surrounding landscape and utilise a contemporary, yet complementary palette of materials. The proposal will have minimal impact of the heritage values of Commonwealth Avenue.

7.4.2 Testing the proposal against the Commonwealth Avenue Bridge Heritage Design Principles

The proposal has been tested against the Commonwealth Avenue Bridge Heritage Design Principles as follows:

Commonwealth Avenue Bridge Heritage Design Principles	Comment
Character	
Complementary New elements should be complementary to the original built form.	Complies. The new elements are complementary to the character of the original bridge.
Contemporary New elements should be identifiably new upon closer inspection to avoid confusion between old and new fabric.	Complies. Contemporary elements, such as the viewing platforms and abutment extensions at either end of the bridge, have been carefully designed to be sympathetic to the original bridge, however, will be readily identifiable as new upon closer inspection. A recessed lighting channel clearly separates the original bridge from the bridge extension setting up a dialogue between the old and the new.
Simple, elegant aesthetic A simple, elegant aesthetic should be adopted for new elements which complements the original design of the bridge.	Complies. The bridge extension is simple and elegant to complement the original design of the bridge.
Horizontal emphasis New elements should reinforce the horizontal emphasis of the original bridge when viewed from afar.	Complies. The horizontal emphasis of the bridge is retained. Joints in the new precast elements and balustrades relate to those in the original bridge to further reinforce this.
Mirrored pair - singular expression The existing bridge comprises a pair of mirror reversed matching elements which read together as one. This should be retained in the design of new elements.	Complies. The widened bridges will continue to read as a mirrored pair.
Simple, transparent balustrades The existing balustrades are simple repetitive elements which have a high degree of transparency and read as secondary elements to the primary form of the concrete bridge. This should be retained in the new design.	Complies. Simple transparent balustrades are proposed which are recessive elements that reinforce the horizontal expression of the bridge. The spacing of the posts respond to the rhythm of the precast concrete panels beneath them.
Landscape elements to respond to surrounding context The landscape design of the approaches should be recessive in respect to the bridge and the Parliament House Vista.	Complies. The landscape design of the approaches is recessive.
Siting	
Minimise impacts on views Any changes to the bridge and the landscape approaches should be sited to avoid or minimise impacts on key views.	Complies. Impacts on key views are minimised through siting and the careful design of new elements.
Connect to surrounding landscape The landscape approaches should be carefully sited to connect to the surrounding landscape.	Complies. The landscape approaches have been carefully designed to connect to the surrounding landscape, which differs in each quadrant.

Commonwealth Avenue Bridge Heritage Design Principles	Comment
Scale	
Bridge edge condition The new bridge edge condition should be similar in scale to the existing edge condition, and taper to create similar shadows on the vertical face, to minimise impacts on views.	Complies. The new outer edge of the bridge extension references that of the original edge condition. The soffit of the bridge extension tapers to meet a new recessed lighting channel at the edge of the original bridge. The bridge extension will affect the shadows cast during the day, however, lighting has been added to the junction between the old and new elements to match the bridge's existing lighting effect. This will enhance the slimline appearance and horizontal expression of the bridge and minimise the impact of the bridge extension on views of the bridge at night.
Balustrade and crash barrier heights The height of balustrades and crash barriers should be minimised to minimise visual impacts. Lowering the speed limit would lower the required height of crash barriers. NCA to assess risks associated with alternative options.	Complies. The height of the balustrades and crash barriers has been minimised, within the constraints of compliance.
Form	
Linear horizontal emphasis The linear horizontal emphasis of the bridge should be retained, with integrated lighting in the balustrades.	Complies. The design respects the linear horizontal emphasis of the original bridge and integrates lighting into the balustrades on the outer edges and the road barrier extensions on the inner edges.
Bridge edge condition The renewed edge condition should be similar to the existing edge condition, with the overall form of bridge widened.	Complies The new outer bridge edge condition interprets the original design. The bridge extension reads as a fine tapered element when viewed from below. The old and the new bridge elements are clearly separated by a new lighting channel. The original bridge edge and vertical panels are retained insitu, with minimal change, which is positive from a heritage perspective.
Minimise vertical elements The bridge pylons should remain the only vertical elements on the bridge. Vertical light poles should be avoided on the bridge, and located as far as possible from the pylons if required on the land north and south of the abutments.	Complies. The bridge pylons remain the only vertical elements on the bridge.
Balustrades and crash barriers Finer elements such as balustrades and crash barriers should be designed to read as secondary elements to the primary form of the bridge.	Complies. The balustrades and road barriers read as finer secondary elements with a high degree of transparency which defer to the primary form of the bridge.

Commonwealth Avenue Bridge Heritage Design Principles	Comment
Materials and colour	
Bridge extension The material of the bridge extension should be light in colour to respond to the existing white pre-cast with exposed Quartz aggregate.	Complies. The bridge extension is proposed to be a combination of precast concrete at the outer edges with precast glass reinforced concrete soffit panels. All of the precast concrete will be light in colour and the mix chosen to respond to the colours of the aggregate within the original concrete.
Balustrades and crash barriers The balustrades and crash barriers should also be light in colour - the existing are white and silver.	Complies. A light colour is proposed for the balustrades and crash barriers.
Abutments The abutments are constructed of precast concrete with dark aggregate and Tarana granite cladding. This should be retained and conserved. A similar palette of materials should be used for any alterations.	Complies. The original abutments are retained. Polished precast is proposed for the extensions to the abutments, so they read as contemporary, yet complementary, additions. The colours of the aggregate in the precast will have a complementary relationship to the original Tarana granite cladding.
Pylons The existing pylons feature white painted concrete and Tarana granite. This should be retained and conserved.	Complies. The original granite finish to the pylons is retained, with matching cladding to the base where the ground plane is proposed to be lowered.
Detailing	
Simple contemporary detailing The detailing of architectural elements should be simple and contemporary, and based on an understanding of the original design intent.	Complies. The detailing of architectural elements is simple and contemporary yet based on an understanding of the original design intent.
Dialogue between old and new The detailing of new elements should be based on a clear understanding of the original detailing. Establish a dialogue between the old and the new fabric through detailing.	Complies. There is a clear distinction between old and new fabric. The recessed lighting channel between the original bridge and the bridge extension emphasises this.
Concealed engineering upgrades Engineering upgrades required for bridge strengthening should be concealed where possible. Where exposed a simple clean aesthetic should be adopted, which is co-ordinated with the architectural response.	Engineering upgrades will be generally concealed. Exceptions will be carefully detailed to minimise their impacts. This includes the fixings for the road barriers running along the inside face of the bridges. These will be carefully co-ordinated and detailed to minimise visual impacts. Strengthening is required to the top of the piers under the bridge bearings. The fluted aluminium cladding to the pier tops will be replaced to match the original in all respects upon completion.

7.4.3 Summary of Potential Impacts

Proposed Actions	Potential Impact
Landscaped approaches	The construction activities associated with the renewal of the landscaped approaches to the Commonwealth Avenue Bridge may cause the temporary closure of paths and gathering spaces which could have a direct impact on the aesthetic and social values of the bridge. Similarly, the construction noise will have a temporary impact on the 'peaceful' qualities of the surrounding foreshore parklands. However, once completed the renewal of the landscaped approaches to the Commonwealth Avenue Bridge will improve the experience and enhance its heritage significance. The proposed upgrades to the landscaped approaches of the bridge would be reversible, in so far that new paths and associated infrastructure could be modified or removed in the future. The landscaped approaches to the Commonwealth Avenue Bridge have been designed to improve accessibility and offer new shared pedestrian and cyclist connections. The proposed landscape design is nuanced to respond to the differing character and condition of each landing location and to better respond to the intent of the Canberra design principles. The new network of shared paths aims to create a simplified, safer and logical series of path alignments. This will ensure the approaches to and from the bridge are easy to navigate. Interpretation is recommended to further enhance the identified social values of the place. The palette of plants, materials, finishes and colours has been carefully chosen to fit into this highly significant context. The new paths and stairs have been designed to relate to the existing topography which enables the retention of significant trees and plantings, respecting the setting of the foreshore of Lake Burley Griffin. The species of new trees and planting has been selected and appropriately sited to ensure the proposed changes to the landscape are harmonious with the treatment of the adjacent foreshore lands. Low height retaining walls double as seating elements with stone cladding and timber tops. Proprietary outdoor furniture has been selected to tie in with that used in the surrounding area and signage has been kept to a minimum to minimise visual impacts. Removal of the historic Waterloo Bridge stones from their original location on the Commonwealth Avenue Bridge and relocating them together on the northern foreshore, centred beneath the two bridges, will strengthen their presence and make them more accessible to the public.
Bridge strengthening works	Strengthening the existing bridge to SM1600, the Australian Standard for new bridges, whilst maintaining the aesthetic qualities of the CAB was not considered to be physically or economically feasible. As an alternative, the NCA have agreed to limit the proposed strengthening works to loads required to support the bridge extensions and the associated live loads (T44/L44 loading with pedestrian loading on the walkways) to minimise impacts. To support the increased (T44) traffic loads and enable construction of new five-metre-wide shared user paths on both sides of the Commonwealth Avenue Bridge, structural strengthening is required. This includes reinforcing the internal concrete webs, upgrading the internal diaphragms, and installing new post-tensioning elements. These strengthening works will be generally be contained within the existing box girder and hidden from view once complete, minimising potential visual impacts on views of the bridge from the adjacent foreshore parklands and within the curtilage of adjacent heritage items. The bridge bearings will also be replaced to accommodate increased loads and extend the structure's service life. This requires the removal of the existing fluted aluminium pier caps and their replacement to match existing in all respects upon completion. The proposed strengthening works will have a permanent and direct impact on the heritage values of the Commonwealth Avenue Bridge identified by GML in their 2020 assessment. However, they are required to ensure the long-term sustainability of the structure and its capacity to cater for the current and future traffic demands in accordance with contemporary bridge loading and design standards. The ability to maintain the bridge and strengthen the structure to meet current codes is evidence of the quality of the design of the original bridge and the inventiveness of the current proposal which seeks a sustainable outcome with minimal heritage impacts.

Proposed Actions	Potential Impact
Bridge extensions	The proposal retains the bulk of the original precast, post-tensioned concrete bridge however, removal of part of the outer edges is required to construct the bridge extension. This will have a direct, permanent and irreversible impact on the bridge. Five metre wide extensions are proposed, mirrored on either side of the bridge, to accommodate a wider shared path. These are proposed to be constructed from precast concrete which will complement the original bridge in terms of form, materials, details and finish and separated from the soffit of the original bridge by a recessed lighting channel. The proposed extensions adopt a simple, elegant aesthetic which emphasises the long slender spans of the original bridge. The extensions have been carefully designed to respond to the architecture of the original bridge in terms of character, form, scale, materials and colour and detailing to minimise impacts on key views within the Parliament House Vista and within the curtilage of the Lake Burley Griffin study area. During construction, pedestrian and cyclist access and use of the Commonwealth Avenue Bridge and the adjacent foreshore paths would be restricted, however, this would be temporary. Upon completion, the proposed upgrades to the Commonwealth Avenue Bridge will improve safety and accessibility for pedestrians and cyclists in accordance with current codes. The proposal would also encourage greater use of the bridge by commuter cyclists and enhance walking over the bridge for recreational users. The ability to maintain the bridge and strengthen the structure to meet current codes is evidence of the quality of the design of the original bridge and the inventiveness of the current proposal which seeks a sustainable outcome with minimal heritage impacts.
New balustrades and barriers	Removal of the existing balustrades and road barriers is required to meet current codes. Whilst this could be reversed, it is unlikely. Representative examples of the handrails are proposed to be retained insitu between the bridges at either end, with others are proposed to be retained and stored onsite. The new balustrades and road barriers have been carefully designed as simple, repetitive, secondary elements, with a high degree of transparency, which defer to the primary form of the bridge to preserve its clean lines and uncluttered appearance. New lighting has been incorporated into the design of the handrails and road barriers to achieve a similar lighting effect to the original utilising compact, energy efficient luminaires. This will further enhance key views. The road barriers that run along the inner edges of the bridges are required to be fixed through the original soffit of the bridge in order to meet current standards. These will have a permanent and physical impact, however, will be carefully co-ordinated and detailed to minimise visual impacts.
Widening of the space around the abutments	Widening of the space around the abutments will improve pedestrian and cyclist movement on the Commonwealth Avenue Bridge and provide access to the proposed new viewing platforms. The existing abutments are constructed of precast concrete with dark aggregate and Tarana aggregate cladding whilst the existing pylons feature white painted concrete and Tarana granite. Both are proposed to be retained and conserved with the abutment extensions proposed to be clad in precast concrete panels which are similar in colour to the original granite to minimise visual impacts. New cladding is proposed at the based of the abutments which will conceal the existing concrete stairs and pylon base. Whilst this will have a visual impact, careful design has ensured that this has been minimised. The existing stairs adjacent to the abutments are proposed to be retained insitu and enclosed behind the cladding of the proposed bridge abutment extensions, which could be reversed. However, localised demolition may be required at the bottom tread to construct footings for the new wall.
New cantilevered viewing platforms	New cantilevered viewing platforms are proposed on either side of the abutments. These elements could be considered reversible however, will provide new viewing opportunities, outside of the main flow of traffic on the shared footpath, to appreciate Lake Burley Griffin and adjacent lands. The viewing platforms have been designed as distinctly contemporary elements that complement the original form of the bridge and will have minimal impact on the sweeping views and vistas to and from the bridge.

7.5 Heritage Impact Statement

The Commonwealth Avenue Bridge and its approaches do not have statutory heritage status and is not currently identified as an individual item on any heritage lists. However, the bridge forms part of the official heritage values of Lake Burley Griffin and Adjacent Lands. The bridge is also located immediately adjacent to the Parliament House Vista and defines its western boundary. The significance of the bridge is also identified in the nomination to the Commonwealth Heritage List of Commonwealth Avenue - the road which traverses the bridge.

The heritage values associated with the Commonwealth Avenue Bridge have not been formally identified through a statutory process. However, several assessments have considered the significance of the bridge to relate its importance in the history of the development of Canberra; its location in the context of the landscapes of the Lake Burley Griffin; the creative and technical qualities associated with the design of the bridge; and its social value and special associations with individuals of importance in Australia's history.

The proposed bridge upgrades and the landscape design of the approaches will have a minor impact on the overall heritage values of the Parliament House Vista and the Lake Burley Griffin and Adjacent Lands. The design of the new additions maintain the linear horizontal emphasis of the bridge with lighting incorporated within the handrails to achieve a similar lighting effect to the original. The proposed landscape design of the approaches and alterations to the abutments are recessive in respect to the bridge, are carefully sited to connect to the surrounding landscape and utilise a contemporary, yet complementary palette of materials.

The proposal includes removal of some parts of the original fabric, strengthening works and new additions along the entire span of the mirrored pair of bridges. These changes are permanent and direct and will have a moderate impact on the heritage values of the Commonwealth Avenue Bridge. The proposed works are necessary to ensure the continued and improved public use and access of the bridge. To minimise potential physical and visual impacts the proposed additions have been restricted to the outer edges of the bridge and strengthening works is generally concealed within the multi-web box sections of the bridge. The proposed additions have been designed to read as secondary elements to the primary form and original design of the bridge. The bridge extensions interpret the original edge profile with new balustrades and barriers that adopt a simple, elegant aesthetic.

The ability to maintain the bridge and strengthen the structure to meet current codes is evidence of the quality of the design of the original bridge and the inventiveness of the current proposal which seeks a sustainable outcome with minimal heritage impacts.

The proposed Commonwealth Avenue Bridge Renewal works will have a permanent, direct and minor to moderate level of heritage impact on the fabric of the bridge. However, once completed the proposed works will ensure that the bridge meets contemporary safety and accessibility standards. The proposal will also improve the landscape approaches and enhance the heritage values of the bridge within the context of Lake Burley Griffin and parkland character of the surrounding foreshore.

On balance, the level of impact associated with the proposed works to the Commonwealth Avenue Bridge and its approaches is considered to be below the significant impact threshold within the meaning of the EPBC Act and therefore a referral is not warranted. Consultation with the Department of Climate Change, Energy, the Environment and Water may be prudent given the likely public interest in the proposed works.

7.5.1 Suggested Mitigation Measures

The following mitigation measures may assist in reducing the minor to moderate impact on the Commonwealth Avenue Bridge, environment and heritage values during the design development and construction phases:

- Undertake community consultation regarding the proposed works, the construction period, potential benefits of the works and how the heritage values of the bridge are to be conserved.
- Carefully plan the construction period and, if possible, incorporate strategies that will retain access to parts of the bridge during construction.
- Prepare a heritage induction to ensure that all construction personnel are aware of the heritage values of the bridge and its surroundings and to avoid unintentional impacts during construction/implementation.
- A photographic archival record of the bridge should be undertaken prior to the demolition of any elements. This could be in the form of a point cloud survey, drawings and photographs, stored together with the original drawings of the bridge. Views of the bridge from key locations such as Regatta Point should be included.
- Integrate heritage interpretation into the bridge renewal. Commission a Heritage Interpretation Plan which celebrates the heritage values of the place. Consider the integration of interpretive panels at each viewing platform and adjacent to the relocated Waterloo stones beneath the bridge. Historic photographs and information on the heritage values of the bridge could be included on construction hoardings to provide a visually attractive and informative display during the construction period.
- Implement appropriate heritage protection measures to ensure that the original fabric of the bridge and the surrounding landscape are not damaged during works.
- Create buffer zones around trees to be retained to avoid risks of physical impact.
- Carefully site and select new lighting that is consistent and/or sympathetic to the character of the bridge and its approaches.
- Interpret the raised plinth around the pylon, proposed to be removed, in ground plane of the bridge.
- The road barriers that run along the internal edges of the bridge require fixings through the soffit of the original bridge to meet code. These should be carefully co-ordinated and detailed to minimise visual impacts.
- Retain and conserve portions of the original balustrade and inner handrails between the bridges as evidence of original detailing.
- Retain representative samples of elements to be removed including sections of the original balustrade. Store in rooms located beneath existing abutment.
- Remove intrusive signage attached to pylons.

Figure 60: 2014. Commonwealth Avenue Bridge, Canberra ACT.

Source: Flickr, Evynn D Clifford, 6 September 2014, <https://flic.kr/p/oQB9gn>



Appendix A

Additional Photographs

Additional Photographs

The following photographs of the site were taken by TZG architects between 16th September and 23 November 2023.



Figure 61: Commonwealth Avenue Bridge viewed from Henry Roland Park



Figure 64: Commonwealth Avenue Bridge viewed from Barrine drive.



Figure 62: Commonwealth Avenue Bridge viewed from Henry Roland Park



Figure 63: Commonwealth Avenue Bridge viewed from Henry Roland Park



Figure 65: Commonwealth Avenue Bridge viewed from Barrine Drive looking towards Parliament.



Figure 66: Base of Pylon situated NW of bridge.



Figure 67: Stairs and embankment between the 2 bridges.

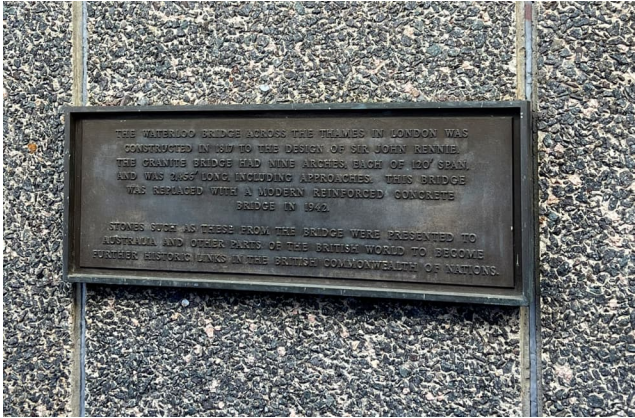


Figure 68: Plaque located between 2 bridges.



Figure 70: View of underside of eastern bridge on the city side.



Figure 69: View of western bridge .



Figure 71: Centred view of eastern bridge soffit and pier.



Figure 72: Detail shot of bridge edge showing precast panelling.



Figure 73: Detail shot of bridge edge showing precast panelling.

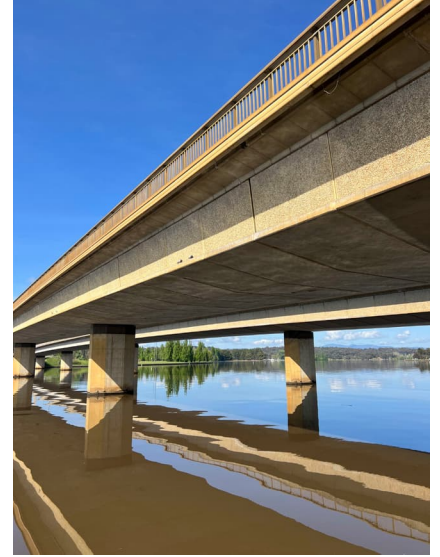


Figure 74: Detail shot of bridge edge showing precast panelling on eastern bridge.



Figure 75: View from Commonwealth Park.



Figure 76: NE stair and Pylon.



Figure 77: NE junction of bridge, stair and Pylon.



Figure 78: NE Pylon and stair from across Barrine Drive.



Figure 79: Stair connection to Commonwealth Park.

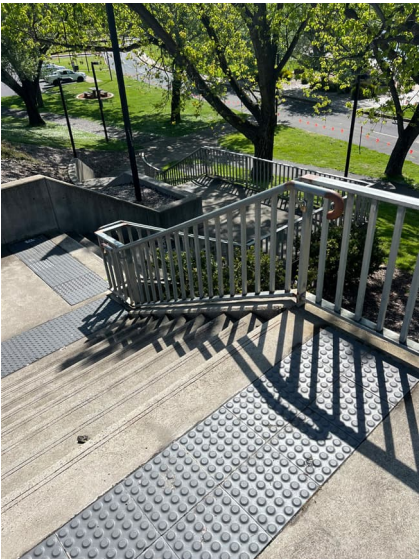


Figure 80: Stair connection to Commonwealth Park.



Figure 81: Stair arrangement around plinth to pylon.



Figure 82: Top of Stair connection to Commonwealth Park.



Figure 83: Balustrade detail to plinth.



Figure 84: Approach to bridge southbound.



Figure 85: View of approach to bridge southbound.



Figure 86: Current barrier termination.



Figure 87: Barrier detail on southbound side.



Figure 88: Pedestrian/ cycleway pinch point southbound.



Figure 90: Balustrade junction on movement joint of bridge.



Figure 89: Pedestrian/ cycleway pinch point southbound.



Figure 91: Movement joint of bridge looking west.

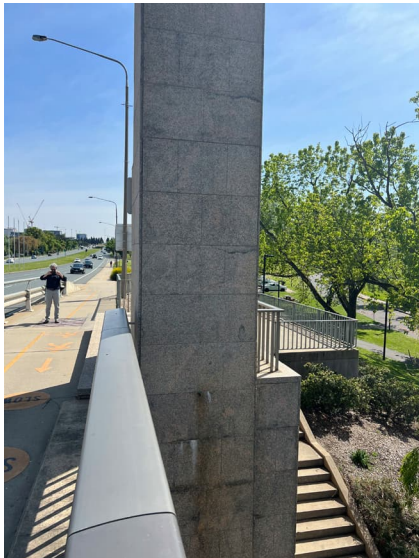


Figure 92: NE Pylon southern face.



Figure 93: Pedestrian/ Cyclepath southbound.

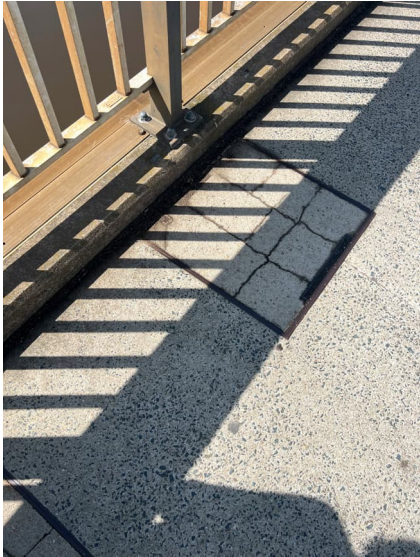


Figure 94: Balustrade fixing detail.



Figure 95: Balustrade lighting detail.



Figure 96: Southern Pylons viewed from southbound bridge.



Figure 97: SW Pylon across lanes.



Figure 98: SE Pylon stair case.



Figure 99: SE stair and ramp access to bridge.



Figure 100: Section between Commonwealth Avenue Bridge and Flynn Drive bridges.

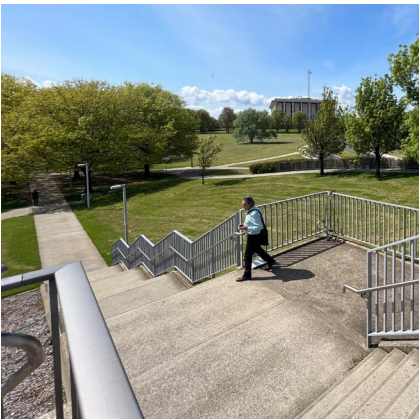


Figure 101: Stair connection to formal oak tree avenue.



Figure 102: Flynn Drive Bridge detail.



Figure 103: Plinth and stair detail SE Pylon.

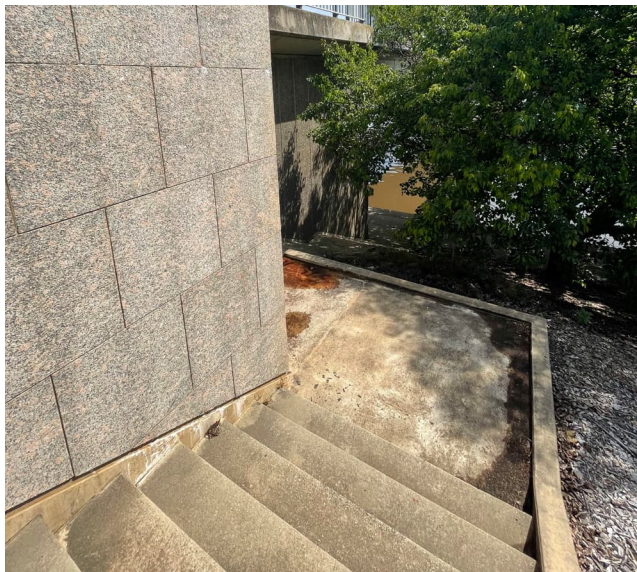


Figure 104: Plinth and stair detail SE Pylon.



Figure 105: Stair connection to formal oak tree avenue.



Figure 106: Rammed path access to bridge.



Figure 108: Desire lines coming off rammed path access to bridge.



Figure 109: Commonwealth Avenue bridge viewed from oak tree avenue.



Figure 107: Bridge viewed from Australians of the Year walk.



Figure 110: Bridge viewed from lake foreshore walk.



Figure 111: Detail bridge soffit with water reflection.



Figure 112: Soffit of southbound bridge showing hole with lighting.



Figure 113: View of northbound bridge.



Figure 114: Looking north towards the City Centre.

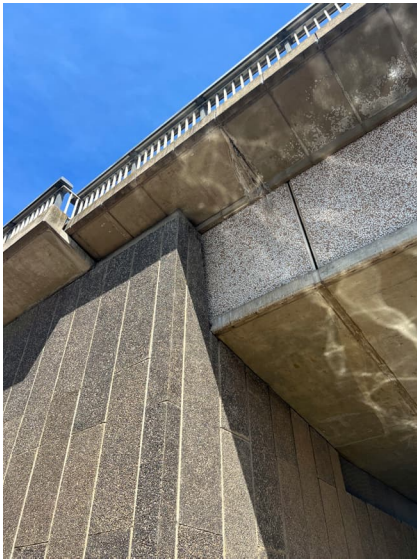


Figure 115: Southern bridge abutment.



Figure 116: Looking north towards the City Centre.



Figure 117: View of southbound bridge.



Figure 118: Detailed view of bridge connection and abutment.



Figure 119: View of abutment.



Figure 120: View of bridge from West Basin loop.



Figure 121: Flynn Drive cycle way.



Figure 122: View northbound bridge.



Figure 125: Connection from Flynn Drive cycle way onto bridge north bound.



Figure 123: Connection from Flynn Drive cycle way onto bridge north bound.



Figure 124: Flynn Drive bridge pathway.



Figure 128: Northbound pathway.



Figure 126: Substation on SW corner of bridge.



Figure 127: Current barrier detail north bound.



Figure 129: Pathway northbound on Civic side.



Figure 130: Pathway detail of pavement, barrier, balustrade and plinth.



Figure 131: Balustrade detail.



Figure 132: Termination detail of north bound barrier.



Figure 133: NW Pylon and pathway.



Figure 136: NW Pylon detail.



Figure 135: NW Pylon detail.



Figure 134: NW Plinth and Pylon detail.



Figure 140: Termination detail of northbound barrier.



Figure 141: Cycle path termination northbound.



Figure 137: Base detail of widened path.



Figure 138: Edge detail abutment showing balustrade.

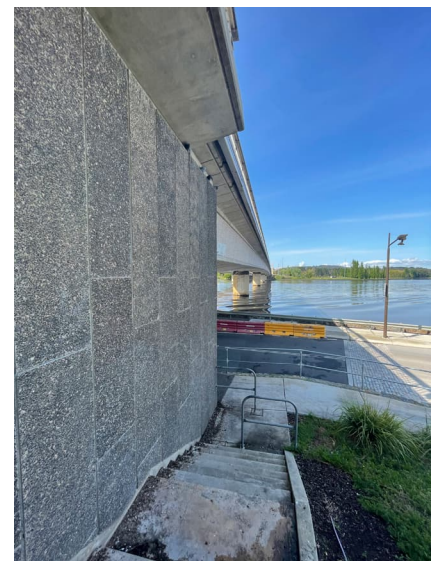


Figure 139: NW stair leading to Barrine Drive.

Appendix B

Heritage Listings

B.1 National Heritage List

National Heritage items in the vicinity of the Commonwealth Avenue Bridge include:

	Name of Item	ID No.
1	Australian War Memorial and the Memorial Parade.	105889
2	High Court - National Gallery Precinct.	105745
3	Old Parliament House and Curtilage.	105774
4	Australian Academy of Science Building.	105741

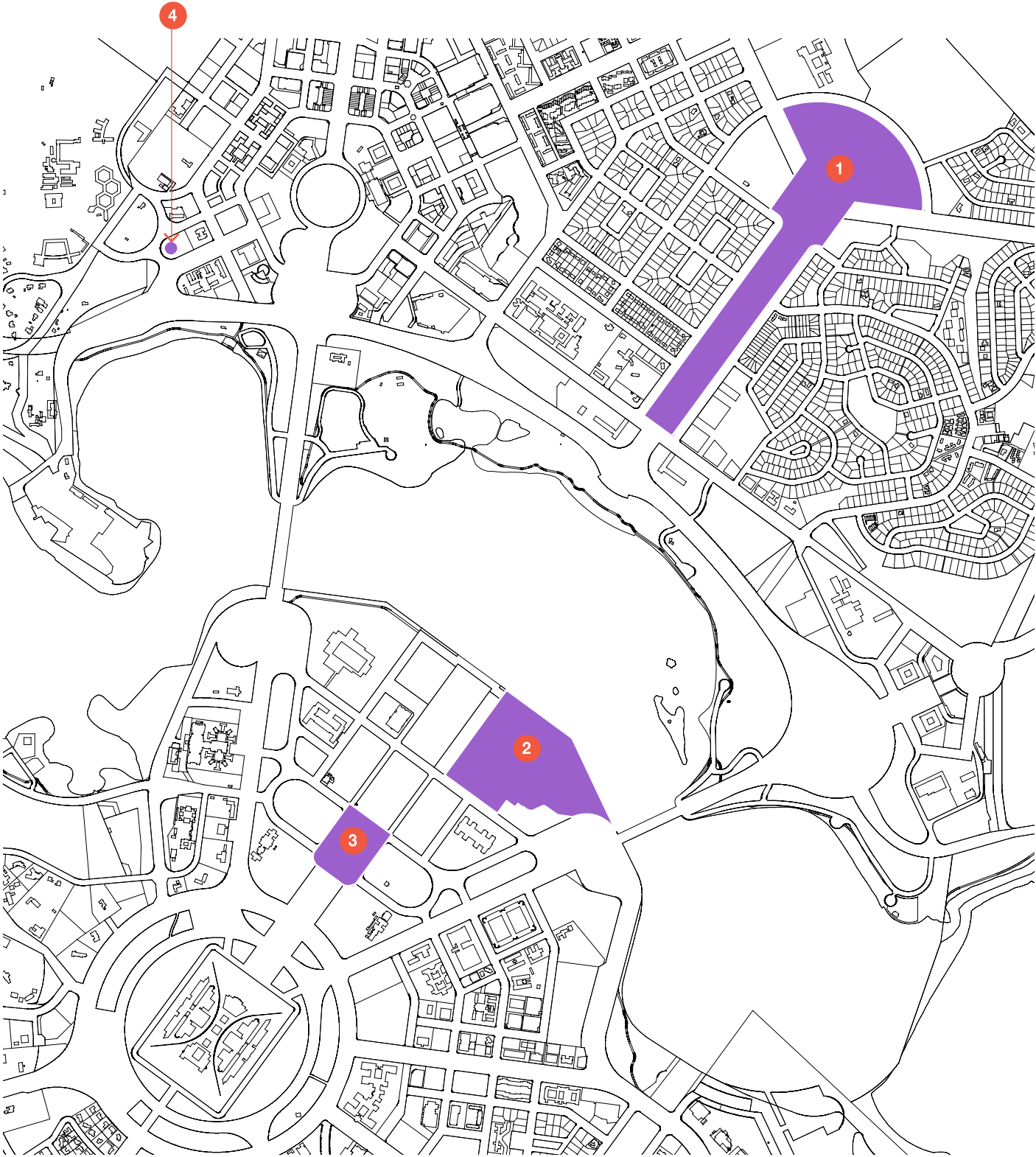


Figure 142: National Heritage Items diagram.
Source: ACT Government, online.

Legend

 National Heritage List

B.2 Commonwealth Heritage List

The Commonwealth Avenue Bridge is located within Lake Burley Griffin and Adjacent Lands heritage curtilage. It also defines one side of the Parliament House Vista curtilage.

There are many other Commonwealth Heritage items in the vicinity of the Commonwealth Avenue Bridge. These include:

	Name of Item	Place No.
1	Parliament House Vista	105466
2	Lake Burley Griffin and Adjacent Lands	105230
3	National Library of Australia and surrounds.	105470
4	High Court of Australia.	105557
5	National Gallery	105558
6	John Gorton Building.	105472
7	National Rose Gardens.	105473
8	Old Parliament House and curtilage.	105318
9	Old Parliament House Gardens.	105616
10	Acton Peninsula Buildings.	Various
11	University House and gardens.	105190



Figure 143: Commonwealth Heritage Items diagram.
Source: ACT Government, online.

- Legend**
- Commonwealth Heritage List
 - Commonwealth Heritage List
Parliament House Vista

Lake Burley Griffin and Adjacent Lands

The Commonwealth Avenue Bridge lies within the boundary of the Lake Burley Griffin and Adjacent Lands final values boundary.

The following assessment of significance has been extracted from the Heritage Management Plan (HMP) for Lake Burley Griffin and adjacent lands prepared by GML Heritage, with aspects relevant to the Commonwealth Avenue Bridge Renewal Project highlighted orange in the text that follows:

The decision to list Lake Burley Griffin and Adjacent Lands on the Commonwealth Heritage List, pursuant to section 341JI of the *Environmental Protection and Biodiversity Conservation Act 1999* was reached on 8 April 2022. The Commonwealth Avenue Bridge lies within the curtilage of this listing which includes about 6640ha, comprising the following:

1. Lake Burley Griffin, extending to the outside walls where these exist or otherwise to a line drawn at the normal lake level, except that the line shall be drawn across the entrance to Lake Burley Griffin of the Molonglo River, Jerrabomberra Creek and Sullivans Creek. All islands within Lake Burley Griffin are included except for Aspen Island and the Carillon.
2. Scrivener Dam, **Commonwealth Avenue Bridge** and Kings Avenue Bridge.
3. Comprising Blocks 1, 3, 4, 5 Section 54 Parkes; Block 2 Section 38 Barton; Blocks 1, 2, 3, 4 Section 89 Acton; Block 1 Section 126 Yarralumla; Block 1 Section 129 Yarralumla; Block 1432 Central Canberra District.
4. Stirling Ridge and Attunga Point Yarralumla comprising Block 3 Section 128, Block 4 Section 22, Block 13 Section 108 Yarralumla.
5. Yarramundi Point comprising Block 1339, 1299, 1338, 1300, 1343 Canberra Central District.¹⁹

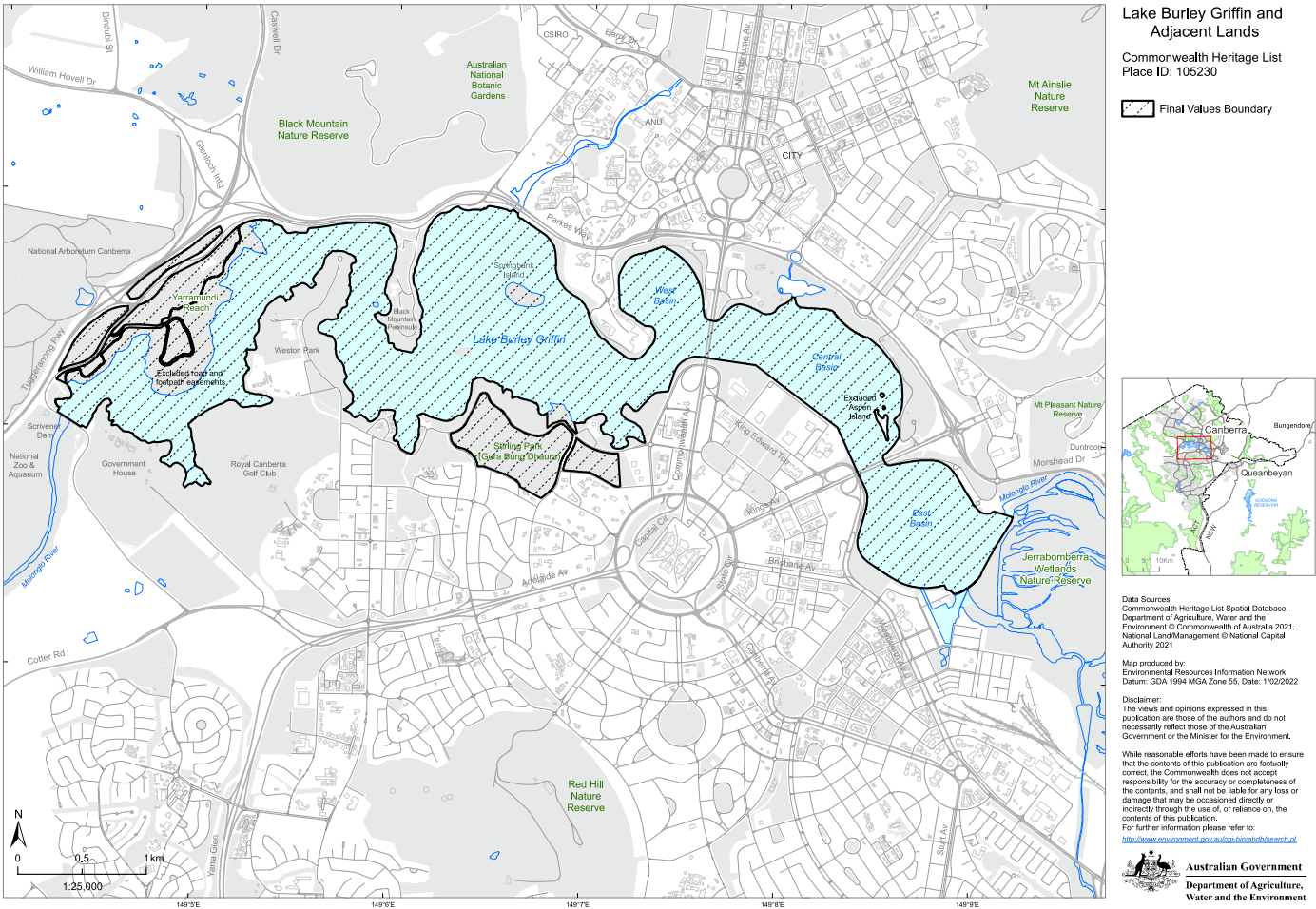


Figure 144: Lake Burley Griffin and Adjacent Lands Final Values Boundary.
Source: Department of Agriculture, Water and the Environment, available online.

19: GML Heritage, Heritage Management Plan (HMP) for Lake Burley Griffin and adjacent lands.

Parliament House Vista

Summary of Statement of Significance

Design Importance

The Parliament House Vista is the central designed landscape of Canberra, that expresses the core of the Walter Burley Griffin design vision for Canberra. It is highly significant for its symbolic representation of the democratic interchange between the people and their elected representatives and its use of the natural landforms to generate a strong planning geometry. It expresses a masterly synthesis and ordering of topographical features and administrative functions to meet the needs of a national capital. The vista landscape embraces the central land axis and part of the water axis and most of the Parliamentary Triangle including the area known as the Parliamentary Zone. The significance incorporates Walter Burley Griffin's vision for the area, as the focus of Commonwealth parliamentary and governmental activity as well as national cultural life. This vision has been partly realised and the place is the setting for major, government, judicial and cultural institutions. The northern extent of the vista of Anzac Parade and the Australian War Memorial, despite differing from the original plan, are significant for memorial purposes developed in response to the needs of the people. Despite being modified to a lesser degree to accommodate the impact of wars on Australians, the Vista now presents as a philosophical concept expressed in urban planning, landscape and architecture, to achieve a grand vision of a symbolic, unified and visually dramatic place (Criterion F.1) (Australian Historic Themes 7.4 Federating Australia, 8.10, Pursuing excellence in the arts and sciences)

The Parliament House Vista incorporating the central national area, is the core of the most ambitious and most successful example of twentieth century urban planning in Australia. It is important for its design pattern with large landscape and waterscape spaces with their enframement by treed avenues and at the lake by bridges, the terminal vista features of the Australian War Memorial and Mount Ainslie at the northern end and Parliament House at the southern end, with the Carillon and Captain Cook Jet creating balanced vertical features in the water plane (Criterion F.1).

The spatial setting of the buildings as features in the landscape reflects Beaux Arts planning concepts and the building masses and their careful location complement the significance of the overall landscape pattern. Across the Parliamentary Triangle, the buildings of Old Parliament House, and East and West Blocks provide a distinctive Stripped Classical architectural patterned horizontal band, that contributes to the symmetrical overall patterning of the landscape. At a higher elevation, Parliament House is a significant feature terminating the southern end of the land axis, culminating the classical landmark image of the triangle apex. The John Gorton Building (the former Administrative Building) and the Treasury Building balance the composition on King George Terrace while at the Lake edge the post-war architecture of the National Library of Australia and the High Court - National Gallery Precinct are prominent modern architectural forms and have a significant historical layering effect. The Portal Buildings provide balanced building massing at the southern end of Anzac Parade (Criterion F.1).

Avenues of trees along the terraces, roads and pathways of deciduous, pine, and eucalypt species provide colour,

character, and contrast, emphasising the significance of the formal symmetrical design. Lombardy Poplars in groups of four, form sentinels at key locations. Water fountains, and statues also reinforce the significance of the total design pattern of the place. On the northern expanse of the vista the landscape pattern is the wide sweeping avenue space emphasised by red scoria gravel in the central strip and edged by large Blue Gums (Criterion F.1).

The vista landscape is significant for its richness of features. Many places in the Vista area have individual heritage significance for their architectural design and historic importance. These include Old Parliament House and Curtilage, East Block Government Offices, West Block and the Dugout, John Gorton Building, the National Library of Australia, the High Court of Australia, the National Gallery of Australia, Blundells Farmhouse, Slab Outbuildings and Surrounds, the Australian War Memorial, the Portal Buildings, The High Court - National Gallery Precinct, the Carillon, and King George V Memorial (Criteria F.1 and A3).

Within the area are important parklands and gardens enhancing the significance of the landscape setting. These include the Gardens of Old Parliament House (the former Senate and House of Representative Gardens), important for expressing their history in plantings, sports facilities, modest features and layout pattern. Also important is the Sculpture Garden of the National Gallery, a significant native style garden, and the National Rose Gardens. Commonwealth Park, the Peace Park, the Lakeshore Promenade and are important landscapes for their design and popular use (Criteria F.1 and A3.)

Adding to the richness of the place is the manner in which Griffin's vision of democracy has also been emphasised, as places within the area have become identified with political protest actions by people, as exemplified in the significant Aboriginal Embassy site (Criteria F.1 and A3).

Historic Importance

The central national area of Canberra is strongly associated with the history of politics and government in Australia and the development of Canberra as the Australian National Capital. It is significant as the home of the Commonwealth Parliament, the focus of the Federal Government since 1927, initially in the Old Parliament House and from 1988 in the new Parliament House. The various government buildings in the area reinforce the association with Australian government and political history, including East and West Blocks, the Administrative Building, the Treasury Building and the High Court. The latter, being set apart from Parliament House but facing it is symbolic of the judicial role of the High Court as a physical representation of the separation of powers (Criterion A.4, Australian Historic Themes: 7.2 Developing institutions of self-government and democracy).

The central national area has strong links with the planning and development of Canberra as the Australian Capital. The relocation of Parliament to Canberra and the central national area in 1927 was the focus of an intense period of development

of the new city and gave purpose to Canberra as the Nation's Capital. Over time this association has been reinforced by the construction of major government buildings in the area, such as the Treasury Building, the Administration Building (now John Gorton Building), the Portal Buildings and latterly the new Parliament House, as well as the construction of major cultural institutions. The area as intended has become the focus of Commonwealth parliamentary and governmental activity as well as, to some extent, national cultural life. (Criterion A.4) (Australian Historic Themes: 4.1 Planning urban settlement, 7.2 Developing institutions of self-government and democracy, 7.3 Federating Australia).

The area has been associated since 1941 with the development of Australian cultural life and national identity through the presence of such institutions as the Australian War Memorial, the National Gallery of Australia, the National Science and Technology Centre and the National Library of Australia. The national cultural institutions reinforce the national character of the area and are an important symbolic group in Australia's national cultural life. The Australian War Memorial and Anzac Parade memorials and, to a lesser extent, the other memorials have and continue to play a very important role in fostering aspects of national identity, in particular the Australian War Memorial through its role as a National Shrine for all Australians (Criterion A.4, Australian Historic Themes 8.8 Remembering the Fallen).

Social Importance

The area has strong and special associations with the broad Australian community because of its social values as a symbol of Australia and Federal Government. The values have developed over many years since Canberra's creation and the relocation of the Parliament in 1927 gave them a special focus. The special association is reflected in the use of the area as the location for national memorials, the number of tourists who have and continue to visit the area, the media portrayal of Canberra and federal politics and the continuing use of the area as the venue for occasional ceremonies and political protests by sections of the community. Memorial features include sculptures, plaques, commemorative trees, water features and gardens. The collection of sculptures, associated art and design which comprise the Anzac Parade Memorials, give expression to key aspects of the history of Australia's armed forces and Australia's war involvement, and possess high social value (Criterion G.1, Australian Historic Themes 8.8 Remembering the fallen, 8.9 Commemorating significant events and people).

The special association for the community is also the use of the area by people demonstrating against government decisions. The central national area, particularly Parkes Place in front of Old Parliament House, has been used for countless demonstrations (Criterion G.1).

The landscape spaces are important for social activities of visitors and Canberra residents and these include Canberra festivals, water events, national events and parades such as Anzac Day Parade and the Dawn Service, and other commemorative services (Criterion G.1).

Aesthetic Value

The place has high aesthetic significance due to the visual impact of the extensive open sweeping vista along the land axis that can be experienced in two directions, the designed axes set within natural features of forested hills, patterns and textures of architectural massing accentuated by planned open spaces, water planes and tree plantings that are arranged across the area. The vista is significant for its visual drama with its ability to engage viewers in the visual perspective of the sweeping vista to the terminal features. The aesthetic significance is also a result of the large scale qualities of the axes, including the open green spaces, combined with patterns and symmetrical characteristics of the road networks and numerous designed smaller attributes. These include the rose gardens, the Old Parliament House Gardens, Commonwealth Park, the street tree plantings, the lake-land interface and the Sculpture Garden of the National Gallery, and many intimate spaces rich in texture, colour, fragrance and in some cases, art works and water features (Criterion E1).

Associational Value

The central national area has a special association with its designer, Walter Burley Griffin. Griffin is an important figure in Australia's cultural history for his overall design of Canberra as the Nation's Capital. The special association between the central national area and Griffin results from the area being the centrepiece of the planning geometry for Canberra and perhaps the only part of his Canberra plan to survive relatively intact. The area has a strong association with Marion Mahoney Griffin who prepared the perspective drawings of the Vista. The Vista area has a strong association with numerous architects and planners, in particular John Smith Murdoch, Chief architect of the Commonwealth Government, and Thomas Charles Weston, Superintendent of Parks, Gardens and Afforestation in Canberra, and notable planners of the National Capital Development Commission such as Sir John Overall, Peter Harrison and Paul Reid (Criterion H.1).

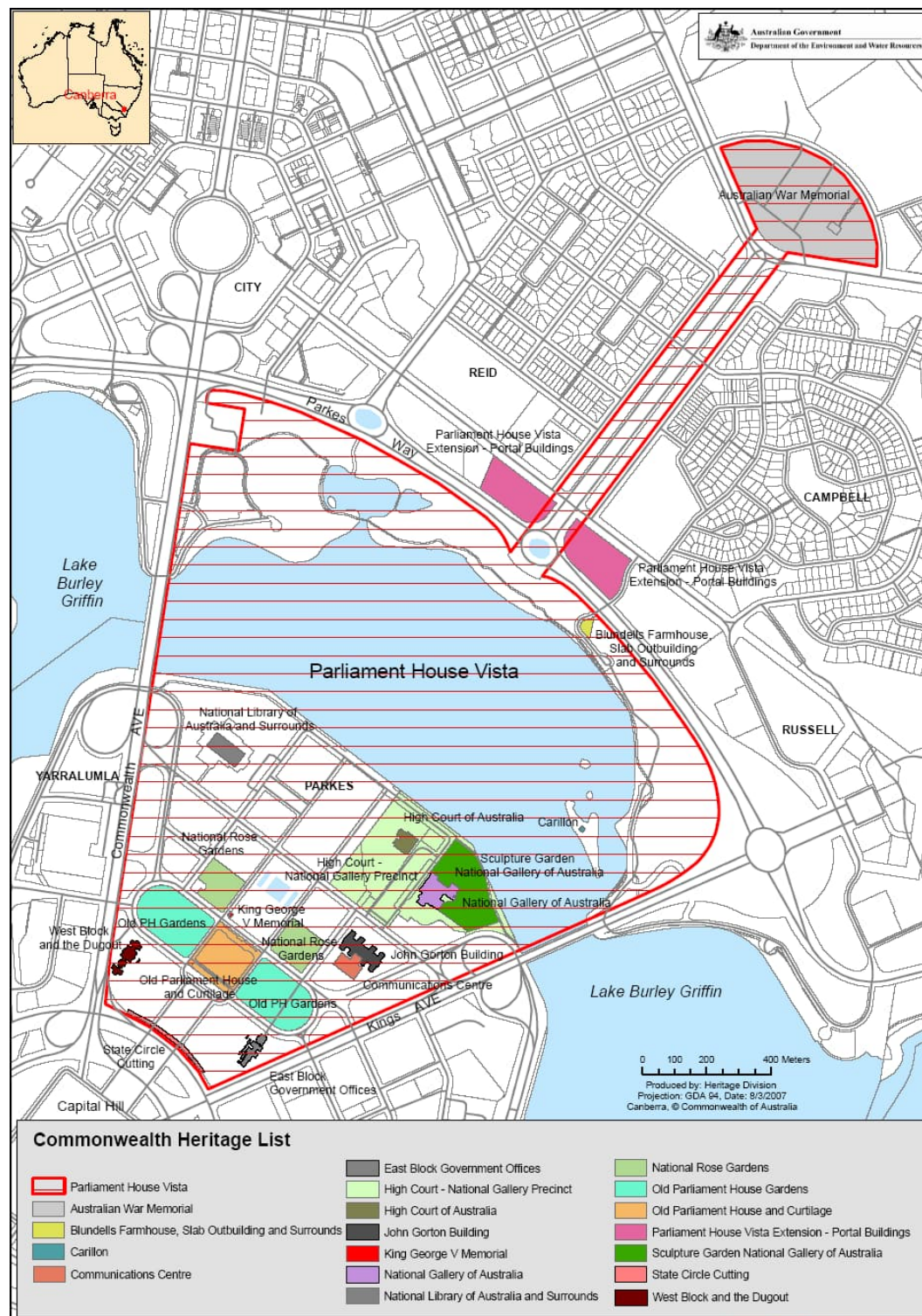


Figure 145: The Parliament House Vista Commonwealth Heritage boundary outlined and hatched in red, showing places of heritage significance within the vista.

Source: Department of the Environment and Water Resources, 2008.

B.3 ACT State Heritage Register

The study area is located within the vicinity of a number of items listed on the ACT State Heritage Register. The following Heritage Items are located in close proximity to the site:

	Name of Item	ID No.
1	Albert Hall	429
2	Hotel Canberra	437
3	National Rose Gardens	439
4	Lennox House	447
5	Captain Cook Water Jet	Nominated



Figure 146: ACT State Heritage Listing Map.
Source: ACT Government, online.

Legend

 ACT Heritage Register

Appendix C

Relevant Heritage Management Plans

C.1 Lake Burley Griffin and Adjacent Lands - Heritage Management Plan, October 2009

The Lake Burley Griffin and Adjacent Lands—Heritage Management Plan, Volume 1, Lake Burley Griffin—Final Report, October 2009 includes general conservation policies relevant to the Project, whilst Volume 4 - Dam and Bridges contains Specific Policies related to the Commonwealth Avenue Bridge.

Volume 1 - General Conservation Policy

Lake Burley Griffin and Adjacent Lands - Heritage Management Plan, October 2009

Policies	Actions	Priority	Timing
1. Heritage Conservation			
1.1 Conserve the identified heritage values of the Lake Burley Griffin Study Area in compliance with the requirements of the <i>EPBC Act, the Australian Capital Territory (Planning and Land Management) Act 1988 and the Nature Conservation Act 1980 (ACT)</i> (in accordance with the 1998 MOU).	1.1.1 The NCA should formally adopt this HMP as the basis for future management of the heritage values of the Study Area.	High	By 2011
	1.1.2 The identified heritage values of the Study Area (shown in Table 1.1) will be the principal basis for all future planning, management and impact assessment of activities or actions.	High	Immediately
	1.1.3 Any proposal or action that will or is likely to have a significant impact on the environment including the identified Commonwealth and National heritage values of the Study Area (Table 1.1) will require a referral to the Minister for Environment, Heritage and the Arts.	High	As required
1.2 Conserve the identified heritage values of the Lake Burley Griffin Study Area in line with this Heritage Management Plan (HMP).	1.2.1 All the components of the Study Area (identified in Table 1.1) should be added to the NCA's register of places of Commonwealth heritage value, in accordance with s341ZB (1) of the <i>EPBC Act</i> .	High	By 2011
	1.2.2 The NCA should consider the nomination to the Commonwealth Heritage list of all the components of the Study Area, identified in Table 1.1, preferably as a group making up a significant cultural landscape.	Medium	By 2014
	1.2.3 The NCA should consider the nomination of the Lake Burley Griffin Study Area to the National Heritage list. This consideration should involve a review of an appropriate curtilage for a National list nomination, taking into account the need for the integrated management of central Canberra's significant cultural landscape.	Medium	By 2014
1.3 Implement the policies and actions set out in this HMP, in line with the identified priority and timing guidelines.	1.3.1 Implementation actions are set out below in Section 5 Documentation, Monitoring and Review.	High	Immediately
1.4 All planning or strategic documents or proposals with the potential to affect the Study Area should refer to this HMP for primary guidance on the management of its heritage values.	1.4.1 Promote a holistic management approach to the Study Area by ensuring that proposals are assessed in terms of their potential to impact on the heritage values of the Study Area as a whole. The aim of this policy is to promote a co-ordinated rather than a piecemeal approach to management.	Medium	As required
	1.4.2 Ensure all proposals for development or activities around the foreshore of the lake are assessed in terms of their potential to impact upon (positively or negatively) the identified heritage values of the Study Area.	High	As required
	1.4.3 Ensure new developments contribute to the qualities and heritage values of the Study Area as a designed, symbolic landscape of national significance.	High	As required

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Policies	Actions	Priority	Timing
1.5 Co-ordinate the heritage management of the Study Area with the heritage management plans for places and landscapes which have an integral relationship with the heritage values of the Study Area.	1.5.1 Co-ordinate this HMP with the heritage management plans for: Blundells' Cottage, High Court and National Gallery Precinct, Carillon and Aspen Island, Central Parklands, the National Library, Parliament House Vista, Australian War Memorial and Old Parliament House. Also ensure co-ordinated management with other places with heritage values strongly linked to the Study Area including Lennox Gardens, Government House, Westbourne Woods, Weston Park, Yarralumla Nursery, Black Mountain, Acton Peninsula, Commonwealth Place, Bowen Park, Kingston foreshore, Jerrabomberra wetlands, Grevillea Park and Molongolo Reach.	Medium	As required
1.6 Conserve and manage the integrity of the formal design elements of the study area that derive from the Griffin plan and the later design and construction of the lake and its foreshores, influenced by Holford and the NCDC.	1.6.1 Conserve the integrity of the axes, vistas and visual links with the surrounding landscape (including Black Mountain, Mount Ainslie and Red Hill) and conserve the visibility of the lake from public open spaces and public institutions. This will support the continued appreciation of the lake as a unifying and linking element for the close and distant topography in the landscape and as the setting of the surrounding buildings and open space areas.	High	Immediately
	1.6.2 Conserve the visibility of the waters of the lake in views from within Canberra, including the retention of open views to the water from roads and other public use areas (Commonwealth Avenue, Parkes Way, the cycle paths) as well as local secluded vistas from near the lake shore.	High	Immediately
	1.6.3 Maintain the water level and water quality of the lake in line with the benchmark for 'Protection of freshwater aquatic systems' in the LBG Water Quality Management Plan, 2006.	High	In accordance with the Plan
	1.6.4 Conserve the informal, river-like form of Westlake as a contrast to the more formal basins.	High	Immediately
	1.6.5 Respect the relationship between the vertical and horizontal design elements, including the bridges, Carillon and Captain Cook Water Jet.	High	Immediately
	1.6.6 Conserve the historic plantings of deciduous trees around the foreshores, planted to reflect spring and autumn colour in the waters of the lake.	High	Immediately
	1.6.7 Conserve the relationship between the lake and the National Library, High Court of Australia, National Gallery of Australia and the National Museum of Australia, where the buildings contribute to the lake's setting and, in turn, the lake provides the setting for the buildings.	High	Immediately

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Policies	Actions	Priority	Timing
1.7 Recognise the Lake Burley Griffin study area as a layered cultural landscape, the heritage values of which reflect Indigenous use and cultural values; early European use and development; the Griffin plan; the Holford plan and subsequent phases of design and construction by the NCDC; and the remnant natural environment.	1.7.1 Conserve the diverse landscape character of the Study Area, including the contrasts between the formal and informal landscapes, and native and exotic vegetation.	High	Immediately
	1.7.2 Conserve the overall form and shape of the lake which strongly reflects the Griffin plan.	High	Immediately
	1.7.3 Conserve the islands and areas of hard and soft edge treatments reflecting the period of design and construction of the lake.	High	Immediately
	1.7.4 Conserve the evidence (including archaeological) of past historic and Indigenous use of the landscape including the identified Indigenous sites, the remains of the former Westlake settlement site, and Sewer Vent No. 1.	Medium	As required
	1.7.5 Rigorously manage new development on Stirling Ridge and Attunga Point in order to conserve the aesthetic and natural values of the landscape, topography and vegetation and its importance in significant views.	High	As required
	1.7.6 Conserve and actively manage the historical and aesthetic values of Lindsay Pryor Arboretum and Roman Cypress Hill.	High	By 2011
	1.7.7 Rigorously manage new development on the Yarramundi Peninsula in order to conserve the historical, aesthetic and natural values of the landscape, topography and vegetation and its importance in significant views. In particular manage the Peninsula to maintain the 'natural' river-like qualities of Westlake.	Medium	As required
1.8 Conserve and manage the aesthetic values of the Study Area which are particularly valued by the community.	1.8.1 Conserve and manage the 'quiet and still' qualities of the Study Area, particularly in areas such as Central Basin, Taroola Reach and Yarramundi Reach.	High	Immediately
	1.8.2 Conserve the role of the lake as the setting for significant national institutions, particularly the nature of its reflective qualities.	High	Immediately
	1.8.3 Conserve and manage the high quality parkland setting of the lake to a high standard.	High	Immediately
	1.8.4 Manage the setting of the lake to retain seasonal colour, natural qualities and diversity of character.	High	Immediately
	1.8.5 Retain views to the surrounding hillsides as well as their vegetated, natural character.	High	Immediately

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Policies	Actions	Priority	Timing
1.9 Conserve and manage the creative and technical heritage values of the Study Area.	1.9.1 Conserve the evidence of engineering and technical excellence in the Study Area including the Commonwealth Avenue and Kings Avenue Bridges and Scrivener Dam.	Medium	As required
	1.9.2 Continue to maintain to a high standard the structural and design integrity of the bridges and dam and their settings, to ensure their long-term conservation as an integral aspect of the designed landscape of the Study Area.	Medium	Annually
	1.9.3 Conserve the geometry of Griffin's plan, which has been emphasised by the distinctive plantings and parklands designed by Holford and the NCDC, including the contrast of naturalistic and formal designs around the foreshore.	High	As required
1.10 Conserve and manage the Indigenous heritage values of the Study Area.	1.10.1 Recognise Indigenous heritage values which arise from sites, places and the interrelation between sites, places and landscapes.	High	By 2011
	1.10.2 Add the identified Indigenous heritage places of Stirling Ridge, Yarramundi Peninsula and the submerged Indigenous sites to the NCA's register of places of Commonwealth Heritage value, in accordance with s341ZB (1) of the <i>EPBC Act</i> .	Medium	As required
	1.10.3 Works in areas of Indigenous archaeological significance may require archaeological assessment and management in consultation with appropriate Indigenous communities and relevant authorities.	Medium	As required
	1.10.4 Recognise the potential for works or activities to impact upon previously undetected places of Indigenous heritage value and follow the assessment and notification procedures of the <i>Heritage Act 2004 (ACT)</i> .	Medium	As required
	1.10.5 Prepare documentation to be included with Service Contracts which notifies contractors of Indigenous heritage values and potential values of relevant areas and ensures effective implementation of these policies by all contractors and relevant authorities.	High	By 2011
	1.10.6 Note the location of Indigenous heritage places on fire control plans as assets requiring protection and management.	Medium	By 2011

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Policies	Actions	Priority	Timing
1.11 Conserve and manage the natural heritage values of the Study Area.	1.11.1 Conserve the natural heritage values of Stirling Ridge and Attunga Point. The Button wrinklewort is a listed threatened species under section 18 of the <i>EPBC Act</i> ; and Yellow box—Red gum grassy woodland and natural temperate grassland are both listed as threatened ecological communities under section 18A of the Act.	High	Immediately
	1.11.2 Conserve the natural heritage values of the Yarramundi Peninsula: the natural temperate grassland and grassland habitat for the Striped legless lizard (declared threatened species under the <i>Nature Conservation Act 1980 (ACT)</i> and threatened species under the <i>EPBC Act</i>) and the Perunga grasshopper (declared threatened species under the <i>Nature Conservation Act 1980</i>).	High	Immediately
	1.11.3 Conserve and manage the lake as an aquatic habitat comprising the waterbody, aquatic fauna, vegetation and lake bed.	Medium	Immediately
	1.11.4 Conserve and manage the wetland habitat for threatened and migratory bird species provided by Warrina Inlet, Accacia Inlet and Yarramundi Inlet wetlands.	Medium	Immediately
	1.11.5 Conserve and manage the habitat values provided by the lake waterbody draw-down zone (foreshore areas).	Medium	Immediately
	1.11.6 Prepare documentation to be included with Service Contracts which notifies contractors of the natural heritage values of relevant areas and ensures effective implementation of these policies by all contractors.	High	By 2011
1.12 Removal or damage to significant aspects of the place.	1.12.1 Removal or works which would adversely impact on places of identified heritage value should only be permitted where: – the work makes possible the recovery of aspects of greater heritage value; – the work helps to ensure the security and viability of the place; – there is no feasible alternative (eg to meet safety or legal requirements); – full assessment of alternative options has been undertaken to minimise adverse impacts.	High	As required
1.13 Authenticity of the place.	1.13.1 Ensure that the integrity of fabric of heritage value from different phases and periods of the cultural landscape is maintained, managed and interpreted.	High	As required

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Policies	Actions	Priority	Timing
2. Interpretation			
2.1 An Interpretation Plan should be prepared for the Study Area.	2.1.1 Interpret the historic, Indigenous and natural heritage values of the Lake Burley Griffin Study Area to local, national and international audiences—using a range of media including published material, online material and signage.	Medium	By 2011
	2.1.2 Consult and involve stakeholders in the development of the Interpretation plan and specific interpretation initiatives.	Medium	By 2011 and as required
	2.1.3 The specific policies identify nodes, themes and locations for on-site interpretation.	N/A	
2.2 Develop an Indigenous heritage interpretation plan in partnership with appropriate community representatives.	2.2.1 In partnership with the local Indigenous community, investigate how the Indigenous cultural values of the Molongolo River Valley (prior to construction of the lake) could be recognised and incorporated into the public environment of the city (examples may be the erection of signage, public art, and use of Aboriginal place names).	Medium	By 2011
	2.2.2 Interpret the following aspects of the Indigenous cultural landscape on signage at the edge of the lake, or incorporated into the exhibition at Regatta Point: – the original course of the Molonglo in relation to Lake Burley Griffin; – the role of the Molonglo corridor to Indigenous people; and – the current role of Indigenous people in protecting ACT heritage sites. Involve the Indigenous community in the design of all signage and in approving the cultural information displayed for viewing by the wider community.	Medium	By 2014
2.3 A variety of methods should be used to interpret the major aspects of the heritage values of the Study Area, in consultation with the ACT government.	2.3.1 Develop themed ‘heritage trails’ around Lake Burley Griffin, utilising brochures, online or downloadable information, as well as signage, focusing on significant themes of the Study Area such as: – the Griffin plan; – modernist design; – engineering heritage; – Indigenous cultural values; – the historical cultural landscape; and – the natural values of the landscape.	Medium	By 2014
	2.3.2 On-site interpretation around Lake Burley Griffin should feature a consistent and distinctive graphic style to form a recognisable interpretive trail around the lake.	Medium	As required

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Policies	Actions	Priority	Timing
3. Use and Access			
3.1 Provide the public with free and open access to the lake and foreshores.	3.1.1 Encourage public access to the lake for a variety of non-motorised, water-based recreational uses which do not impact on other heritage values.	High	Immediately
	3.1.2 Continue to use the lake as a stage or setting for large public events (which are temporary and do not impact on other heritage values).	Low	Immediately
	3.1.3 Provide opportunities for organised and informal community and family gatherings around the lake.	Medium	Immediately
	3.1.4 Control recreational activities on the lake to minimise noise and disruption to the water surface, avoid impacts on the shore and shore users and minimise conflicts with other lake users.	High	Immediately
3.2 Ensure the lake is available and accessible for a range of uses at all times.	3.2.1 Manage water quality to enable recreational uses including swimming and boating.	High	Annually
	3.2.2 Retain current existing points of access to the lake for recreation (boat ramps and swimming area).	Low	Annually
	3.2.3 Avoid the introduction of new uses that require closure of the lake and foreshores (or parts thereof) to public access, ie for private or corporate events.	High	As required
3.3 Provide and facilitate access to significant places for appropriate Indigenous community members for the conduct of traditional or culturally significant activities.	3.3.1 Provide a point of contact to Indigenous stakeholders requesting access and establish access protocols.	High	Immediately
3.4 Manage use of and access to Stirling Ridge and Attunga Point and the Yarramundi Peninsula to minimise impacts on the identified natural heritage values.	3.4.1 Control access to Stirling Ridge and Attunga Point and the Yarramundi Peninsula, through the use of fencing, signage and control/closure of paths, to consolidate and promote the ecological sustainability of the natural communities in those areas.	High	By 2011
3.5 Review and update the Lake Burley Griffin Recreation Policy, 2005, in line with this HMP	3.5.1 Continue to monitor recreational use of the lake to assess current use patterns and determine future recreational needs.	Medium	Annually
	3.5.2 As part of the review and update of the Lake Burley Griffin Recreation Policy, 2005, develop objectives and evaluation criteria for events and uses to promote, conserve and manage the identified heritage values of the Study Area in line with this HMP.	Medium	By 2011

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Policies	Actions	Priority	Timing
4. Decision Making Procedures, Expertise and Training			
4.1 Develop a decision making process, supported by assessment documentation and checklists, in order to make consistent and effective decisions on the potential impacts of works, activities or proposals on the heritage values of a place.	4.1.1 The decision making process should include consultation with internal and external stakeholders.	High	As required
	4.1.2 Decision making relating to places of Indigenous heritage value must include consultation with appropriate Indigenous community members.	High	As required
	4.1.3 Decision making will be documented and the records kept for future reference.	High	Immediately
	4.1.4 Decision-making relating to actions and impacts affecting the Lake Burley Griffin Study Area should be based upon the identification and assessment process set out in the NCA Heritage Strategy and the NSW Heritage Branch Statement of Heritage Impacts.	High	As required
	4.1.5 Recognise ongoing management needs through specific precinct/ area conservation management plans and masterplans. These will form the basis for any further assessment of heritage impacts. In particular, prepare detailed conservation management plans/ masterplans for Westlake (rowing course site), Yarralumla Bay, West Basin, Attunga Point/Stirling Ridge and Kingston foreshore as part of the detailed design development for these precincts. These will form the basis for the assessment of any proposed impacts upon their heritage values.	High	As required
4.2 Engage appropriate experts to advise on potential impacts on heritage values, decisions or designs affecting the heritage values of the Study Area, and to assist in the resolution of heritage conservation issues.	4.2.1 Maintain a list of experienced heritage advisors who can assist the NCA with specific heritage advice or research relating to the Study Area.	Medium	By 2011
4.3 Develop the capacity of NCA staff and contractors to manage the heritage values of the Study Area.	4.3.1 Develop the capacity of NCA staff to appropriately manage Indigenous heritage values, in consultation with stakeholder communities. Explore opportunities for the provision of appropriate Indigenous heritage and cross-cultural awareness training for relevant personnel.	Medium	By 2014
	4.3.2 Provide training opportunities for relevant staff to build capacity in heritage management, particularly in the philosophy and practice of cultural landscape management, heritage significance assessment, and heritage impact assessment.	Medium	By 2014
	4.3.3 Develop heritage management guidelines to assist contractors and Service Contract administrators, in the areas suggested in the specific policies.	High	By 2011
	4.3.4 Continue to undertake and foster research into the heritage values of the Study Area, as a basis for refining future understanding and management for the benefit of the national community.	Low	By 2019

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Policies	Actions	Priority	Timing
4.4 Should new research or physical evidence be discovered which has implications for the heritage values of the Study Area, the implementation of the HMP may need to be reviewed or re-assessed (as set out in 5 below).	4.4.1 The heritage value of newly discovered physical evidence within the Study Area, such as an unforeseen archaeological site, must be assessed prior to making decisions about its future management.	High	As required
5. Documentation, Monitoring and Review			
5.1 Review and update the Lake Burley Griffin and Adjacent Lands HMP every five years, in compliance with s341X of the <i>EPBC Act</i> .	5.1.1 Review and update the HMP every five years or following any major change in circumstance, including changes to the management structure, impacts from natural disaster or to take account of significant new information or research.	Medium	By 2014
5.2 Collate all monitoring data annually, as required by this HMP, as a basis for reporting on the implementation of the HMP and monitoring the condition of the values, in compliance with the <i>EPBC Act</i> .	5.2.1 Use annual reporting on the implementation of the HMP to review the guidelines set out in this HMP for priority and timing of actions. Priorities should be re- assessed in any review following the definitions set out in this HMP—that is highest priority should be attributed to actions which alleviate or mitigate key risks to the heritage values (as set out in the definitions at the beginning of this section).	High	Annually
5.3 The condition of the identified heritage values of the Study Area should be monitored and reevaluated as part of the five-yearly review of the HMP.	5.3.1 Use the annual collation of monitoring data to identify trends against the condition of values described in this HMP.	Medium	By 2014
	5.3.2 Ensure that any review of the HMP responds to and addresses trends revealed in monitoring data by refining management techniques accordingly.	Medium	By 2014
5.4 Manage sensitive information and documentation about Indigenous heritage values and places appropriately.	5.4.1 Do not make sensitive or confidential information about Indigenous heritage values or places public without the consent of appropriate stakeholders.	High	Immediately
5.5 Maintain records of works, intervention and maintenance in the Study Area.	5.5.1 As a minimum, record the nature and outcomes of works, interventions and maintenance on the NCA register of places of Commonwealth value, as required by the <i>EPBC Act</i> .	Medium	As required
	5.5.2 Existing elements of heritage value should be recorded to appropriate archival standard prior to any intervention or major works that will alter the place.	Medium	As required

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Policies	Actions	Priority	Timing
6. Stakeholder Consultation and Involvement			
6.1 Develop and follow a formal consultation plan or protocol for liaison with appropriate Indigenous stakeholders regarding the management of Indigenous sites and heritage values.	6.1.1 Identify relevant Indigenous stakeholders, develop a consultation plan or protocol and meet with them on as needs basis.	High	By 2011
	6.1.2 Encourage appropriate participation of Indigenous stakeholders in management of Indigenous cultural heritage values.	Medium	As required
6.2 Continue to convene the Lake Burley Griffin Users Group.	6.2.1 Continue to consult regularly with lake users to promote equitable and appropriate recreation opportunities for the community.	High	Immediately
6.3 Recognise the strong community attachment to the heritage values of the Study Area through regular liaison on proposals affecting the future uses and development of the place.	6.3.1 Recognise and consult with stakeholders with an interest in the former Westlake settlement site, on any proposals which may affect the future of the place.	High	As required
	6.3.2 Recognise and consult with individuals who have had a significant role in creating and caring for the lake in the past, on proposals affecting future developments, interpretation and management of the heritage values of the place.	High	Annually
	6.3.3 Consult the local Canberra community regularly on the management of the Study Area. Consider holding an annual stakeholder forum to update the community on proposals affecting the Study Area.	High	As required
	6.3.4 Consult more broadly on proposals with the potential to impact on the National heritage values and national cultural and symbolic significance of the Study Area.	High	As required
6.4 Maintain regular liaison with the ACT government on the management of the heritage values of the Study Area: in particular seek to develop a collaborative approach to the management of natural values of the Study Area.	6.4.1 Convene an annual forum of ACT government and NCA officials to develop a formal agenda for the development of collaborative management of natural values.	High	Annually
6.5 Maintain regular liaison with the Department of the Environment, Water, Heritage and the Arts regarding the management of Commonwealth and National Heritage values of the Study Area.	6.5.1 Seek informal comment from the Department of Environment, Water, Heritage and the Arts on any proposals which have the potential to impact on the heritage values of the study area as part of the decision-making process to assess the significance of impacts. Consultation should occur at an early stage, prior to design development.	High	As required

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Policies	Actions	Priority	Timing
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SPECIFIC POLICIES

Component 1 - The Lake as a designed landscape



Heritage Conservation

C1-1 Conserve and manage the integrity of the formal design elements of the Study Area deriving from the Griffin plan and the later design and construction of the lake and its foreshores.	C1-1.1 Conserve the integrity of the axes, views and vistas of the surrounding landscape (including Black Mountain, Mount Ainslie and Red Hill). Conserve the visibility of the lake from public open spaces and public institutions. This will support the continued appreciation of the lake as a unifying and linking element for the close and distant topography in the landscape and as the setting of the surrounding buildings and open space areas.	High	Immediately
	C1-1.2 Conserve the visibility of the waters of the lake in views from within Canberra, including the retention of open views to the water from roads and other public use areas (Commonwealth Avenue, Parkes Way, the cycle paths) as well as local secluded vistas from near the lake shore.	High	Immediately
	C1-1.3 Maintain the water level and water quality of the lake in line with the benchmark for 'Protection of freshwater aquatic systems' in the LBG Water Quality Management Plan, 2006.	High	In accordance with the plan
	C1-1.4 Conserve the informal, river-like form of Westlake as a contrast to the more formal basins.	High	Immediately
	C1-1.5 Respect the relationship between the vertical and horizontal design elements, including the bridges, Carillon and Captain Cook Water Jet.	High	Immediately
	C1-1.6 Conserve the historic plantings of deciduous trees around the foreshores, planted to reflect spring and autumn colour in the waters of the lake.	High	Immediately
	C1-1.7 Conserve the relationship between the lake and the National Library, High Court of Australia, National Gallery of Australia and the National Museum of Australia, where the buildings contribute to the lake's setting and, in turn, the lake provides the setting for the buildings.	High	Immediately

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Policies	Actions	Priority	Timing
C1-2 Recognise Lake Burley Griffin as a layered cultural landscape, the heritage values of which reflect the Griffin plan; subsequent phases of design and construction; and the remnant natural environment.	C1-2.1 Conserve the diverse landscape character of the lake, including the contrasts between the formal and informal landscapes, and native and exotic vegetation.	High	Immediately
	C1-2.2 Conserve the overall form and shape of the lake which strongly reflects the Griffin plan and later modernist design phases.	High	Immediately
	C1-2.3 Conserve the islands and areas of hard and soft edge treatments reflecting the period of design and construction of the lake.	High	Immediately
C1-3 Conserve and manage the aesthetic values of the lake which are particularly valued by the community.	C1-3.1 Conserve and manage the 'quiet and still' qualities of the lake, particularly in areas such as Central Basin, Tarcoola Reach and Yarramundi Reach.	High	Immediately
	C1-3.2 Conserve the role of the lake as the setting for significant national institutions, particularly the nature of its reflective qualities.	High	Immediately
	C1-3.3 Conserve and manage the high quality parkland setting of the lake to a high standard.	High	Immediately
	C1-3.4 Manage the setting of the lake to retain seasonal colour, natural qualities and diversity of character.	High	Immediately
	C1-3.5 Retain views to the surrounding hillsides as well as their vegetated, natural character.	High	Immediately
C1-4 Recognise ongoing management needs through the preparation of specific precinct/area conservation management plans and masterplans as the basis for any further assessment of heritage impacts.	C1-4.1 Prepare detailed conservation management plans/masterplans for Westlake (rowing course site), Yarralumla Bay, West Basin, Attunga Point and Stirling Ridge and Kingston foreshore as part of the detailed design development for these precincts and as the basis for the assessment of any proposed impacts upon the heritage values.	High	By 2011
Interpretation			
C1-5 An Interpretation Plan should be prepared for the Study Area.	C1-5.1 Interpret the historic, Indigenous and natural heritage values of Lake Burley Griffin to local, national and international audiences—using a range of media including published material, online material and signage.	High	By 2011
	C1-5.2 Consult and involve stakeholders in the development of the Interpretation Plan and specific interpretation initiatives.	High	By 2011 and as required

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Policies	Actions	Priority	Timing
C1-6 A variety of methods should be used to interpret the major aspects of the heritage values of the lake.	C1-6.1 Develop themed 'heritage trails' around Lake Burley Griffin, utilising brochures, online or downloadable information, as well as signage, focusing on significant themes of the heritage values such as: – the Griffin plan; – modernist design; – engineering heritage; – Indigenous cultural values; – the historical cultural landscape; and – the natural values of the landscape.	High	By 2014
	C1-6.2 On-site interpretation around Lake Burley Griffin should feature a consistent and distinctive graphic style to form a recognisable interpretive trail around the lake.	Medium	As required
C1-7 Provide the public with free and open access to the lake's waters.	C1-7.1 Encourage public access to the lake for a variety of non-motorised, water-based recreational uses which do not impact on other heritage values.	High	Immediately
	C1-7.2 Continue to use the lake as a stage for large public events (which are temporary and do not impact on other heritage values).	Low	As required
	C1-7.3 Provide opportunities for organised and informal community and family gatherings around the lake.	Medium	Immediately
	C1-7.4 Control recreational activities on the lake to minimise noise and disruption to the water surface, avoid impacts on the shore and shore users and minimise conflicts with other lake users.	High	Immediately
C1-8 Ensure the lake is available and accessible for a range of uses at all times.	C1-8.1 Manage water quality to enable recreational uses including swimming and boating.	High	Annually
	C1-8.2 Retain current existing points of access to lake for recreation (boat ramps and swimming area).	Low	Annually
	C1-8.3 Prepare a policy plan for temporary venue hire on and around the lake, to facilitate access by a range of user groups.	High	As required
C1-9 Review and update the Lake Burley Griffin Recreation Policy, 2005, in line with this HMP.	C1-9.1 Continue to monitor recreational use of the lake to assess current use patterns and determine future recreational needs and to assess the effectiveness of the policies in conserving the heritage values.	Medium	Annually
	C1-9.2 Develop, as part of the review and update of the Lake Burley Griffin Recreation Policy, 2005, objectives and evaluation criteria for events and uses to promote, conserve and manage the identified heritage values of the Study Area, in line with this HMP.	Medium	By 2011
Stakeholder Consultation			
C1-10 Recognise the strong community attachment to the heritage values of Lake Burley Griffin through regular liaison on proposals affecting the future uses and development of the place.	C1-10.1 Consult the local Canberra community regularly on the management of the lake. Consider holding an annual stakeholder forum to update the community on proposals affecting the heritage values of the lake.	High	As required
	C1-10.2 Consult broadly on proposals with the potential to impact on the National Heritage values and national cultural and symbolic significance of Lake Burley Griffin.	High	As required

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Policies	Actions	Priority	Timing
Component 2 - Waterbody of the lake as an ecosystem and aquatic habitat			
			
Heritage Conservation			
C2-1 Manage the lake as an aquatic habitat for a range of native species including the Murray cod.	C2-1.1 Continue to implement the fisheries management principles set out in the LBG Management Plan, 1995.	High	As required by existing plans
	C2-1.2 Monitor and manage water quality in line with the benchmark for 'Protection of freshwater aquatic systems' in the LBG Water Quality Management Plan, 2006.	High	As required by existing plans
	C2-1.3 Adopt the precautionary principle approach set out in the LBG Water Abstraction Plan, 2006, in considering the use of water from the lake.		
C2-2 Manage the water quality of the lake in order to maintain recreational uses (yachting, boating, swimming etc).	C2-2.1 Management Strategy, 1995.	Medium	As required by existing plans
	C2-2.2 As part of the review and update of the Lake Burley Griffin Recreational Plan, 2005, develop objectives and evaluation criteria for events and uses to promote, conserve, and manage the identified heritage values of the Study Area in line with this HMP.	Medium	By 2011
	C2-2.3 Monitor and manage water quality in recreational zones in line with the benchmark for 'Recreational water' in the LBG Water Quality Management Plan, 2006.	High	As required by existing plans
C2-3 Ensure that Service Contracts for asset management of the lake and foreshores are consistent with the protection and conservation of identified historic, indigenous and natural heritage values.	C2-3.1 Prepare documentation to be included with Service Contracts which: – provides a statement of heritage values and legislative responsibilities for their protection and management; and – clearly states the priority and emphasis of management activities in different areas.	High	By 2011
Interpretation			
C2-4 Interpret the natural values of the lake as an ecosystem and aquatic habitat.	C2-4.1 Develop a themed heritage trail around the lake utilising brochures, online or downloadable information, as well as strategic signage, which focuses on the natural values of the lake landscape and its role as an ecosystem and aquatic habitat.	Medium	By 2014

Lake Burley Griffin and Adjacent Lands - Heritage Management Plan, October 2009

Policies	Actions	Priority	Timing
Component 3 - Central Basin			
			
Heritage Conservation			
C3-1 Conserve and manage the integrity of the formal design elements of the Central Basin deriving from the Griffin plan as well as the later design and construction of the lake and its surrounds.	C3-1.1 Conserve the integrity of the axes, vistas and visual links with the surrounding landscape (including Black Mountain, Mount Ainslie and Red Hill) and conserve the visibility of the lake from public open spaces and public institutions.	High	Immediately
	C3-1.2 Conserve the visibility of the waters of the lake in views from within the Parliamentary Triangle and the Parliament House Vista/land axis, and beyond.	High	Immediately
	C3-1.3 Conserve the relationship between the vertical and horizontal design elements, including the bridges, Carillon and Captain Cook Water Jet.	High	Immediately
	C3-1.4 Conserve the historic plantings of deciduous trees around the foreshores, planted to reflect spring and autumn colour in the waters of the lake.	High	Immediately
	C3-1.5 Conserve the naturalistic landscape style, with mixtures of exotic and native plantings to reflect differences in character from one part of the lake edge to another.	High	Immediately
	C3-1.6 Conserve the relationship between the lake and the National Library, High Court of Australia and National Gallery of Australia.	High	Immediately

Lake Burley Griffin and Adjacent Lands - Heritage Management Plan, October 2009

Policies	Actions	Priority	Timing
C3-2 Conserve and manage the aesthetic values of the Central Basin which are particularly valued by the community.	C3-2.1 Conserve and manage the quiet and still qualities of the water in Central Basin, and thus its reflective qualities.	High	Immediately
	C3-2.2 Conserve and manage the parkland foreshore setting of the Central Basin to a high standard.	High	Immediately
	C3-2.3 Retain views to the surrounding hillsides as well as their vegetated, natural character.	High	Immediately
	C3-2.4 Do not obscure or impede the open expanse of the water of Central Basin, for instance by allowing large or bulky craft or structures on the water or extended moorings.	Medium	As required
	C3-2.5 Conserve and maintain the NCDC era edge treatments of Central Basin including: – the naturalistic northern shore; – rock walls; – concrete wall at Gallipoli Reach; and – beach areas on Aspen Island and adjacent to the mouth of Nerang Pool.	Medium	Annually
Interpretation			
C3-3 Interpret all the heritage values of the Central Basin - Indigenous and historic.	C3-3.1 In the context of developing an Interpretation Plan for the Study Area as a whole, key nodes for interpretation in Central Basin should be identified.	Medium	By 2011
	C3-3.2 Develop themed heritage trails around the lake utilising brochures, online or downloadable information, as well as strategic signage, which focus on the range of natural and cultural heritage values of the lake landscape.	Medium	By 2014
Component 4 - East Basin			
Not applicable			
Component 5 - Captain Cook Water Jet			
Not applicable			

Lake Burley Griffin and Adjacent Lands - Heritage Management Plan, October 2009

Policies	Actions	Priority	Timing
Component 6 - West Basin			
			
Heritage Conservation			
C6-1 Conserve and manage the integrity of the formal design elements of the West Basin deriving from the Griffin plan as well as the later design and construction of the lake and its surrounds.	C6-1.1 Ensure all proposals for development around West Basin are developed in sympathy with the identified heritage values of the place and that the significance of their potential impacts on heritage values are assessed, in line with the <i>EPBC Act</i> .	High	Immediately
	C6-1.2 Ensure any new development on the foreshores of West Basin provides appropriate view corridors to and from the lake, especially from Commonwealth Avenue.	High	As required
	C6-1.3 Conserve and manage significant views and solar access to the foreshore by managing the height of foreshore development to provide views and to prevent overshadowing of the foreshore.	High	As required
	C6-1.4 Ensure foreshore development enhances and contributes to the reflective qualities of the lake setting and provides plantings designed to contribute to the lake's character.	High	As required
	C6-1.5 Retain the sense of the lake and its surrounding developments as located in an open park-like setting.	High	As required

Lake Burley Griffin and Adjacent Lands - Heritage Management Plan, October 2009

Policies	Actions	Priority	Timing
C6-1 (continued)	C6-1.6 The design process for the proposed pedestrian bridge should be rigorously managed to ensure that it is sympathetic to the existing heritage values of the place. It should not obscure significant views or have a negative impact on the design qualities of Commonwealth Avenue Bridge and the surrounding foreshore areas. Guidelines for its materials, colour, scale, bulk and massing should be developed to ensure that it is sympathetic to the existing heritage values of the place.	High	Immediately
	C6-1.7 The proposed pedestrian bridge should not have an adverse impact on the use of West Basin and Westlake for sailing and other recreational, non-motorised water based activities.	High	Immediately
	C6-1.8 Conserve and maintain the rock wall around the National Museum of Australia precinct.	Medium	Annually
Interpretation			
C6-2 Interpret the heritage values of the West Basin. Indigenous, historic and natural themes could all be explored in the context of West Basin.	C6-2.1 In the context of developing an Interpretation Plan for the Study Area as a whole, key nodes for interpretation in West Basin should be identified.	Medium	By 2011
	C6-2.2 Develop themed heritage trails around the lake utilising brochures, online or downloadable information, as well as strategic signage, which focus on the range of natural and cultural heritage values of the lake landscape.	Medium	By 2014
Component 7 - West Lake			
Not applicable			
Component 8 - Springbank Island			
Not applicable			
Component 9 - Spinnaker Island			
Not applicable			
Component 10 - Warrina Inlet Wetland			
Not applicable			
Component 11 - Acacia Inlet Wetland			
Not applicable			
Component 12 - Yarramundi Inlet Wetland			
Not applicable			

C.2 Parliament House Vista - Heritage Management Plan, 2010

The two bridges, Commonwealth Avenue Bridge (1963) and Kings Avenue Bridge (1962), cross Lake Burley Griffin and define the symmetrical layout of the Parliamentary Triangle. The Commonwealth Avenue Bridge is aligned with the apex of Capital Hill through Russell. The bridges are major structural features of the lake and also provide important vantage points for viewing the lake.²⁰

Whilst the Commonwealth Avenue Bridge itself is technically outside the curtilage of the Parliament House Vista, the lakeside land at its base is included within the curtilage. The following table lists the policies in the HMP with policies of particular relevance to the project highlighted and expanded.

No.	Policy Title	Strategy	Priority	Timetable
VOLUME 1 - CONSERVATION POLICIES				
#	General Policies			
1	Significance the basis for management, planning and work			
2	Adoption of Burra Charter			
3	Adoption of policies	3.1 Priority and implementation timetable		
4	Compliance with legislation	4.1 Manage Commonwealth Heritage values		
		4.2 Providing notice, and seeking advice and comments under the <i>EPBC Act</i> regarding the plan		
		4.3 Boundary issues		
		4.4 Non-compliance		
5	Planning documents for or relevant to the Area			
6	Integrated management of components	6.1 Curtilage of components		
7	Expert heritage conservation advice	7.1 Identification of experts		
8	Decision making process for works or actions	8.1 Process		
		8.2 Log of decisions		
		8.3 Criteria for prioritising work		
		8.4 Resolving conflicting objectives		
		8.5 Annual review of implementation		
		8.6 Oversight of treescape management		
9	Review of the management plan	9.1 Reasons to instigate a review		

20: GML Heritage, Lake Burley Griffin—Heritage Assessment—Final Report, October 2009, p.18.

No.	Policy Title	Strategy	Priority	Timetable
#	Liaison			
10	Relationship with DEWHA			
11	Relationship with other stakeholders	11.1 List of stakeholders 11.2 Informing stakeholders 11.3 Consultation regarding interpretation		
		11.4 Commonwealth Park Geological Site The NCA will consult the ACT Heritage Council about the possible heritage values of the Commonwealth Park Geological Site, and the coordinated management of such values if confirmed. Commentary: Most of this site lies outside the study area. If heritage value is confirmed, this may lead to some changes to the management of the portion of the site within the study area.	Medium	12/2010
12	Ongoing Consultation with Aboriginal Stakeholders	12.1 Opportunities to be involved		
#	Indigenous Heritage			
13	Protection of sites with potential Aboriginal heritage values	13.1 Ground-disturbing works in Kings Park 13.2 Excavation in sandy soils		
14	Artefacts recovered from the Old Parliament House Senate Gardens	14.1 Locating artefacts		
#	Landscape			
15	Landscape masterplanning	The NCA may consider more detailed landscape masterplanning for the area or precincts within it. Such masterplans will be consistent with this management plan.	Medium	Ongoing
16	General conservation provisions for the landscape	16.1 Strengthening evergreen framework at the AWM 16.2 Strengthening the evergreen framework around the National Library of Australia 16.3 Lombardy Poplar sentinels		
		16.4 Trees at Commonwealth Place The removal/non-replacement of the asymmetrical tree plantings at Commonwealth Place may be given future consideration when the opportunity arises.	Medium	As the opportunity arises

No.	Policy Title	Strategy	Priority	Timetable
17	Conservation provisions relating to specific components of the Parliament House Vista	17.1 Strengthening the evergreen framework plantings along main avenues		
		17.2 Blundells' Cottage landscape		
		17.3 National Rose Gardens		
		17.4 Strengthening the northern lakeshore plantings	Medium	6/2011
		17.5 New information about commemorative trees		

Commonwealth Park

Conserve the surviving elements of the Crowe masterplan for Commonwealth Park including:

- limited vehicle access and surface parking provision with primary access to be via foot or cycle;
- the entrance at the northeast corner of the park from Civic;
- areas of individual and distinct landscape and horticultural character along the north of Nerang Pool, linking the two main pedestrian entrances – the Marsh Garden, Flower Garden and Stream Valley;
- Nerang Pool (including its existing configuration), Lily Pond, Children's Wading Pool and Mirror Pond;
- the retention of Pryor's two contained lawn areas and the grassed area at Regatta Point;
- thick plantings along Parkes Way to block the sight and sound of traffic, being those adjacent on the northern boundary of the park and effectively the whole length of the this boundary (Commentary: It is noted the NCA may wish to create a view/s into Commonwealth Park from Parkes Way, especially in the vicinity of the Corranderk Street pond);
- lighting to enhance features (Commentary: Nerang Pool included underwater lights but it is not clear if these can be reinstated);
- public facilities including a building at Regatta Point (Commentary: Not necessarily the current building which is much altered and extended from the original);
- amphitheatre (Commentary: It is noted that the amphitheatre could be enhanced as a small-scale event space);
- play sculpture/the fort;
- Stream Valley with its crossing of stepping-stones;
- the use of large scale tree planting to provide a framework and create a suitable scale, especially plantings in informal patterns or drifts;
- Eucalypt plantings down the ridges and green margins with exotic deciduous trees (see figure in Marshall and others 2007);

- the quality of open grass areas and areas of spatial interest;
- framed views and vistas to points of special interest;
- vistas from the main spur of Regatta Point towards the lake and Commonwealth Avenue Bridge, views from Regatta Point to the lake, vistas to and from the east facing slopes of Regatta Point to the lake;

Conserve the surviving elements of the NCDC masterplan for Commonwealth Park as follows:

- Rhododendron Garden (Shrub Glade) concept;
- informal planting of willows, poplars and elms along the north shore of the Central Basin;
- surrounds of Nerang Pool - drifts of Liriodendron tulipifera, Taxodium distichum and Betula pendula;
- higher levels of Commonwealth Park - informal groups of eucalypts with pine accents and extensive under planting of wattles; and • Commonwealth Avenue - formal deciduous tree plantings.

Commentary:

The existing trees in Commonwealth Avenue, *Ulmus procera*, have not been successful/thrived, and replacement plantings may be contemplated using the same species.

No.	Policy Title	Strategy	Priority	Timetable
18	Landscape maintenance planning and works	18.1 Current maintenance planning 18.2 Prioritised water-use regime 18.3 Improving the standard of maintenance		
19	Tree survey, database and management plan			
20	Tree maintenance and replacement	20.1 Tree replacement strategy 20.2 Tree surgery works 20.3 Recommendations from other relevant studies 20.4 Replacement of storm damaged trees 20.5 Thinning Kings Park plantation 20.6 Trees in carparks 20.7 Replacement of commemorative trees		
21	Shrubs and hedges	Shrubs and hedges are important elements within the area, and the NCA will seek to maintain them, and replace if dead, dying or in poor health. If possible, advanced specimens will be used.		
22	Turf and grass areas	Turf and grassland will continue to be managed to conserve heritage values and to achieve the best outcome in relation to the intensity of use. While the objective may be to maintain some areas as unirrigated (eg. Kings Park), it must be acknowledged that encouragement of greater use carries with it greater wear. The NCA will continue to monitor grass trials with species new to Canberra which require less water while remaining wear resistant.		
23	Weed species	The NCA will give due consideration to the cultural heritage values of any environmental weeds in the area.		
24	Irrigation	The NCA will seek to maintain irrigation systems where these currently exist and are being used. The NCA may introduce new irrigation to areas not previously irrigated, however if mature trees are present then this will only be undertaken with the agreement of an expert arborist after consideration of any adverse impact on the mature trees.		
25	Landscape condition monitoring	25.1 Monitoring program		
#	Natural Heritage			
26	Native vegetation adjacent to West Block	26.1 Planning and management 26.2 Consultation with Environment ACT 26.3 Management plan for site		
27	State Circle cutting	27.1 Site issues 27.2 Monitoring 27.3 Exposure of the upper bench area face 27.4 Stabilisation techniques		

No.	Policy Title	Strategy	Priority	Timetable
#	Built Elements			
28	Major buildings			
29	Minor buildings/structures	29.1 Acoustic environment for the Carillon		
30	Memorials and commemorative features	30.1 Trees at Reconciliation Place		
31	Artworks	Existing memorials and commemorative features will be conserved		
32	Ponds, pools and fountains	32.1 Water use		
33	Paths and paving	Paths and paved areas may generally be conserved or upgraded if desired. However, care will be taken if paths are widened or extended to maintain the overall dominance of soft landscaping (see Policy 59 regarding new paths or paving). In addition: careful consideration will be given to the palette of finishes for paths and paving including: – a sympathetic selection given the character of the landscaping in the vicinity of the paths or paving; – possible reconstruction of paths in cases where a significant landscape design exists but it has lost its paths as part of the significant design (eg. Commonwealth Park); – any hierarchy of paths; and – the differing landscape characters of component parts of the Vista; ... the section of path in the Bog Garden of Commonwealth Park containing round pre-cast exposed aggregate pavers will be maintained as evidence of the original Crowe design;		
34	Roads	...It is noted possible changes may include: – changes to the character of King Edward Terrace, its connection to Commonwealth Avenue, and road widening of Commonwealth Avenue;		
35	Car and bus parking	35.1 King Edward Terrace and King George Terrace 35.2 Major events 35.3 Temporary parking 35.4 Temporary parking works and making good 35.5 Reconstruction of the Patrick White Lawns The NCA will reconstruct the Patrick White Lawns by the removal of the temporary gravel carpark and reinstatement of the lawn. Commentary: This reinstatement work does not preclude possible future use of the lawn area for temporary parking, as discussed at Strategy 35.3.	High	6/2011
36	Signs and furniture	Existing signs and furniture may be maintained or removed.		

No.	Policy Title	Strategy	Priority	Timetable
37	Lighting	Generally maintain existing lighting, including the specially designed street/promenade lighting in the Parliamentary Zone which echoes the design used at the new Parliament House, and the Anzac Parade street lights.	High	6/2011
38	Infrastructure	Generally maintain existing infrastructure, such as services, unless they fail to meet current or projected needs or standards. Infrastructure may be upgraded or adapted but this should involve no increase in impact.		
39	Maintenance planning and works	39.1 Review of existing maintenance planning		
		39.2 Maintenance and monitoring		
		39.3 Life-cycle maintenance planning		
40	Upgrading and adaptation works	The NCA will replace or upgrade fabric and services, or undertake adaptation works as required by their condition or changed standards. Such works will not compromise significance unless there is no alternative, in which case every effort will be made to minimise the impact on significance.		
41	Condition monitoring	41.1 Monitoring program		
		41.2 Reporting by contractors		
#	Setting			
42	Protection of the Setting	42.1 Liaison with ACTPLA		
		42.2 Protection of Mount Ainslie		
		42.3 Portal Buildings		
		42.4 Further consideration of impact of National Capital Plan proposals		
43	Protection of views to and from the Area	The significant views to and from the Vista will be protected. The significant views include: – to the surrounding hills, especially Mount Ainslie, Black Mountain and Mount Pleasant; – to the west and the mountains across West Basin; – to East and West Basins; – to the current Parliament House; – from Mount Ainslie, Mount Pleasant, Black Mountain, Red Hill and Parliament House; – from Commonwealth and Kings Avenues, especially the bridges; and – from the eastern part of Parkes Way adjacent to Kings Park.		

No.	Policy Title	Strategy	Priority	Timetable
#	Use of the Place			
44	Primary and secondary uses	44.1 Zoning		
		44.2 Inclusion of secondary uses in major buildings		
		44.3 Coordination of uses and major events		
45	New and continuing uses compatible with significance			
46	Access			
47	Carrying capacity			
48	Control of leased areas/activities	48.1 Lease arrangements		
#	New Development			
49	General provisions relating to new development			
50	New landscaping, landscape structures and plantings	New landscaping, landscape structures and plantings, not including replacement plantings, may be permitted subject to the following: – that it is consistent with the general landscape conservation provisions and provisions relating to specific components (see Policies 16 and 17); – that it respects the existing tree planting patterns within the area; and – that it is consistent with any management plan for the specific component affected. ... Opportunities may exist to complete the Crowe masterplan for Commonwealth Park, including intensive horticulture areas, a conservatory and hilltop native garden.		
51	Major new buildings			
52	New minor buildings			
53	New memorials and artworks			
54	New parking			
55	New jetties			
56	Temporary changes			
57	Signage	57.1 General guidelines		
		57.2 Signage plans for institutions		
58	Furniture			
59	Paths and paving			
60	Lighting			
61	Infrastructure			

No.	Policy Title	Strategy	Priority	Timetable
#	Interpretation			
62	Interpreting the significance of the Vista	62.1 Interpretive strategy		
		62.2 Review of strategy		
63	Signage	63.1 Review and alteration of existing and proposed signage		
#	Unforeseen Discoveries			
64	Unforeseen discoveries or disturbance of heritage components			
65	Records of intervention and maintenance	65.1 Records about decisions		
		65.2 Records about maintenance and monitoring		
		65.3 Summary of changes in heritage register		
#	Further Research			
66	Addressing the limitations of this management plan			
#	Other Matters			
67	Targeted information products derived from the HMP			

Geological site in Commonwealth Park (Section 2, Block 4, Parkes) (Criterion (a) Natural History

The outcrops are a colourful and readily accessible example of the common sedimentary bedrock of City Hill and the central region of Canberra.

Natural history – Geological site in Commonwealth Park

It is considered that the natural heritage values of the small section of this geological site in the study area do not meet the criteria relevant to listing on the National or Commonwealth Heritage lists as there are better examples of this type of exposure in nearby areas. This includes the contiguous section of the exposure to the north, and elsewhere in Canberra such as at Yerrabi Pond, Ngunnawal.

The geological site in Commonwealth Park does not meet these or other criteria.

Heritage Listings

The Geological site in Commonwealth Park is listed by the National Trust of Australia (ACT).

Appendix D

Options Study

Prior to the current proposal, the NCA had undertaken a number of investigations into the condition of Commonwealth Avenue Bridge due to the age of the Bridge, evolving Bridge design standards and growing demand for a variety of different modes of transport.

An Initial Business Case was prepared in 2018 and more recently, a Detailed Business Case was prepared in 2020 that sought to provide options and a proposed solution that would bring the Bridge up to the necessary engineering standards, whilst improving safety and capacity for all modes of transport.

In 2022 and 2023, TZG and SMM worked with SMEC to further develop options for the renewal of the bridge and the surrounding landscape.

The following options built upon the recommendations in the Detailed Business Case, providing further optionality and recommendations that informed the overall Concept Design of the Bridge Renewal.

D.1 Business Case - Concept Design, 2019

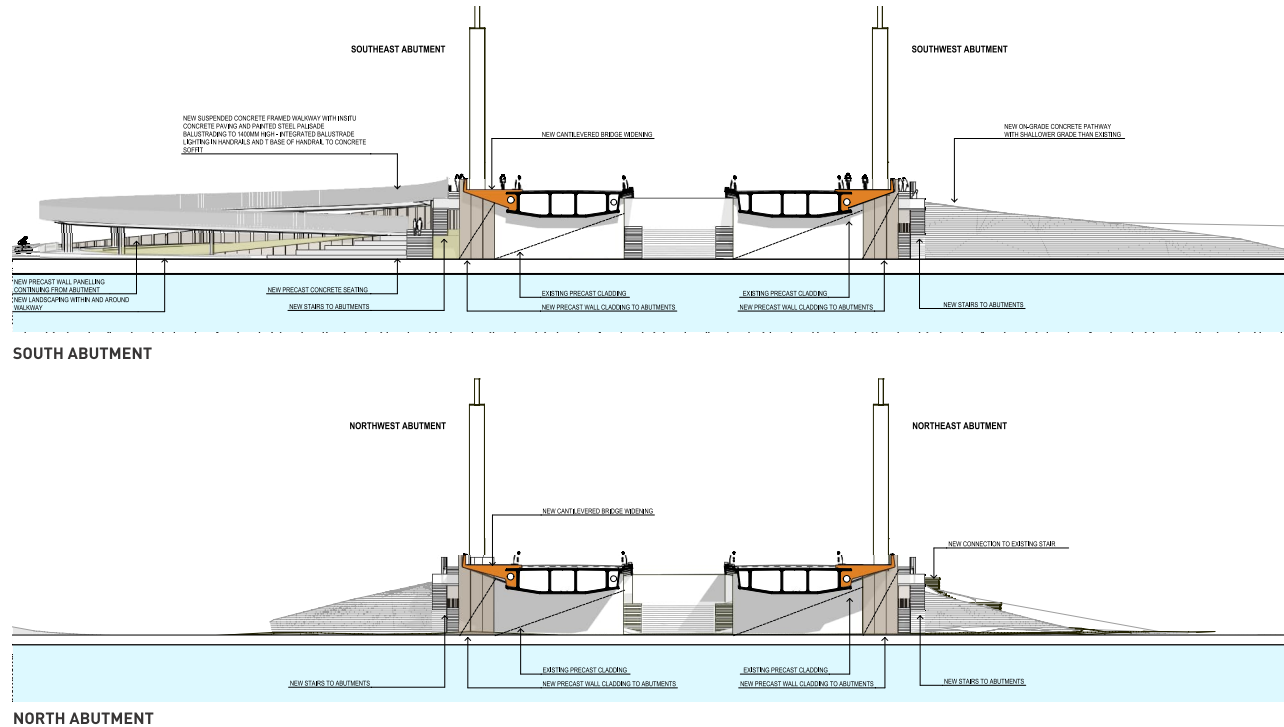


Figure 147: Site sections.

Source: Commonwealth Avenue Bridge Upgrade, Final Draft, Urban Design and Architecture Concept Design Report, Lahznimmo architects + Jacobs, Rev B - Final report, 12.11.19.



Figure 148: 3D view of bridge extension.

Source: Commonwealth Avenue Bridge Upgrade, Final Draft, Urban Design and Architecture Concept Design Report, Lahznimmo architects + Jacobs, Rev B - Final report, 12.11.19.



Figure 149: 3D view bridge extension and southeast abutment.

Source: Commonwealth Avenue Bridge Upgrade, Final Draft, Urban Design and Architecture Concept Design Report, Lahznimmo architects + Jacobs, Rev B - Final report, 12.11.19.



Figure 150: 3D view southwest approach and southeast abutment.

Source: Commonwealth Avenue Bridge Upgrade, Final Draft, Urban Design and Architecture Concept Design Report, Lahznimmo architects + Jacobs, Rev B - Final report, 12.11.19.

D.2 CCJ Architects, Commonwealth Avenue Bridge Handrail & Barrier Options, Concept Design Report, October 2016

GML provided the following recommendations for general guidance to the project team developing new handrails and barriers for the bridge in their Heritage Memorandum for the Commonwealth Avenue Bridge Handrail Upgrades in October 2016.

- Pursue a design option for the handrail and barrier which follows the general principles outlined below - to respect the existing design principles of the Commonwealth Avenue Bridge and its context (the lake setting as a designed landscape.)
- The development of a suitable option should:
 - be a custom made design which is constructed of high quality architectural finishes in a durable material, and a neutral colour;
 - reinforce the symmetry of the bridge, be streamlined, 'slim-line' and aesthetically pleasing;
 - not be visible from the outside of the bridge (ie viewed from the water or the lakeside);
 - incorporate lighting which is complementary to the setting and does not compete with or distract from the existing designed lighting of the outer handrails (a significant attribute of the heritage values).
- Where possible within the scope - ensure consistency in the design and retain the symmetry of the bridge by installing the same handrail approach for both the northbound and southbound lanes. Both sides of each lane of the road should also be considered (ie the inner traffic barrier), with a complementary barrier design developed (noting that pedestrian access is restricted and therefore interpretation would be reduced).
- An interpretation plan could be prepared to coincide with the development of a preferred design option. This would present an opportunity to include interpretive panels or interactive elements to tell stories of the early construction of the bridge and/or lake; memorable events and processions; important viewpoints; and connections with the land and water axes of Griffin's plan as part of the early planning for Canberra.

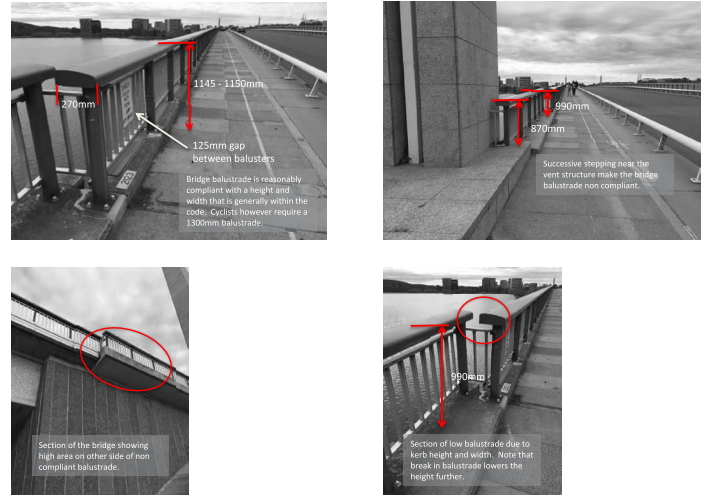


Figure 151: Existing bridge balustrade.

Source: Commonwealth Avenue Bridge - Handrail Options, CCJ Architects, Issue 1 - September 2016, p.18.

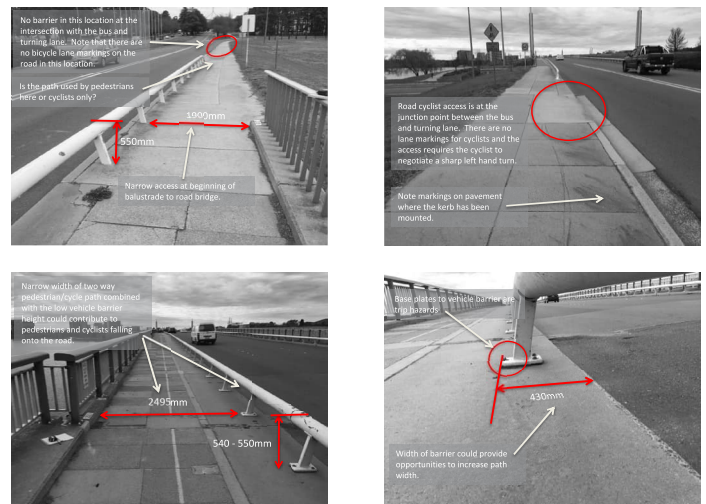


Figure 152: Pedestrian traffic barrier.

Source: Commonwealth Avenue Bridge - Handrail Options, CCJ Architects, Issue 1 - September 2016, p.5.



Figure 153: Existing balustrade around vent structure.

Source: Commonwealth Avenue Bridge - Handrail Options, CCJ Architects, Issue 1 - September 2016, p.19.

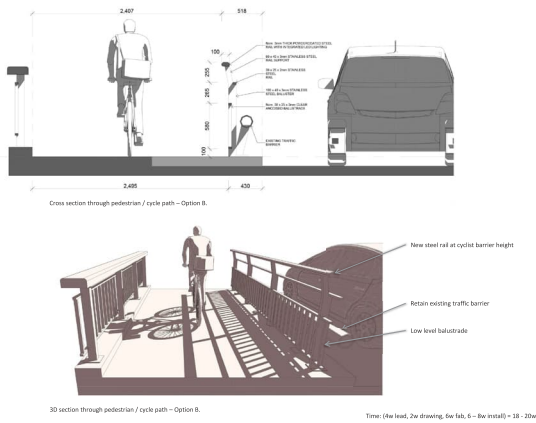


Figure 154: Balustrade Option B - New designed handrail with existing barrier.
Source: Commonwealth Avenue Bridge - Handrail Options, CCJ Architects, Issue 1 - September 2016, p.11.

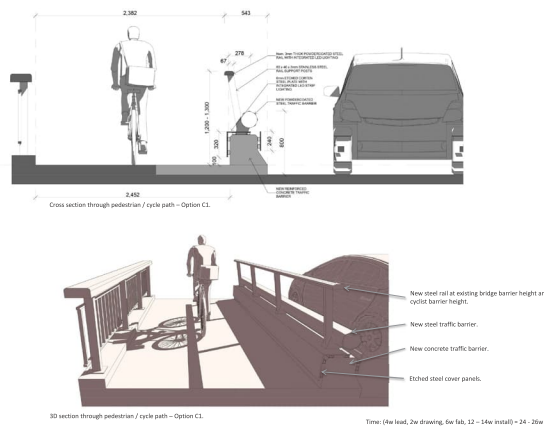


Figure 155: Balustrade Option C1 - New designed handrail and barrier.
Source: Commonwealth Avenue Bridge - Handrail Options, CCJ Architects, Issue 1 - September 2016, p.12.

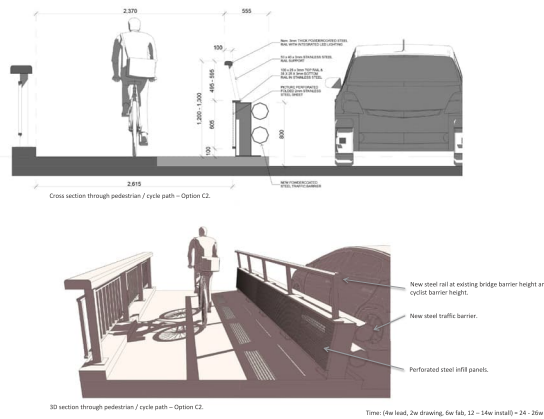


Figure 156: Balustrade Option C2 - New designed handrail and barrier.
Source: Commonwealth Avenue Bridge - Handrail Options, CCJ Architects, Issue 1 - September 2016, p.13.

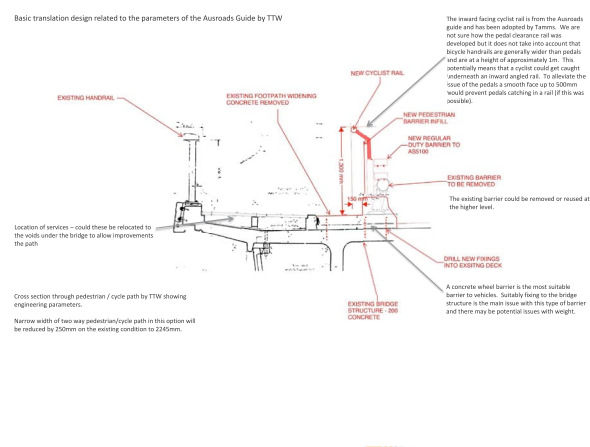


Figure 157: Traffic barrier options.
Source: Commonwealth Avenue Bridge - Handrail Options, CCJ Architects, Issue 1 - September 2016, p.9.

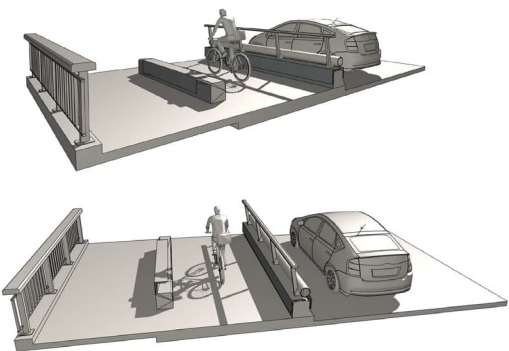


Figure 158: Bridge extension with new handrail and barrier.
Source: Commonwealth Avenue Bridge - Handrail Options, CCJ Architects, Issue 1 - September 2016, p.15.

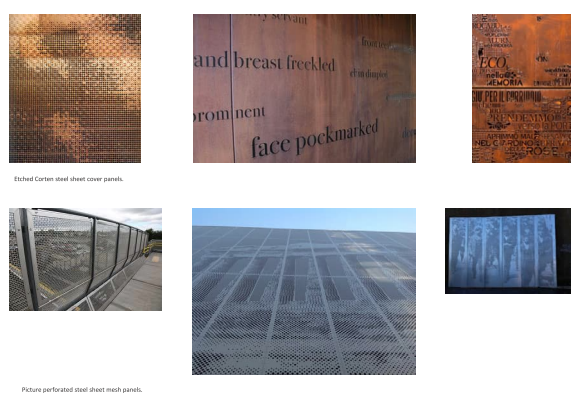


Figure 159: Balustrade and barrier materials.
Source: Commonwealth Avenue Bridge - Handrail Options, CCJ Architects, Issue 1 - September 2016, p.16.

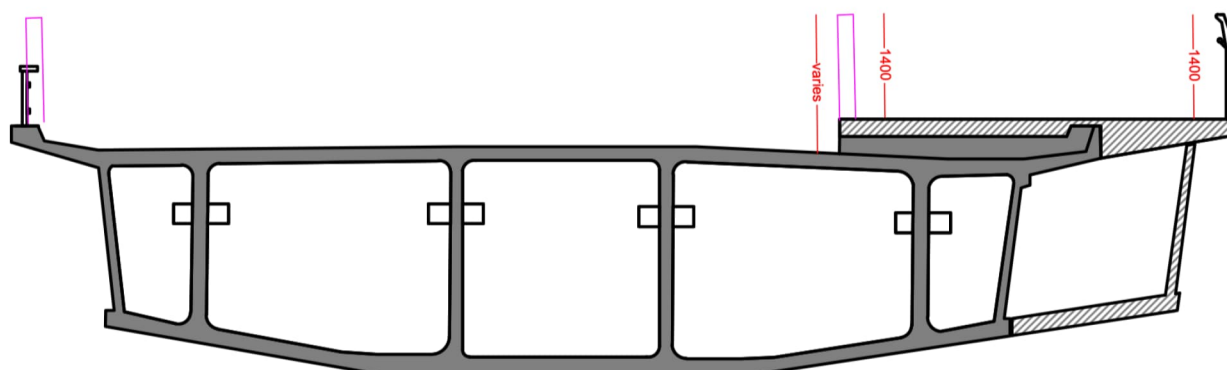
D.3 Barrier Constraints, SMEC, 2022

Regular Performance Barrier

	Agreed barrier name	Indicative barrier profile [#]	Barrier description
RMS RCO, RCI Regular level, F-shape concrete barrier	RL1		Concrete parapet; designed for both outer and inner traffic barriers (RCO and RCI, respectively); total height 820 mm 900mm. The outer face of the concrete parapet must be vertical for inner traffic barrier type RCI. CHS grab rail for cyclists can be installed on top of these barriers.
RMS RBO, RBI Regular level, Combination barrier	RL6		Combined concrete parapet and two metal rail-and-post barrier; designed for both outer and inner traffic barriers (RBO and RBI, respectively); maximum post spacing is 2700 mm; the rail is RHS cross-section; M20 high strength steel bolts grade 8.8; height of parapet 650 mm 750 mm, height of steel barrier 650 mm, total height 1300 mm 1400 mm. The outer face of the concrete parapet must be vertical for inner traffic barrier type RBI. Provision for cyclists. Termination: expansion joint, transition and end post provided.
VRR1 VicRoads Regular level, Three rail steel barrier	RL3		Typical three rail regular level barrier over bridges. 1200 mm height steel posts, bolted to 600 mm diameter concrete column or retaining wall. Three RHS guardrails spacing 350–450 mm.
RMS RAO, RAI Regular level, Combination barrier	RL5		Combined concrete parapet and two metal rail-and-post barrier; designed for both outer and inner traffic barriers (RAO and RAI, respectively); maximum post spacing is 2700 mm; rails are RHS cross-section; M20 high strength steel bolts grade 8.8; height of parapet 440 mm 510 mm, height of steel barrier 590 mm, total height 1000 mm. The outer face of the concrete parapet must be vertical for inner traffic barrier type RAI. No provision for cyclists. Termination: expansion joint, transition and end post provided.

Medium Performance Barrier

Original barrier type	Agreed barrier name	Indicative barrier profile#	Barrier description
DPTI Medium level, Post and rail barrier			
RMS MAO, MAI	ML4		Combined concrete parapet and two metal rail-and-post barrier; designed for both outer and inner traffic barriers (MAO and MAI, respectively); maximum post spacing is 2700 mm; rails are RHS cross-section; M20 high strength steel bolts grade 8.8; height of parapet 650 mm, height of steel barrier 650 mm, total height 1300 mm. The outer face of the concrete parapet must be vertical for inner traffic barrier type MAI. Provision for cyclists. Termination: expansion joint, transition and end post provided.
RMS MBO, MBI	ML5		Combined concrete parapet and one metal rail-and-post barrier; designed for both outer and inner traffic barriers (MBO and MBI, respectively); maximum post spacing is 2700 mm; the rail is RHS cross-section; M20 high strength steel bolts grade 8.8; height of parapet 650 mm, height of steel barrier 480 mm, total height 1300 mm. The outer face of the concrete parapet must be vertical for inner traffic barrier type MBI. Provision for cyclists. Termination: expansion joint, transition and end post provided.



Minimum bridge barrier height varies with performance level.

D.4 TZG/SMM/SMEC Option, 2023

Prior to arriving at the final 2023 option, many sub-options were explored. Some of these are outlined on the following pages.

Site Approach Options

Many options were explored for the approaches to the bridge. Some of these options are illustrated on the following pages:

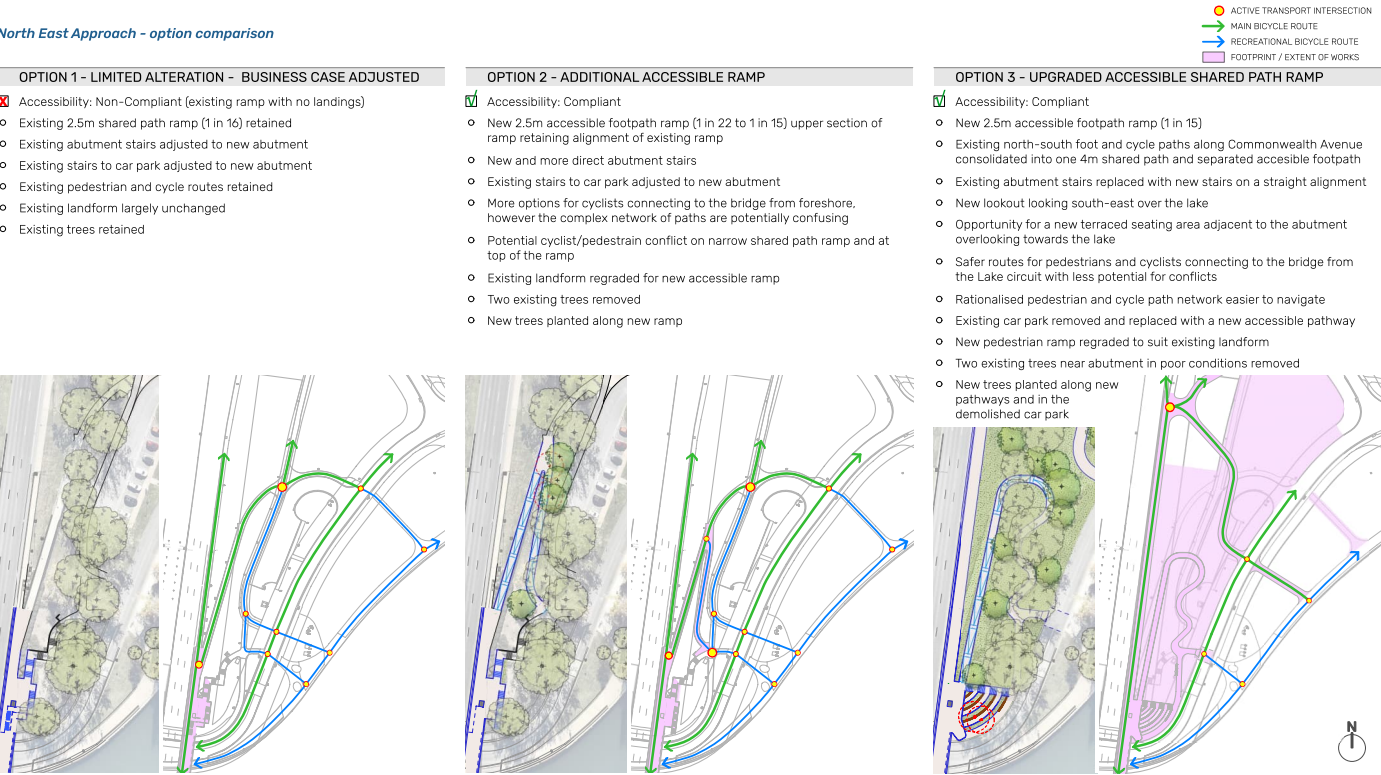


Figure 160: North East Approach - Option Comparison 2022.
Source: SMM and TZG with SMEC for Australian Government, National Capital Authority - 30% Concept Design Report, Rev. A, May 2023.

South West Approach - Option Comparison

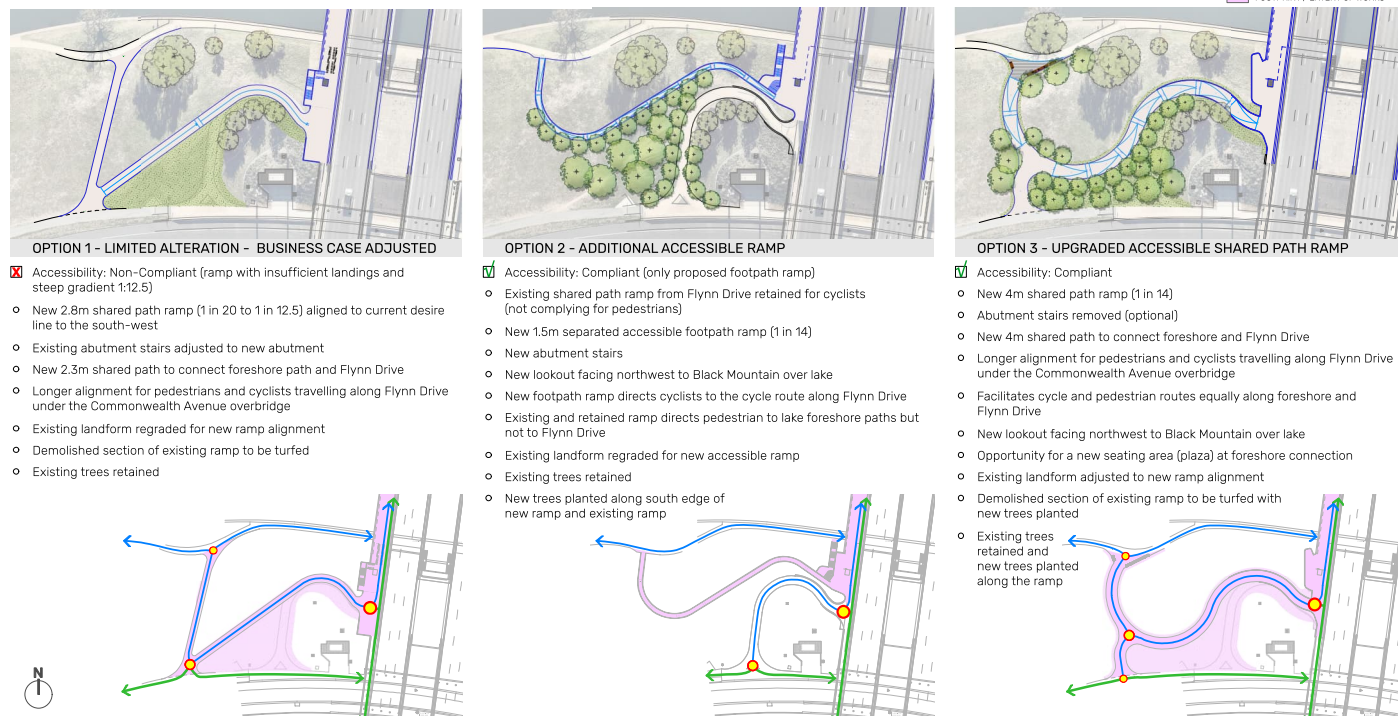


Figure 161: South West Approach - Option Comparison 2022.

Source: SMM and TZG with SMEC for Australian Government, National Capital Authority - 30% Concept Design Report, Rev. A, May 2023.

South East Approach - Option Comparison

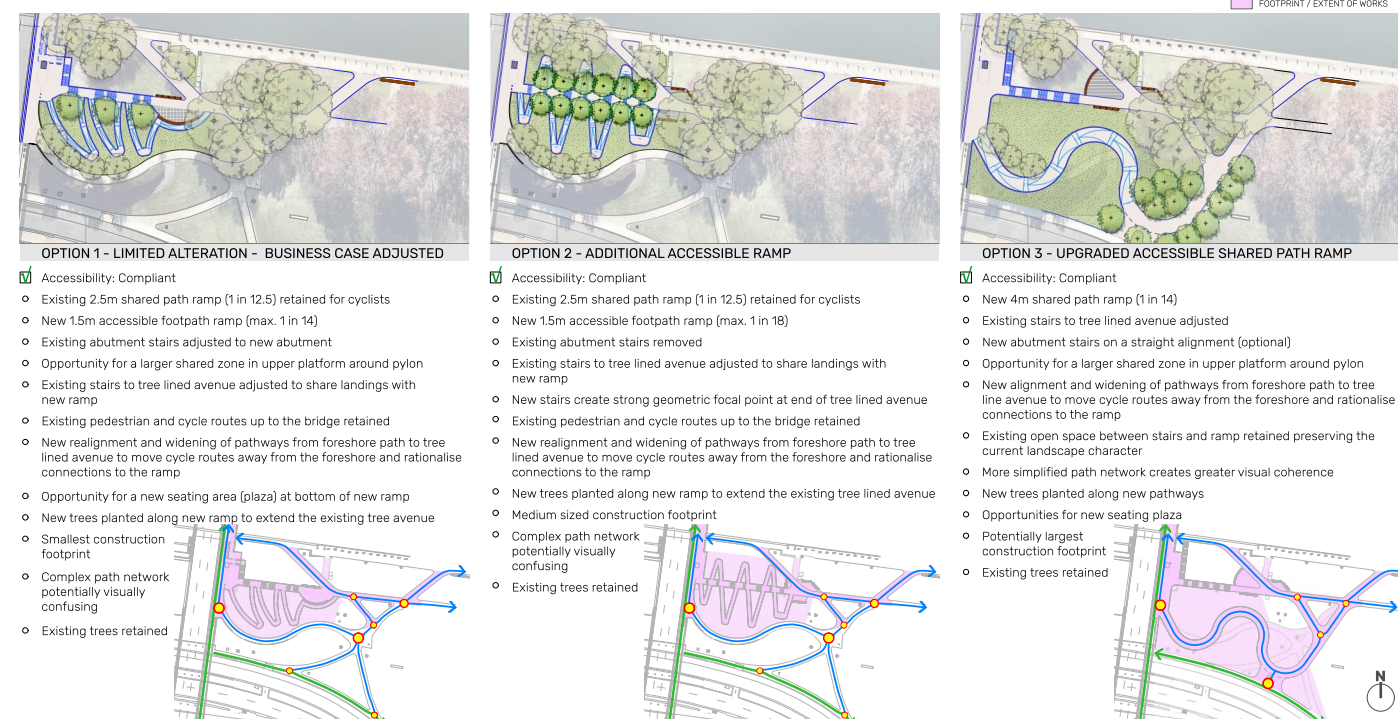


Figure 162: South East Approach - Option Comparison 2022.

Source: SMM and TZG with SMEC for Australian Government, National Capital Authority - 30% Concept Design Report, Rev. A, May 2023.

Shared path/cycle path arrangement

Option 1 - Shared path only

Advantages

- Meets RFT widening requirements.
- Wider path creates more space for pedestrians and cyclists.

Disadvantages

- Does not separate faster on-road cyclists from shared path users.
- Flynn Drive overbridge does not require modification to accommodate the on-road cycleway.
- Impacts on drainage design in the shoulders.
- Increased number of cyclists on shared path may cause congestion and potential conflict during peak periods.

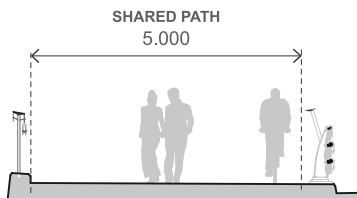


Figure 163: Active transport arrangement Option 1 - shared path only - preferred option.

Option 2 - Shared path plus on road cycleway

Advantages

- Separates faster on-road cyclists from shared path users (pedestrians and other cyclists).
- Limits the number and likely speed of commuter or faster cyclists on the shared path increasing the safety on the shared path.
- May not require a rub rail to be instilled to the top of the vehicle barrier into the shared path.
- Shared path width on bridge matches to shared path widths on the bridge approaches.

Disadvantages

- Narrower shared path will reduce space for pedestrians and cyclists.
- Does not meet RFT widening requirements.
- Flynn Drive Bridge requires modification to accommodate the on-road cycleway. Impacts on drainage design in the shoulders.

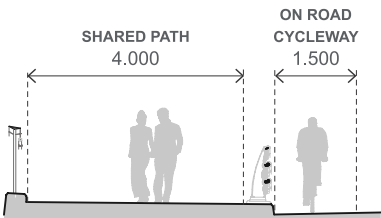


Figure 166: Active transport arrangement Option 2 - shared path plus on road cycleway.

Vehicle lane arrangement

Option 2 - Business case adjusted with shoulder

Advantages

- Exceeds RFT widening requirements.
- Exceed minimum lane widths requirements.
- Improved driver's feel and safety due to provision of shoulders and wider lanes.
- Reduced likelihood of impacting barriers which reduces maintenance of barriers.

Disadvantages

- Requires additional widening and demand on the bridge structure.
- Increased cost.
- Wider Bridge lane widths than the Bridge approaches so shoulder and lane transition on the approach is required.

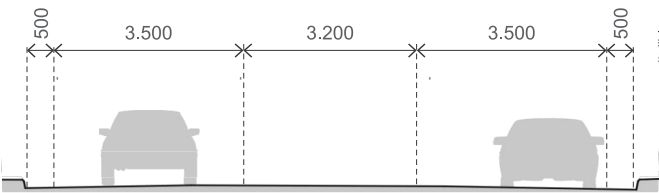


Figure 164: Lane arrangement Option 2 - Business case adjusted with shoulders - preferred option.

Option 3 - Narrow traffic lanes with shoulder

Advantages

- Meets RFT widening requirements.
- Improved driver's feel and safety due to provisions of shoulders.
- More cost efficient.
- Consistent lane widths with the Bridge approaches.
- Reduced likelihood of impacting barriers which reduces maintenance of barriers.

Disadvantages

- Only meets Austroads minimum lane width requirements by providing existing lane widths.

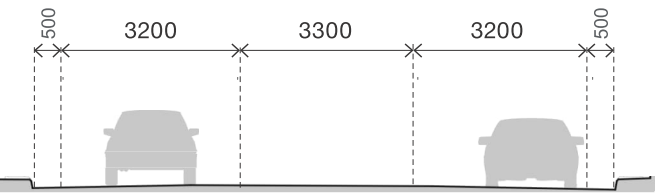


Figure 165: Lane arrangement Option 3 - Narrow traffic lanes with shoulders - preferred.

Bridge Extension Profile

An early option replicated the existing outer edge detail and profile but extended the soffit until it met the existing vertical panels. The original edge condition was lost in the junction between the old and the new forms and hence this option was not preferred.



Figure 167: Bridge extension option 2022.
Source: SMM and TZG with SMEC for Australian Government, National Capital Authority - 30% Concept Design Report, Rev. A, May 2023,

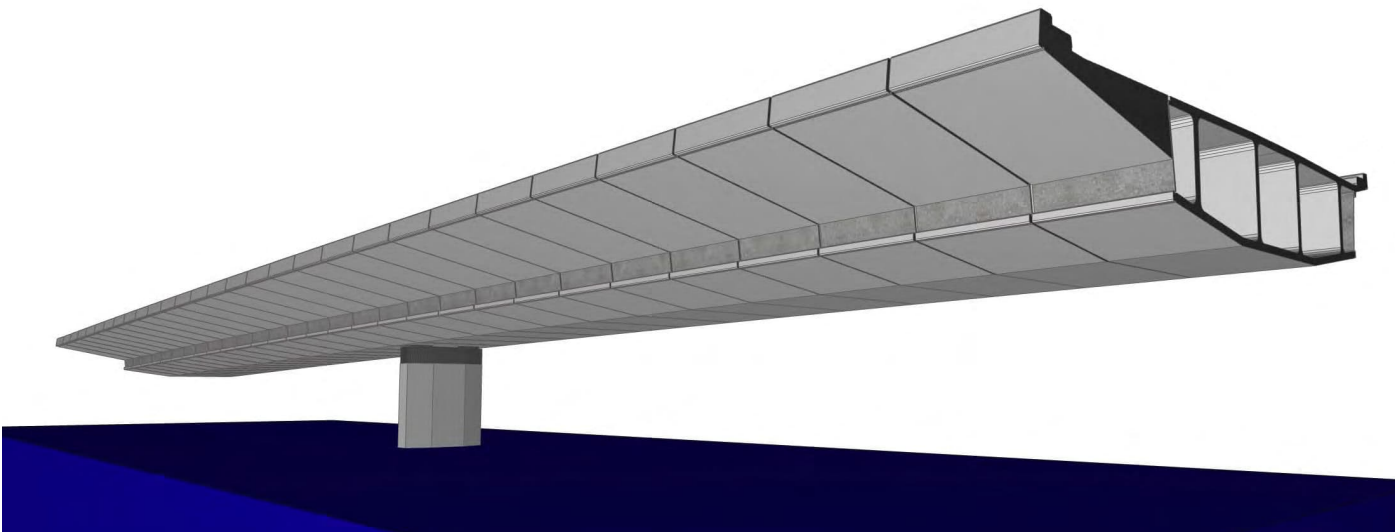


Figure 168: Bridge extension option 2022.
Source: SMM and TZG with SMEC for Australian Government, National Capital Authority - 30% Concept Design Report, Rev. A, May 2023,

The 2023 option replicated the existing outer edge detail and profile, including the relationship to the vertical face, but extended the soffit further out. The weight of the additional structure proved to be excessive and the cost prohibitive, hence this option was discounted.

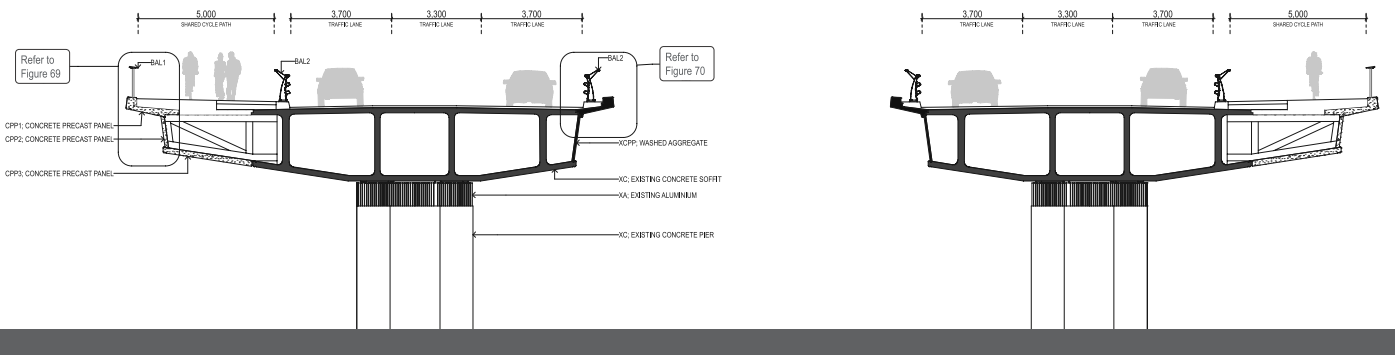


Figure 170: Proposed bridge cross sections 2023.
Source: SMM and TZG with SMEC for Australian Government, National Capital Authority - 30% Concept Design Report, Rev. A, May 2023.

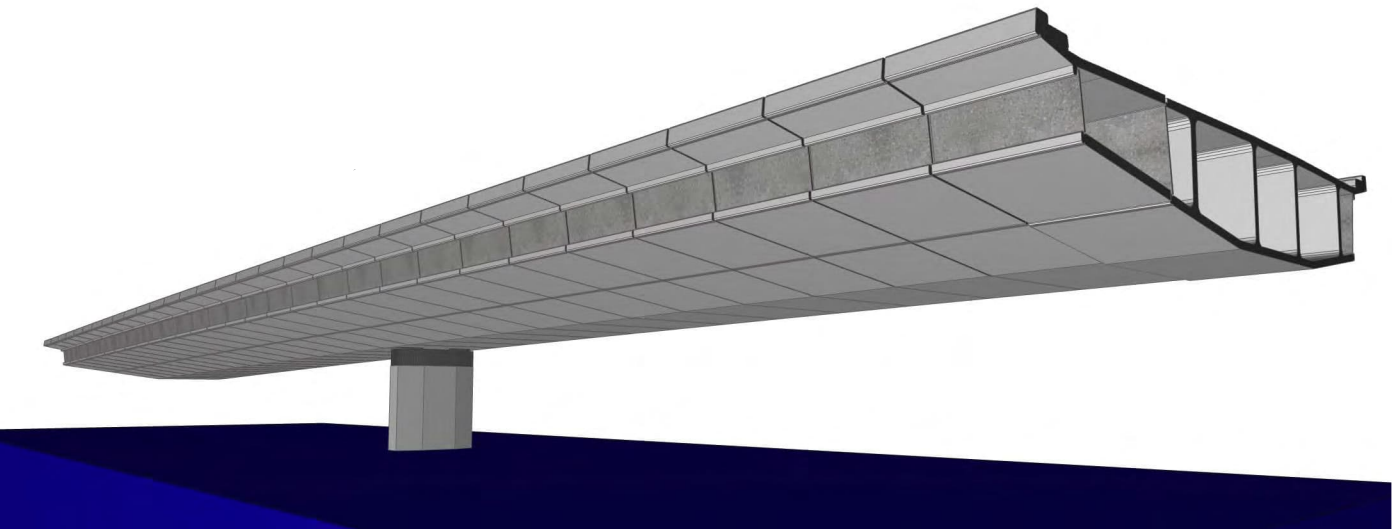


Figure 169: 3D Sectional perspective showing extension of the bridge 2023.
Source: SMM and TZG with SMEC for Australian Government, National Capital Authority - 30% Concept Design Report, Rev. A, May 2023.

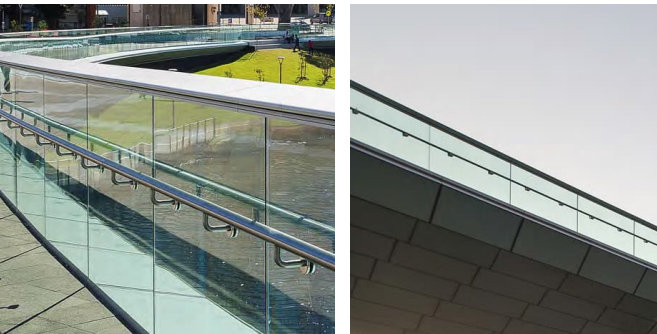
External Balustrade

Option 1 - Frameless glass balustrade

Balustrade option 1 is a frameless glass balustrade which cantilevers out of the base structure of the Bridge with a top rail and handrail.

Heritage outcome

- + Minimal amount of visible structural elements.
- Change of overall appearance of Bridge edge.



Option 2 - Fine metal vertical railing

Balustrade option 2 is a fine metal railing structure with slim vertical metal bars with a top rail.

Heritage outcome

- + Retains existing character and simplifies appearance.

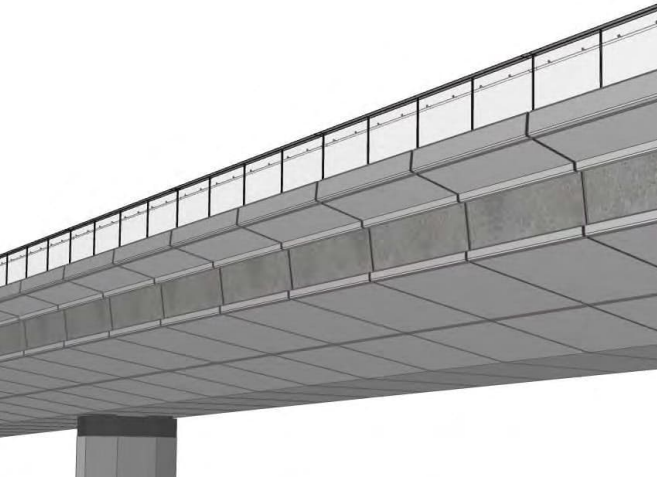


Figure 171: External balustrade Option 1 - frameless glass, 2022.

Option 3 - 1.5m post spacing

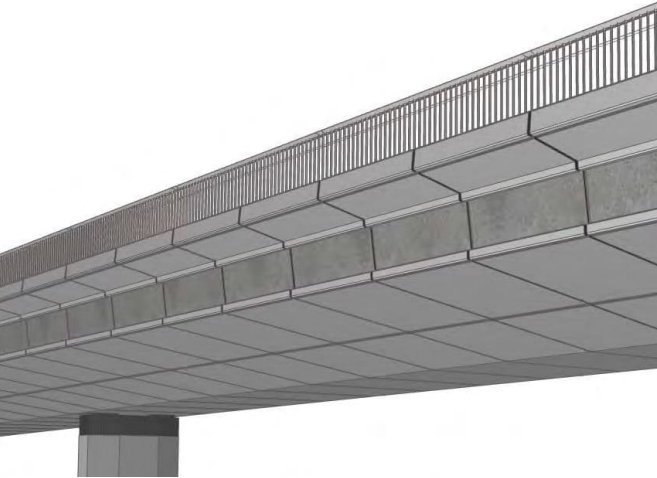


Figure 172: External balustrade Option 2 - vertical steel railing, 2023.

Option 4 - 2.25m post spacing - preferred

Traffic barrier

Dolre barrier (Business Case)

Post spacing 1.5m

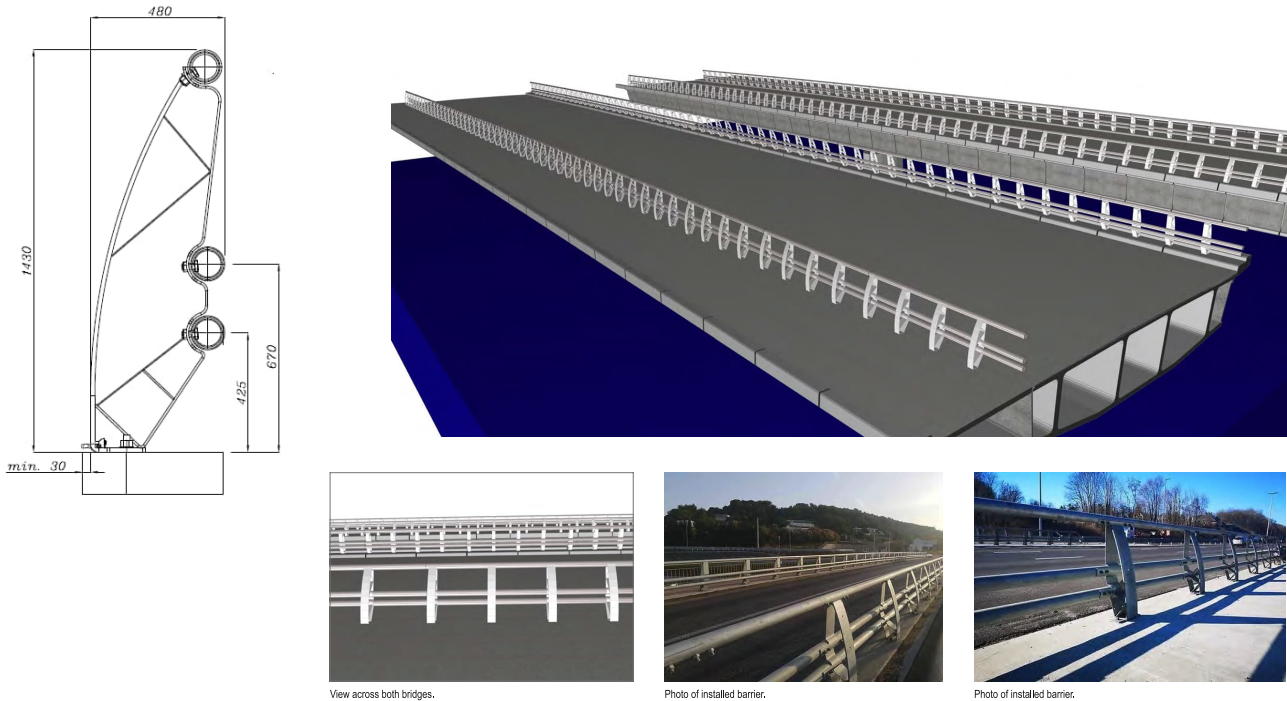


Figure 173: The Dolre barrier was not deemed suitable.

RMS Type RBO Barrier

Post spacing at 2.7m

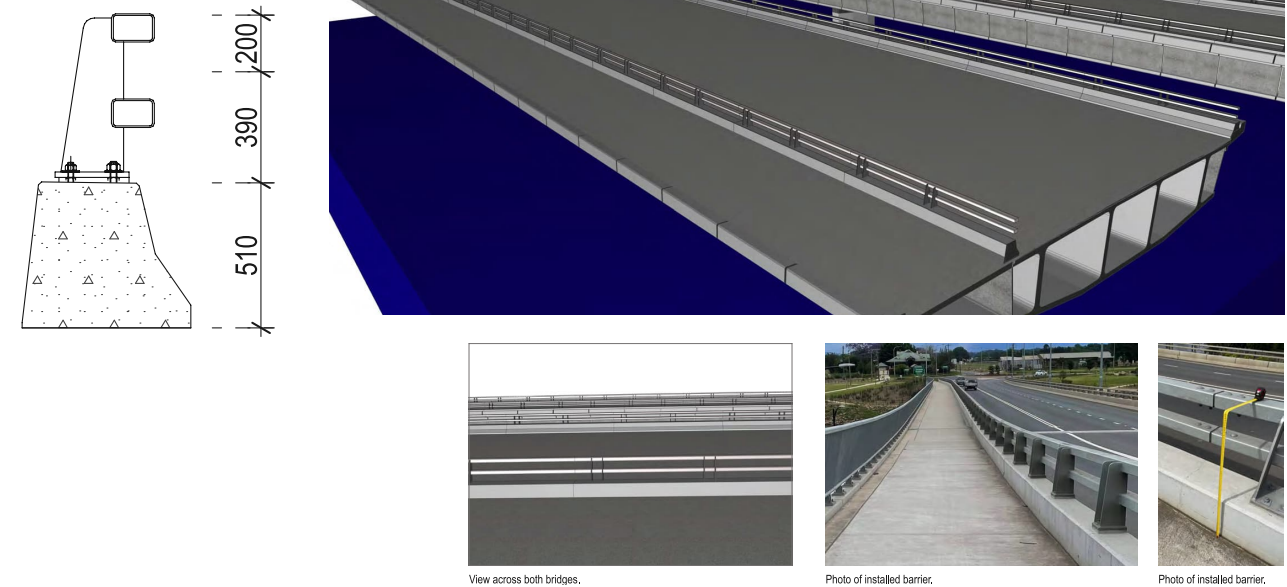
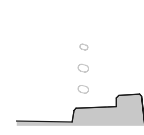
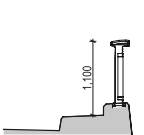


Figure 174: The RMS Type RBO Barrier was not deemed suitable.

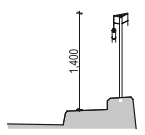
Internal Barrier



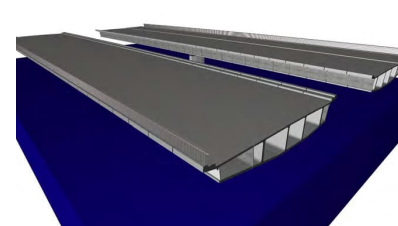
- + Cleaner and less cluttered appearance.
- Forms a continuous ledge which forms a possible safety issue with people climbing the crash barrier.
- Removal of heritage balustrade has a negative impact.

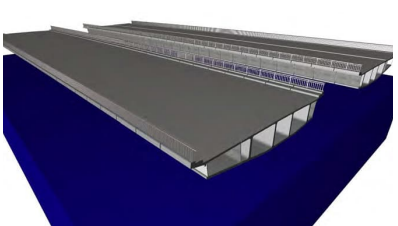


- + Keeping heritage balustrade.
- Lower than new balustrade on outer edge.
- No unified treatment of both edges.



- + Inner and outer balustrade match.
- Removal of heritage balustrade has a negative impact.





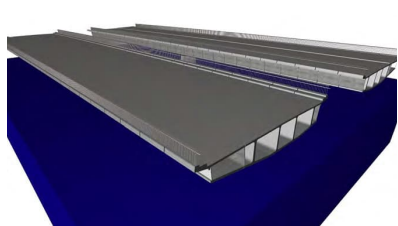


Figure 178: Option 2 - Crash barrier only.

Figure 177: Option 2 - Heritage balustrade - does not comply.

Figure 179: Option 3 - New balustrade - does not comply.

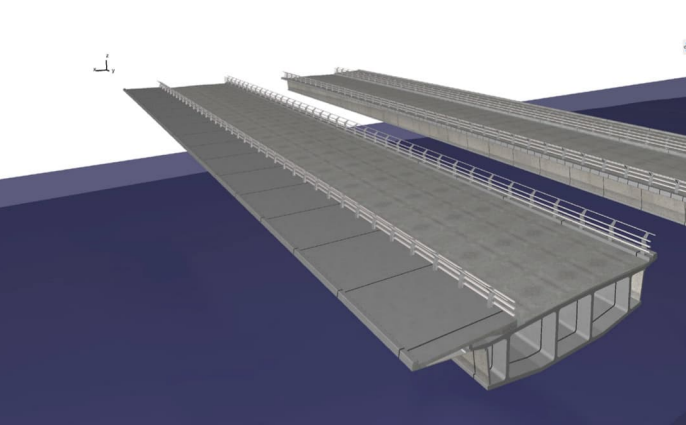


Figure 175: VGAN crash barrier with rub rail with integrated lighting to inner edge of bridge. Original non-compliant balustrade removed.

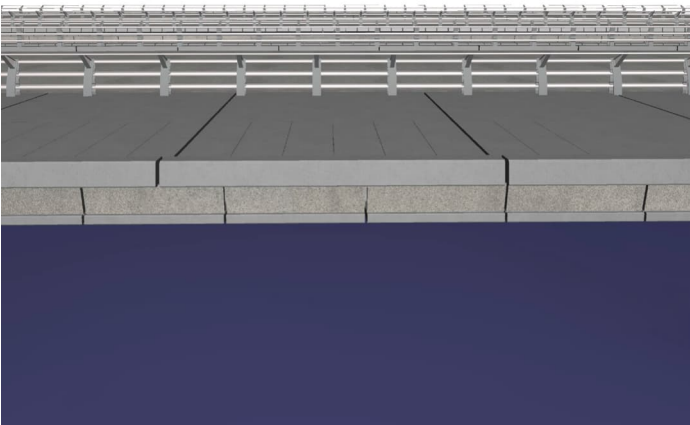


Figure 176: VGAN crash barrier with rub rail with integrated lighting to inner edge of bridge. Original non-compliant balustrade removed.

Materials - Bridge Extension

A range of alternative materials were explored for the different bridge extension profiles.

Figure 180: White precast concrete panel with exposed white Quartz aggregate.

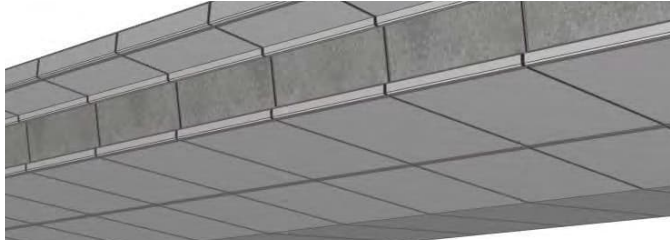


Figure 181: Matte glass panels.

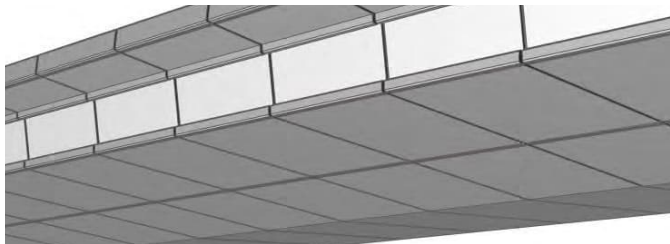
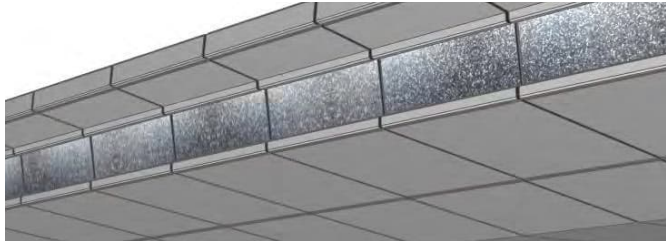
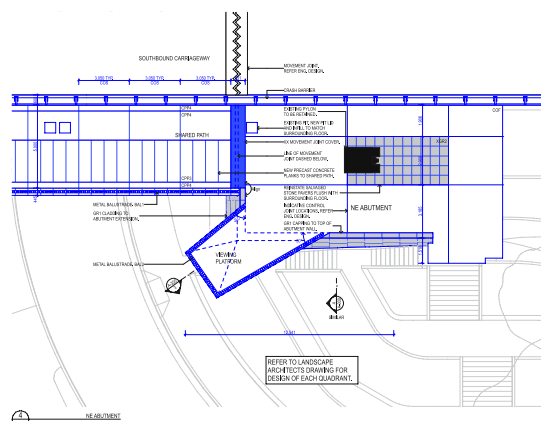
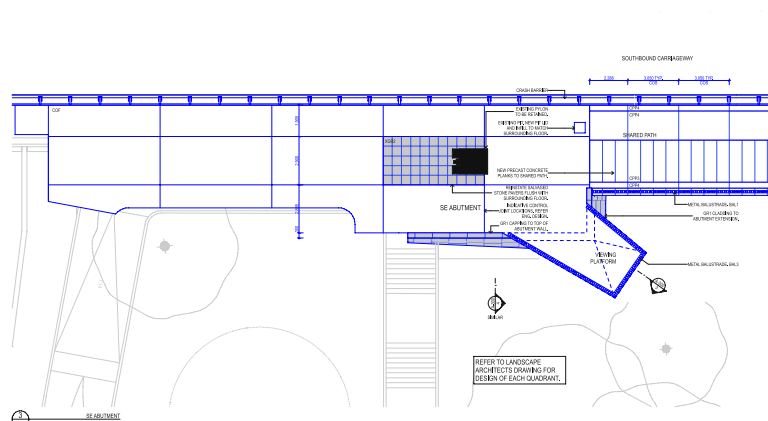
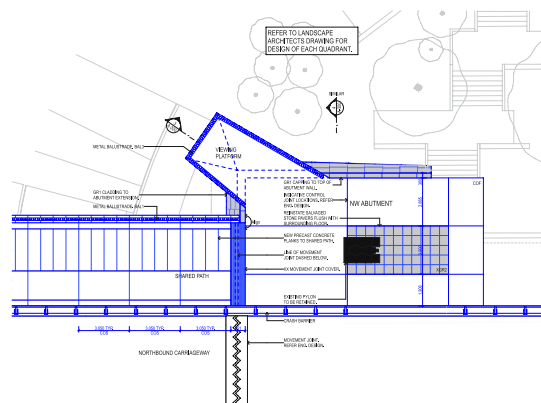
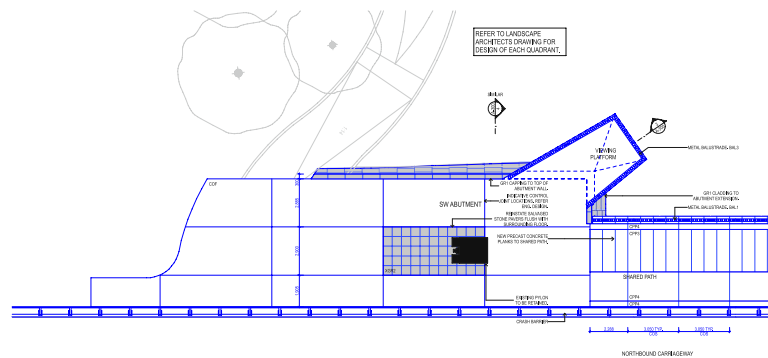
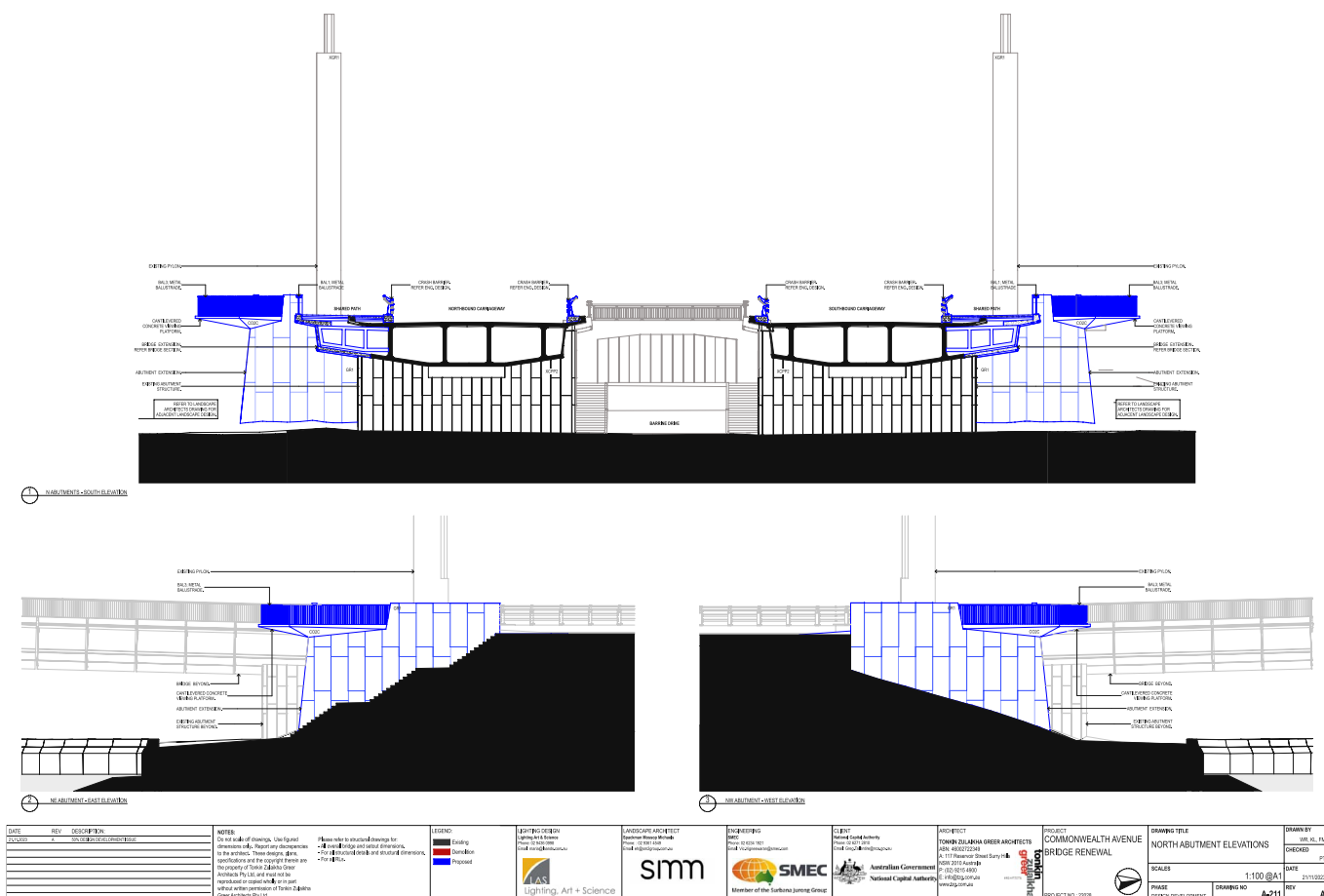
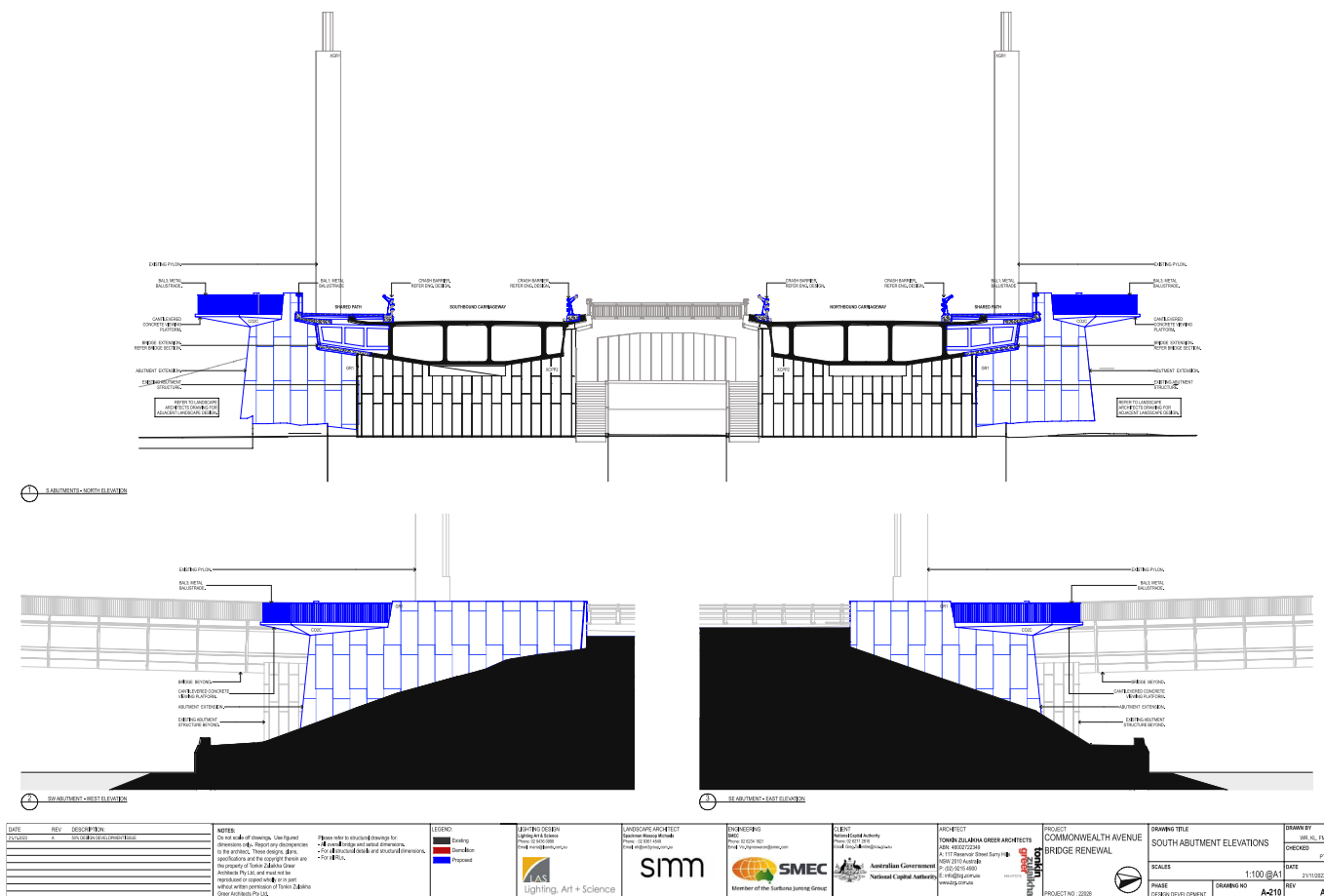


Figure 182: Use of a printed image either of an abstract dotted print or a commissioned artwork relating to the location.

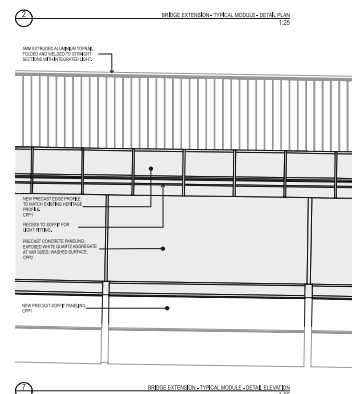
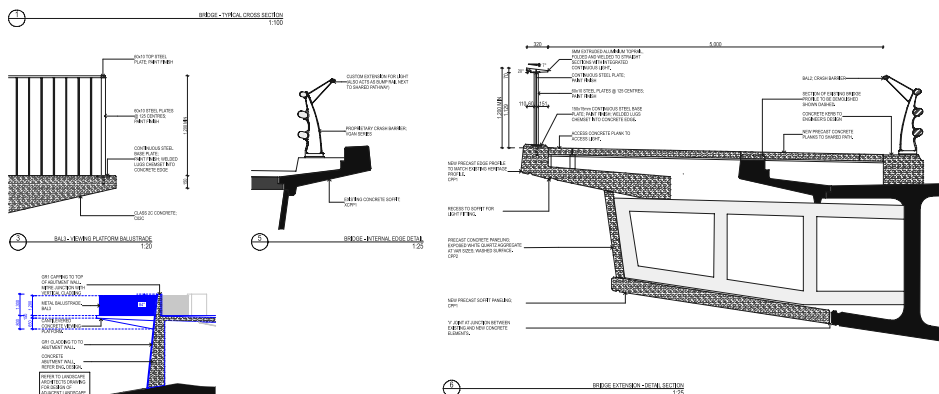
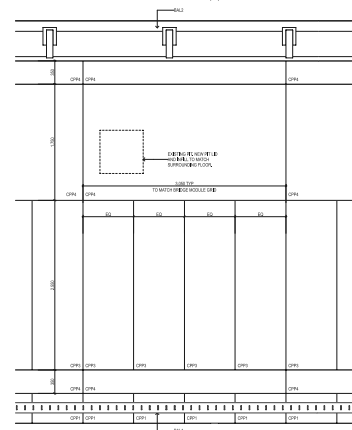
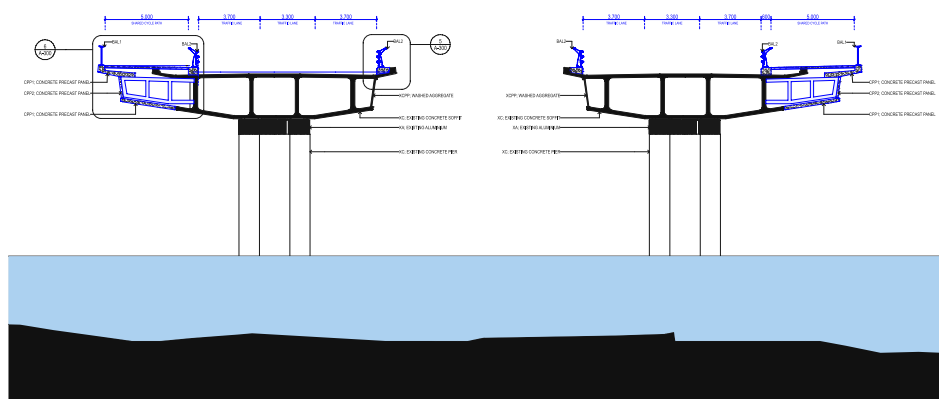


DATE		REV	DESCRIPTION	NOTES	STATUS	DESIGN DECISION	LANDSCAPE ARCHITECT	ENGINEERING	CLIENT	PROJECT	GROUPING TITLE	OWNER BY
2024/01/10		A	REVISED DOCUMENTS BOLD	On-site visit of bridge, the signed drawings are correct. Report is disseminated to the architect. These include, three specifications and the copyright form on the property of Stone Island Australia Pty Ltd, is not valid as represented in response to a request when written permission of Stone Island Group Australia Pty Ltd. Please refer to attached drawings for: • Landscaping and earth dimensions, and • Proposed bridge and structural dimensions, and • DTM.	Approved Revised Proposed	Approved Revised Proposed	Approved Revised Proposed	Approved Revised Proposed	Approved Revised Proposed	Approved Revised Proposed	Approved Revised Proposed	Approved Revised Proposed
				Lighting, Art & Science		sim	SMC	Australian Government	Commonwealth Infrastructure	Commonwealth Infrastructure	Commonwealth Infrastructure	Commonwealth Infrastructure
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				Lighting, Art & Science		sim						

[illegible]



Options Study

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BAL1	BAL2	BAL3	CO2C
Description Steel-reinforced aluminum balustrade with integrated LED lighting. Location Outer edge of widened shared paths. Architectural Requirements Dimensions: As per architectural drawings. Finish: Polished top to enhance of glass element into present concrete edge to engineer's requirement. All other things to be concealed. Finish: Aluminum. Coated and anodized. Finish: Steel. Powdercoated finish or approved equivalent. Color: Aluminum T16 Color: Steel T16A Notes Provide suitable separation between non-compatible metals to avoid galvanic corrosion. Retefication to lighting to be fully concealed in top rail.	Description Bridge cross beam barriering. Location Refer engineer's documentation. Architectural Requirements Refer engineer's documentation. Notes Refer engineer's documentation.	Description Full finished steel balustrade. Location Edge of abutment viewing platform. Architectural Requirements Dimensions: As per architectural drawings. Finish: Welded top to underside of glass plate - concealed side concrete slab to engineer's requirement. All other junctions to be fully sealed. Finish: Powdercoated or approved equivalent. Color: T16A Welding: All welds to be continuous, ground flush, and sealed smooth prior to painting. Notes	Description Class 2 off color colored concrete. Location Abutment viewing platform surft. Architectural Requirements Finish: Off color concrete. Color: Class 2C, Tone 3 (4263R1), for max. 90% of viewings. Formwork: Joints: Layout of the boards and joints to be even and aligned and must be approved, joints to be sealed to prevent grout leakage. Shoe: Changing: Provide between fixings, including form boards, tie rods, dunnery joints and pour joints for Superconcrete approved prior to commencement. Protective Panel: Prepare a protective of CO2C to demonstrate standard of finish for Superconcrete approval. Also to provide further protective panels as necessary until approved is achieved. Notes
COF Description If site concrete path. Location Abutment entrance and viewing platform. Architectural Requirements To match landscape architect's concrete path specification. Notes	CPP1 Description Precast concrete edge member/split. Location Shared path extensions. Architectural Requirements Color: Class 2C, Tone 3, AS 3610, for 90% of viewing. Color: One large may be between tone 1 and 5 for 10% maximum of finish. Formwork: Shared path: sealed and ground smooth to porosity indicated; finish to comply with the requirements for Formwork Class 2C in AS 3610. Finish: Exposed finished Class 2C in AS 3610, Sub-side: sealed casting. Edges: Provide chamfer to all exposed edges as indicated in design drawings. Notes Class 2C finish required to visible surface only. Non-visible surfaces acceptable to be Class 3.	CPP2 Description Exposed aggregate precast concrete bridge decking. Location Shared path extension "bustle". Architectural Requirements Aggregate: Quartz mix: size and colour to match existing decking (CO2P1) or approved equivalent. Surface Treatment: Washed, not sandblasted; to match existing decking (CO2P1). Finish: Clear penetrating sealer. Edges: Smooth chamfer to all exposed edges. Finish: Concrete finished. Thickness: Refer engineer's documentation. Samples: Allow to provide a minimum of six (6) 100mm x 100mm sample panels to test different aggregate mixes and surface treatments. Notes	CPP3 Description Concrete textured precast concrete floor planks. Location Shared path paving. Architectural Requirements Aggregate: Coars White Quartz or approved equivalent. Surface Treatment: Shotblasted to achieve coarse textured finish. Finish: Clear penetrating sealer. Edges: Smooth chamfer to all exposed edges. Finish: Concrete finished. Thickness: Refer engineer's documentation. Samples: Allow to provide a minimum of four (4) 100mm x 100mm sample panels to test different aggregate mixes and surface treatments. Notes
CPP4 Description Finely textured precast concrete floor planks. Location Shared path paving. Architectural Requirements Aggregate: Coars White Quartz or approved equivalent. Surface Treatment: Shotblasted to achieve finely textured finish. Finish: Clear penetrating sealer. Edges: Smooth chamfer to all exposed edges. Finish: Concrete finished. Thickness: Refer engineer's documentation. Samples: Allow to provide a minimum of four (4) 100mm x 100mm sample panels to test different aggregate mixes and surface treatments. Notes	GR1 Description Grass pavers - UrbanStone "Desert Row" or agreed alternative. Location Abutment extensions. Architectural Requirements Dimensions: Individual max. panel size 1000 x 270mm, 40mm thick. Edges/Corners: Smooth chamfer to all exposed edges. Min. junctions to all external corners. Finish: Concrete to engineer's requirements. Layout: Pattern as per architectural drawings. Finish: Clear penetrating sealer. Notes	XA Description Existing base concrete plinth decking. Location Top of existing concrete bridge abutment. Architectural Requirements Cleaning: Pressure clean all visible surfaces. Finish: Clear penetrating sealer. Notes Finish: Clearing does not cause damage to decking. Test clearing methodology on area of decking to be removed or concealed.	XC Description Existing form concrete. Location Existing concrete bridge soft and pliers. Architectural Requirements Cleaning: Pressure clean all visible surfaces. Finish: Clear penetrating sealer. Notes Ensure clearing does not cause damage to surfaces. Test clearing methodology on area of decking to be removed or concealed.
XCPP1 Description Existing exposed aggregate precast concrete bridge decking. Location Existing bridge "bustle". Architectural Requirements Cleaning: Pressure clean all visible surfaces. Finish: Clear penetrating sealer. Notes Ensure clearing does not cause damage to decking. Test clearing methodology on area of decking to be removed or concealed.	XCPP2 Description Existing exposed aggregate precast concrete abutment decking. Location Existing abutments. Architectural Requirements Cleaning: Pressure clean all visible surfaces. Finish: Clear penetrating sealer. Notes Ensure clearing does not cause damage to decking. Test clearing methodology on area of decking to be removed or concealed.	XGR1 Description Existing "Terra Pave" granite deck decking. Location Existing pliers. Architectural Requirements Cleaning: Pressure clean all visible surfaces. Finish: Clear penetrating sealer. Notes Terra Pave granite is no longer able to be sourced. Ensure clearing does not cause damage to decking. Test clearing methodology on additional granite deck not intended for replacement.	XGR2 Description Existing "Terra Pave" granite deck paving. Location Existing pliers bases. Architectural Requirements Cleaning: Clean all remove existing grout to avoid damage, clean thoroughly and store safely for reuse. By: Resistance: Surface of pavers to meet durability and resistance requirements. Samples: Allow to undertake a minimum of three samples, including pre-clearing, sand, clearing and penetrating sealer, to establish preferred approach to achieve the desired finish maintaining aesthetic qualities of the material. Notes Terra Pave granite is no longer able to be sourced. Samples to be undertaken on additional granite deck removed from base of pliers that are not intended for reuse. Should it be found unable to be salvaged without damage, an alternative approach may be considered to achieve the desired finish.

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CABR – Planning Report - HIA suggested mitigation measures:

Ref.	HIA Suggested Mitigation Measure	Owner	Approach / next steps
001	Undertake community consultation regarding the proposed works, the construction period, potential benefits of the works and how the heritage values of the bridge are to be conserved.	NCA	NCA has consulted widely throughout the planning and design phase of the project including public consultation as part of the Public Works Committee approval and as part of the NCA Works Approval for the permanent works. Refer to the PWC public submission paper for further details. NCA has also implemented a stakeholder communications plan in the lead up to construction with key information about the project and benefits of the works.
002	Carefully plan the construction period and, if possible, incorporate strategies that will retain access to parts of the bridge during construction.	SWC	The construction period and staging are being planned to enable the works to be undertaken in a safe manner that minimises disruption for the community. Current staging retains access to both bridges during Stage 0 before implementing a full closure on the Northbound bridge with the Southbound bridge open, followed by a full closure of the Southbound bridge, with the Northbound bridge reopened. Effort will be maintained to minimise the duration of full closures wherever possible.
003	Prepare a heritage induction to ensure that all construction personnel are aware of the heritage values of the bridge and its surroundings and to avoid unintentional impacts during construction / implementation.	SWC	The site induction is currently under review to include content that raises awareness among construction personnel about the heritage values of the bridge and its surroundings, helping to reduce the risk of any unintentional impacts.
004	A photographic archival record of the bridge should be undertaken prior to the demolition of any elements. This could be in the form of a point cloud survey, drawings and photographs, stored together with the original drawings of the bridge. Views of the bridge from key locations such as Regatta Point should be included.	NCA	Prior to commencement of construction the NCA will compile a photographic archival record of the bridge, including historic images and drawings and views of the bridge from key locations. This will be stored for record on the NCA file management system.
005	Integrate heritage interpretation into the bridge renewal. Commission a Heritage Interpretation Plan which celebrates the heritage values of the place. Consider the integration of interpretive panels at each viewing platform and adjacent to the relocated Waterloo stones beneath the bridge. Historic photographs and information on the heritage values of the bridge could be included on construction	SWC	This will be considered as appropriate, notwithstanding, temporary fencing will generally avoid the use of impermeable coverings to manage the risk of overturning under wind loads. NCA will investigate options to temporary signage as part of the project to achieve the desired outcome.

	hoardings to provide a visually attractive and informative display during the construction period.		
006	Implement appropriate heritage protection measures to ensure that the original fabric of the bridge and the surrounding landscape are not damaged during works.	SWC	Dilapidation surveys have been undertaken on and off the bridge. This carefully documents the condition of the site prior to work. Survey monitoring will be undertaken during the works with clear thresholds to be adhered to. These have been included in notes on the construction drawings. Temporary works designs have been prepared to determine methodologies that consider the context and environment. Repair methodologies will be developed and agreed with NCA if there is a need to undertake repairs during construction.
007	Create buffer zones around trees to be retained to avoid risks of physical impact.	SWC	The contractor is currently preparing a Tree Management Plan for the permanent works. This will consider buffer zones for retained trees during construction to avoid physical impact.
008	Carefully site and select new lighting that is consistent and/or sympathetic to the character of the bridge and its approaches.	SWC	The current lighting design has been designed to be sympathetic to the character of the bridge and approaches in coordination with the Architect and Heritage consultant. The lighting positions and angles have been designed to comply with required lighting levels, notwithstanding, a sampling and prototyping process will be followed with NCA to confirm approval prior to final installation.
009	Interpret the raised plinth around the pylon, proposed to be removed, in ground plane of the bridge.	NCA	NCA are considering the development of an interpretation strategy. This would also consider the interpretation of this element.
010	The road barriers that run along the internal edges of the bridge require fixings through the soffit of the original bridge to meet code. These should be carefully co-ordinated and detailed to minimise visual impacts	SWC / NCA	NCA has selected the barrier system based on project safety requirements and to be sympathetic to the character of the bridge. The structural design for the barriers will be carefully coordinated to minimise the visual impact on the heritage value of the bridge.
011	Retain and conserve portions of the original balustrade and inner handrails between the bridges as evidence of original detailing	SWC	The design currently proposes to retain portions of the original balustrade between the bridges.
012	Retain representative samples of elements to be removed including sections of the original balustrade. Store in rooms located beneath existing abutment	NCA / SWC	The Contractor and NCA will discuss and agree elements that require representative samples to be removed and stored.
013	Remove intrusive signage attached to pylons.	NCA / SWC	The NCA and the designers will investigate options to minimise intrusive signage noting there are safety/statutory requirements that may govern and limit the ability to remove any existing signage.