

Prepared for Transport for NSW
March 2021

Sydney Harbour Bridge

Cycleway Access Project - North

Supplementary Detailed Heritage Framework



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Figure 1: 1932. Some of the first vehicles to cross the Sydney Harbour Bridge March 20,1932.
Source: Dictionary of Sydney, <https://home.dictionaryofsydney.org>.

ACKNOWLEDGEMENT OF COUNTRY
TfNSW and the project team acknowledge the traditional owners and custodians of the land on which they work and pay their respects to Elders past, present and emerging.

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Figure 2: View south from beside the Fitzroy Street arch, Milsons Point, showing completed spans 6,7,8,9,and 10. Creeper Cranes on bridge. 5.11.1929.
Source: RTA/RMS print 34479. Filename:19291105HB34479.jpg



1.0

Introduction

2.
5.11.29.

1.1 Background

1.1.1 Project Brief

The Sydney Harbour Bridge Cycleway is identified as a strategic cycle route in Sydney’s Cycling Future, Cycling for Everyday Transport (Transport for NSW, 2013), connecting the Sydney CBD and the Lower North Shore. It is currently used by approximately 2000 cyclists a day, making it the most heavily used cycleway in Sydney. Future Transport 2056 identifies the need for active transport as a viable transport mode for the 30-minute city and emphasises the need for suitable infrastructure for all customer types.

The Sydney Harbour Bridge Cycleway Access Project involves two projects to improve accessibility at the northern and southern ends of the cycleway. The program aims to improve the safety and capacity of the cycleway, improve connections to the wider cycling network and make cycling a convenient and attractive mode of transport for more people.

As a barrier to cycling as a transport mode, access issues on both ends of the Sydney Harbour Bridge Cycleway have been investigated in detail over the past two decades. In 2016 and 2017, RMS developed a concept design to replace the southern access with a separate and more accessible ramp. A Review of Environmental Factors was displayed in 2017 and, following feedback, some changes were made to the concept.

While the concept design for the south has been progressed, the design for the northern access ramp is still under investigation and forms the study area for this Heritage Framework.

1.1.2 Report Purpose

This report aims to provide TfNSW with a detailed Heritage Framework to inform the design of the Sydney Harbour Bridge Cycleway Access Project - North. It includes a review of the history and significance of the various components of the site, identifies heritage constraints and opportunities and provides guidelines for the design of new elements within this highly significant heritage context.

Heritage considerations should underpin the development of options for the Sydney Harbour Bridge Cycleway Access Project - North. Impacts on significant fabric, setting and views should be minimised in accordance with the policies contained in the Sydney Harbour Bridge Conservation Management Plan, (Draft) 2021 and Bradfield Plan of Management, 2014.

This report supports the ongoing historical and significant use of the Sydney Harbour Bridge as a:

- Main traffic route for vehicles
- Essential railway corridor
- Pedestrian connection, and
- Cycleway connection across the Sydney harbour.

Key Reference Documents

The Heritage Framework should be read in conjunction with:

- Sydney Harbour Bridge Conservation Management Plan, Godden Mackay Logan and TfNSW, (Draft) 2021
- Bradfield Park Plan of Management, North Sydney Council, 2014
- Urban Design Framework for the Northern Cycleway Access, Spackman Mossop Michaels Landscape Architects and TZG Architects, 2021
- Sydney Harbour Bridge Cycleway Access Project - North, Urban Design and Heritage Framework prepared by Cox Architecture on behalf of Transport for NSW, Infrastructure and Place, 2021.

1.1.3 Key Stakeholders

Consultation has been held with key stakeholders including Heritage NSW, TfNSW, Sydney Trains and North Sydney Council.

1.1.4 Authorship

This report builds on the extensive archive of reports and studies, prepared by others, related to the Sydney Harbour Bridge, Milsons Point Railway Station, Bradfield Park and surrounding areas, which are listed in the Reference section of this report.

This Heritage Framework has been prepared by Tonkin Zulaikha Greer Heritage on behalf of Spackman Mossop Michaels Landscape Architects for TfNSW.



Figure 3: Sydney Harbour Bridge Cycleway.
Source: Outdoor Design Source: https://da28rauy2a860.cloudfront.net/outdoordesign.com.au/contents/5523/20170926143819_464.jpg.



Figure 4: Sydney Harbour Bridge northern cycleway stairs.
Source: Harbour Link: <http://www.sydneyharbourlink.com/files/55stepsDSCN0809.jpg>



Figure 5: Sydney Harbour Bridge northern cycleway stairs.
Source: Bicycle Network: <https://www.bicyclenetwork.com.au/newsroom/2020/05/20/calls-for-upgrades-to-the-sydney-harbour-bridge-cycleway/>.

1.2 Methodology and Terminology

What is heritage

Heritage in the broadest sense is everything inherited from our past. It can be tangible, such as buildings, places and precincts; archaeological sites and relics; landscape, environment, gardens and trees; moveable heritage (artefacts); or intangible, such as customs, language, stories and beliefs. Heritage helps to shape our identity - our past, present and future. Heritage can also include cultural knowledge, spiritual values and connection with the land, especially in relation to Aboriginal heritage,

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: The Australia ICOMOS Charter for Places of Cultural Significance, 2013 (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 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.¹

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

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.

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.



Figure 6: Aerial view of Milsons Point 1928.

Source: Pinterest <https://www.pinterest.com.au/pin/14707136263790648/> State Records NSW > Leda Holdings. By Rocco Roy Mico.



Figure 7: Current aerial view of Milsons Point.

Source: Pinterest <https://www.pinterest.com.au/pin/14707136263790648/> State Records NSW > Leda Holdings. By Rocco Roy Mico.

¹: TZG Architects for TfNSW, Managing Heritage Issues in Rail Projects Guidelines, December 2015.

1.3 The Study Area

The study area is located in Milsons Point at the northern end of the Harbour Bridge and includes the northern cycleway and bridge approaches, Milsons Point Railway Station, Bradfield Park Central and Bradfield Park North. The Park is bound on the west side by Alfred Street and crossed by Fitzroy Street and Burton Street and their associated underbridges.

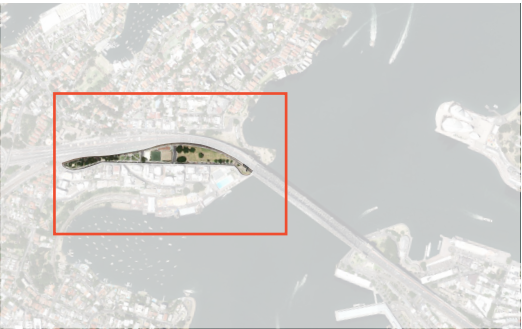
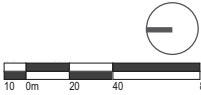


Figure 8: Location Plan.
Source: Nearmaps.



Figure 9: Study Area.
Source: Nearmaps.



1.4 Historical Context

1.4.1 Aboriginal History

Pre-contact

Prior to the arrival of the First Fleet in 1788 the Indigenous people of Australia lived in small clan groups with a complex culture supported by social, political and kinship structures and a deep spiritual connection to Country. The North Shore of Sydney was inhabited by two Aboriginal clans or bands of the Eora Nation, the Cammeraygal and Wallumedegal.² Like many of the coastal peoples who lived around Port Jackson, they relied on the marine environment and the many creeks, rivers and wetlands for much of their food. Surrounding bushlands also provided a hunting ground for small game while the flora and natural woodlands offered edible plants and provided a valuable resource for many practical purposes such as fashioning canoes, spears and basket making. A highly developed land management system established over centuries using fire helped to create diverse vegetation patterns for hunting and foraging. The abundance of the local environment helped to support trade with other tribal groups and encouraged movement throughout their Country in accordance with the seasons. This also maintained social networks and daily rituals encompassing language, customs, spirituality and law, of which the connection between the people, Country and spiritual beliefs was paramount.³

Contact

Although the tribal boundaries for the Cammeraygal and Wallumedegal were never clearly defined, it is noted by Governor Arthur Phillip in 1790 that the Cammeraygal occupied the district called Cammerra, ‘about north-west part of the harbour’ and the opposite shore, called Wallumetta, was occupied by the Wallumedegal clan.⁴ More is known about the Cammeraygal as they were observed and recorded in numerous writings and sketches of the early colonists and described as being ‘robust and muscular’. It is also noted that their social status allowed Cammeraygal men to preside over the initiation of young males from other Sydney groups including a well-known observation of tooth removal ceremonies for members of other clans.⁵

It is likely that the name Wallumedegal or Wallumattagal was derived from the combination of the words ‘wallumai’ the snapper fish and ‘matta’ a word used to describe a water place. Wallumedegal territory followed the north bank of the Parramatta River from Turrumburra (Lane Cove River) in the east to Burramatta at the head of the river in the west.⁶

Post Contact

By the early 1800s Aboriginal social structures and way of life were eradicated following their displacement and the decimation of their population by disease. By 1830 remnants of clans lived on reserves or missions while others still living around Port Jackson formed communities that integrated elements of European culture into their lifestyle.⁷

Today only a few, if any, Aboriginal people living in the northern suburbs can trace their ancestry to the Cammeraygal or Wallumedegal clans.⁸ However, archaeological artefacts in the form of rock engravings, fire charred rock shelters, rock art including hand stencils, middens of whitened seashells from ancient meals and axe grinding grooves provides evidence of the first inhabitants in North Sydney.

There are family groups living in Sydney, in particular the Bidjigal people who reside in La Perouse, who still hold sacred knowledge of this Country, and they continue to share this knowledge today. This includes knowledge of important places, themes, stories, totems and caring for Country principles.⁹

Connections to this Country and the Sydney Harbor Bridge go beyond Eora tribes, for example the Yuin people of Moruya have strong connections to the bridge and are hyper aware of the stone that was removed from their Country and brought up to Sydney to make the iconic stone pilons of the bridge. Material removed from Country is still Country and the construction of the bridge has created a new song line or story that connects Sydney to Moruya.¹⁰



Figure 10: Aboriginal activities on the shore of Port Jackson in 1824.

Source: By Charles Alexandre Lesueur From the collections of the State Library of New South Wales [a1477011 / Q82/41, 11] (from 'Voyage de découvertes aux terres australes by Francois Peron, 11 separate prints of plates contained in Voyage de découvertes aux terres Australes', 2nd ed, 1824) available online at: <https://dictionaryofsydney.org/media/3769>



Figure 11: Part of ‘Panoramic views of Port Jackson’, James Taylor, c1821.

SLNSW, Mitchell Library, Taylor, James, and R. Havell & Son. [Panoramic Views of Port Jackson, Ca. 1821 / Drawn by Major James Taylor, Engraved by R. Havell & Sons], 1821. <https://search.sl.nsw.gov.au/primo-explore/fulldisplay?docid=ADLIB110000157&context=L&vid=SLNSW>

1.4.2 Post 1788

Making way for the Sydney Harbour Bridge

By the 1880s, some locations of the Sydney waterfront had become old with many dilapidated buildings occupying slum areas. Whilst efforts to renew and eradicate these areas proved difficult, it was only after the bubonic plague of 1900 that various government bodies began resumptions of waterfront properties.

Following the Sydney Harbour Bridge Act of 1922, construction of the bridge was to provide the next major catalyst for resumptions and demolitions. The large scale bridge project gained much public support as it was seen as one of improvement and progress.¹¹

To make way for the bridge and its approaches, large sections of Sydney on the north and south side were resumed and demolished. Among the many who lost their homes were waterside workers, shopkeepers, real estate agents, tobacconists, butchers and women running residential and boarding houses.¹² On the north side, 438 houses were resumed impacting up to 2032 residents.¹³

Construction of the bridge began in July 1923 with the turning of the first sod ceremony that took place on the north shore and completed in March 1932 when it was opened to the public.

A detailed history of the Sydney Harbour Bridge is contained in the Conservation Management Plan.

Milsons Point Railway Station

Construction of the Milsons Point Railway Station began in 1929 until 1932 as part of the northern approaches of the Sydney Harbour Bridge. It was initially named Kirribilli Station but changed to Milson Point before it was officially opened as part of the larger bridge opening celebrations by then premier of NSW, JT Lang.¹⁴

Bradfield Park

The land that Bradfield Park occupies was originally part of a land grant to Robert Ryan in 1800. It was acquired by Robert Campbell a year later and passed on to George Campbell in 1846.

Subdivisions and lot sales in the 1850s led to the creation of Milsons Point Wharf and Lane Cove Road (Alfred Street) in 1861. The area experienced increased urban settlement until 1923 when land resumptions and demolition commenced for the construction of the Sydney Harbour Bridge. The surrounding northern approaches were landscaped as a park and named after JJC Bradfield, the Chief Engineer for the bridge construction.

North Sydney Council completed the northern rockery and Milsons Point Station entry section of Bradfield Park in 1934, however, plans for further works were delayed by the Great Depression of the 1930s. Surviving plantings from the 1930s include the four wine palms (*Butia Capitata*) at the entrance to the station.

A drinking fountain was erected by North Sydney Council in 1953 using funds bequeathed by Ms Jessie Broomfield specifically for the ‘erection of drinking fountains [for humans] and troughs for dogs’.

By the 1960s, images of the park show a line of Poplars, probably Lombardy (*Populus nigra*), in front of the viaduct pilasters.

Cabbage Palms were introduced in 1981 when Burton Street was closed to through traffic.¹⁵ In 1988 the land was transferred to the North Sydney Council to allow construction of the Sydney Harbour Tunnel.

The row of poplars was replaced by Council during a park upgrade about 20 years ago with a different species of a similar tree type, however, located either side of the bridge pilasters. Indigenous species and shrubbery were also introduced at this time.

Former Kirribilli Bowling Club and Greens

Founded in 1949, the Kirribilli Ex-Service Club was originally called the Gallipoli Legion Club with 104 of its 112 foundation members having seen active service in Gallipoli. The club house and bowling greens were built in 1955 after the club recieved permission from North Sydney Council to clear the central area of Bradfield Park. In its heyday the club had 190 members.¹⁶

In 1974, a plaque commemorating the two bowling greens was dedicated to two of the club’s highly esteemed members, Arthur Coulter and Harry Mann. The lease expired in 2001 and management of the site was resumed by North Sydney Council.

15: Bradfield Park Plan of Management 2014 and Interpretive Signage.
16: Hedley Somerville, RNSWBA Archivist.

2: North Sydney Council Heritage Leaflet, North Sydney’s Aboriginal past, North Sydney Heritage Centre and ‘A Brief Aboriginal History’ Aboriginal Heritage Office.
3: Fact Sheet No. 13, Willoughby City Libraries Services
4: North Sydney Council Heritage Leaflet, North Sydney’s Aboriginal past, North Sydney Heritage Centre.
5: Fact Sheet No. 13, Willoughby City Libraries Services.

6: The City of Ryde, Aboriginal History, <https://www.ryde.nsw.gov.au/Library/Local-and-Family-History/Historic-Ryde/Aboriginal-History>
7: Fact Sheet No. 13, Willoughby City Libraries Services.
8: North Sydney Council Heritage Leaflet, North Sydney’s Aboriginal past, North Sydney Heritage Centre.
9: Michael Hromek, Technical Executive – Indigenous (Architecture), Design and Knowledge, WSP Australia Pty Ltd.
10: *ibid*.

11: Bridging Sydney, Caroline Mackaness (ed), Historic Houses Trust of NSW, 2006, pp. 130-132.
12: *Ibid*.
13: Sydney Harbour Bridge CMP, Godden Mackay Logan (GML) and Transport for NSW, (Draft) 2021, p.23.
14: Heritage Inventory Listing for Milsons Point Railway Station, Heritage NSW, www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx

Before the Bridge



Figure 12: North Sydney, 1865.
Source: Image courtesy Stanton Library Historical Services. Available online.



Figure 13: Alfred Street from Fitzroy Street before 1926 (showing business premises to be demolished to make way for the Sydney Harbour Bridge), Dalmar Studios 1926. Source: Image courtesy Stanton Library Historical Services. Available online.

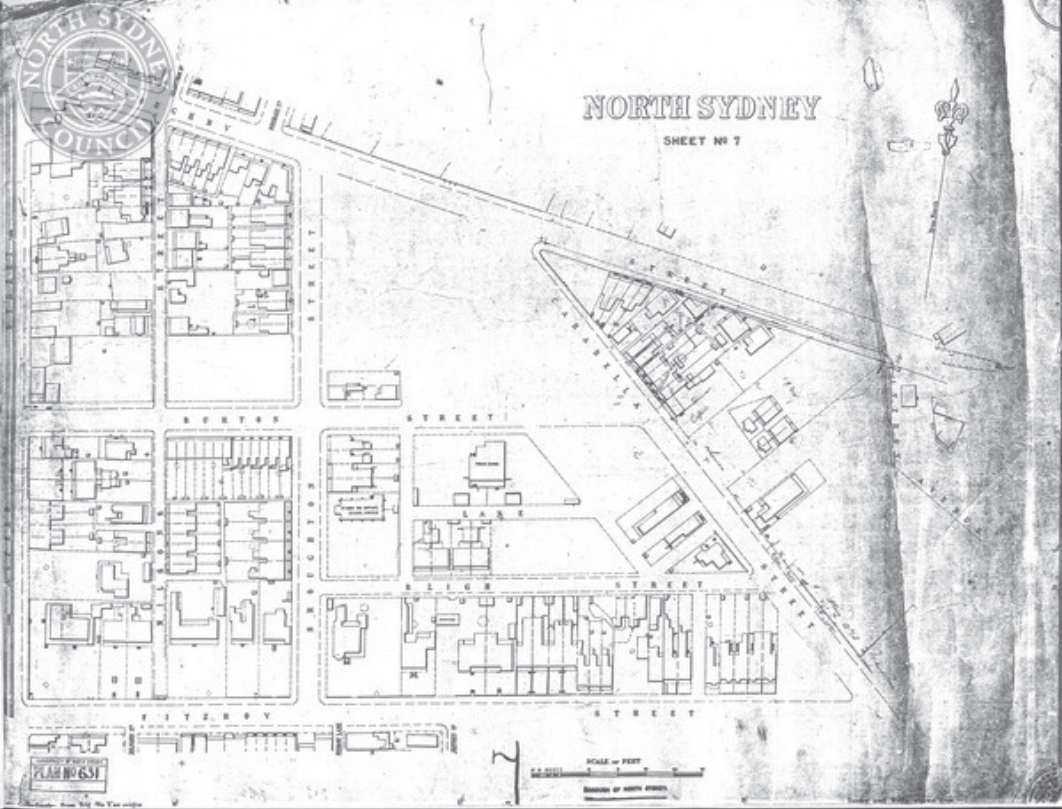


Figure 14: 1890s map of the subject area. Sydney metropolitan detail series, North Sydney Sheet 7.
Source: Image courtesy Stanton Library Historical Services. Available online: https://stanton.imagegallery.me/site/welcome.me?search=~mc_search:221&search_str=Album:%204%201890s%20Block%20Plan%20Maps%20-%20drawn%201890-1896%20by%20NSW%20Surveyor%20General#

Bridge Construction



Figure 15: Milsons Point. Northern approach spans 6,7,8,9 and part of 10 looking south, 17.5.1928.
Source: RTA/RMS Print 34195. Available online.



Figure 16: Aerial view of construction of Bradfield Highway approaches to Sydney Harbour Bridge, late 1920s.
Source: State Rail Authority/State Records. One of set of 10 photographs showing rail/tram transport from SRA Archives, LPF 330-332 and 493-499 Available online via Stanton Library Historical Services.



Figure 17: Cranes positioned at both sides of the unfinished Sydney Harbour Bridge, Sydney, 1929 [picture].
Source: National Library of Australia. Available online at: <https://nla.gov.au/443/tarkine/nla.obj-162053201>



Figure 18: High view of the Fitzroy and Burton Street viaducts and retaining walls, looking north. 2/12/1930.
Source: RTA/RMS Print 35515. Available online.




Figure 19: View of houses alongside construction of bridge approaches including arches over Fitzroy and Burton Streets, Milsons Point. 3/7/1931.
Source: RTA/RMS Print 34195. Available online.



Figure 20: View from the north side showing the old North Sydney railway station and ferry wharf in the foreground.
Source: State Library of NSW. Available online. Call number 2174, File number IE1486532, File Number FL1486541.

A SHORT HISTORY OF THE SYDNEY HARBOUR BRIDGE



1788
Before the arrival of Europeans in 1788 both sides of Sydney Harbour, where the Sydney Harbour Bridge would later be built, were the home of the Eora people.

1815
As early as 1815, convict and architect Francis Greenway suggested the construction of a bridge across the harbour.

1857
In 1857 the engineer Peter Henderson proposed the construction of a large cast iron bridge, spanning from Dawes Point to Milsons Point.

1878-1879
This was followed by a proposal in 1878 for a floating bridge by Commissioner WC Bennett, and in 1879 a high level bridge was designed by TS Parrott.

1881
A plan by JE Garbett was actually accepted by the Government in 1881 but never implemented. A tunnel was also suggested around the same period.

1890
Enough public interest had been raised by 1890 for a Royal Commission. The hearing examined eight schemes, including a tunnel, and set out a list of criteria for any future proposed harbour crossing. These included a requirement for a high level bridge with one clear span over the waterway.

1900
Nothing further progressed until 1900, when a design competition was called by the Minister for Works, EW O'Sullivan. At this point, Dr JJC Bradfield became involved for the first time.

1912
Dr JJC Bradfield was appointed Chief Engineer of Sydney Harbour Bridge and the Metropolitan Railway Construction.

1922
The New South Wales Government invited worldwide tenders for the construction of the Bridge in 1922 and the contract was let to English firm Dorman Long and Co Ltd.

1923
On 28 July 1923 'the turning of the first sod' ceremony took place on the north shore. The first work on the Bridge was the construction of the Bridge approaches and the approach spans.

1926
By September 1926 concrete piers had been built to support the approach spans on each side of the harbour and the erection of the steelwork commenced.

1928
On 26 October 1928 the erection of the arches began. A giant 'creeper crane' was built on each side to move forward on the arches they would help construct. They were used to lift men and materials in a cradle and position them while erecting steelwork.


1930
On 19 August 1930 the two arches touched for the first time.

1932
In February 1932 the Bridge was 'test loaded'. The four rail tracks were loaded with 95 steam locomotives placed end to end. After three weeks of tests the Bridge was declared to be safe for traffic and was ready to be opened. The Bridge was opened to traffic on 19 March 1932. The completion of the entire work, including the Bridge and approaches, took almost 9 years.

1982
The Bridge celebrated the 50th anniversary of its opening. For the first time since opening, the Bridge was closed to vehicles and pedestrians were allowed full access for the day.

1988
The Bridge was declared an International Historic Civil Engineers Landmark.

NOW
The Sydney Harbour Bridge is one of Australia's most recognised, photographed and loved landmarks.



SYDNEY HARBOUR BRIDGE THE OPENING

Two men stand out in the story of the Sydney Harbour Bridge. They are Dr Bradfield and Premier Lang.



John Job Crew (JJC) Bradfield was a civil engineer who, for over 30 years, was the most active and influential person in promoting and overseeing construction of the Sydney Harbour Bridge. The Bridge was part of his grand vision for the electrification of the suburban railway network, which included a new electric train terminal at Sydney Central Station and the city's underground railway.



Jack Lang was Premier of NSW for two terms, 1925-1927 and 1930-1932. Lang was a colourful, outspoken man who 'made things happen'. He was a staunch supporter of Bradfield and his Bridge plans and helped to raise the necessary finance for the Bridge's construction.

THE CELEBRATIONS

Premier Jack Lang's government decided that the opening of the Bridge would be a public holiday, so all of Sydney could join in the celebrations. Brilliant sunshine greeted the crowds as they assembled on opening day. At the time, it was the largest crowd that had ever gathered in Sydney.

The ceremony began at 10am. Lang had decided that he, and not a representative of British royalty, would perform the opening ceremony.

However, at a critical moment in the opening proceedings, Captain Francis de Groot galloped up on horse back and slashed the ceremonial ribbon. As he did so he said, 'I declare this bridge open in the name of His Majesty the King and of all decent people'.

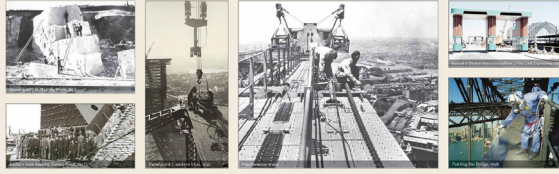
De Groot was bundled from his horse and led away. The ribbon was hastily retied and this time officially cut by Lang.

The ceremony was followed by a pageant across the Bridge. After the procession, an estimated one million pedestrians crossed the Bridge.





SYDNEY HARBOUR BRIDGE THE WORKERS



Thousands of workers were involved in the Bridge construction, including boiler makers, carpenters, engineers, architects, stone masons, draughtsmen, joiners, riveters, secretaries and crane drivers. When construction began, the economy was slowing, heading towards a worldwide depression. Despite the dangers of working on the Bridge, it was one of Australia's largest employment projects to that time.

The Bridge came to be called the 'Iron Lung' because it kept so many people employed for so long. The dangers of working on the Bridge were illustrated most graphically in the numbers killed and injured. In all, 16 men died in the construction of the Bridge: 14 on the Bridge and work sites and two in the quarries at Moruya. At least one survived a fall from the Bridge to the harbour below. Many more were injured.

FACTS & FIGURES

- In 1922, 11,000 vehicles crossed the Bridge each day. Today that's grown to more than 160,000 each day.
- There are seven vehicle lanes, a 24-hour bus lane, two train lines, a footpath and a cycleway.
- Around 4000 broken-down vehicles are removed from the Bridge each year.
- More than 100 people work on maintaining the Bridge each day.

LOGISTICS

- The Bridge's highest point is 134 metres above sea level.
- The arch is 503 metres long.
- The main deck is 49 metres wide.
- There is 49 metres clearance underneath for shipping.
- The pylons are 89 metres high.
- Total length (including approaches) is 1149 metres.

CONSTRUCTION

The workers involved in building the Bridge assembled:

- 52,800 tonnes of steel.
- 6 million rivets weighing 3200 tonnes.
- 95,000m³ of concrete.
- 272,000 litres of paint to give the Bridge its first three coats.
- The arch can rise or fall as much as 18 centimetres due to heating and cooling.

MAINTENANCE FACTS

- It takes 30,000 litres of paint to give the Bridge just one coat.
- The paint used on the Bridge is specially mixed and is known as 'bridge grey'.
- Some parts of the Bridge last 30 years before painting, while other pieces are repainted every five years.
- The road surface is replaced every 15 years or so.
- The flags on top of the bridge are replaced every four to six months.

DID YOU KNOW?

- It took almost nine years to build the Bridge at a cost of close to £5.55 million. The Bridge was not fully paid for until 1965.
- As many as 800 tenant families living in the Bridge's path were relocated and their homes demolished without any compensation given when the Bridge construction started.
- The Sydney Harbour Bridge is the world's widest and tallest (but not longest) steel arch bridge.
- The two eastern lanes on the Bridge were originally tram tracks. They were converted in the 1950s.

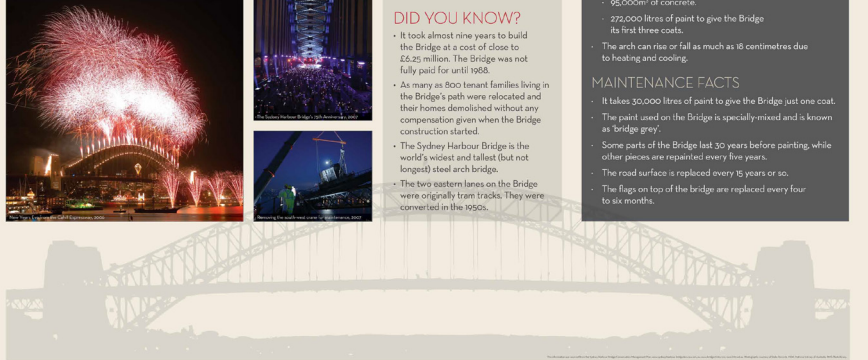


Figure 21: A Short History of the Sydney harbour Bridge
Source: <https://www.rms.nsw.gov.au/documents/about/environment/protecting-heritage/harbour-bridge-history.pdf>

Bradfield Park



Figure 22: Bradfield Park Milsons Point and Sydney Harbour Bridge, photograph by Robin Cale, 1937.
Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF PF273.



Figure 25: Northern end of Bradfield Park near Bradfield Highway exit to Milsons Point, c.1950.
Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF PF444.



Figure 28: Aerial View, Sydney NSW.
Source: Image courtesy Stanton Library Historical Services.

Kirribilli Bowling Club



Figure 31: Gallipoli Legion Women's Bowling Club, Bradfield Park, Milsons Point. Photograph by Leonie Masson, 2001.
Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF CPF1036.



Figure 34: Group portrait of five members of the Gallipoli Legion Women's Bowling Club, Bradfield Park, Milsons Point. Photograph by Leonie Masson, 2001.
Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF CPF1041.



Figure 23: Bradfield Park adjacent to northern approaches to Sydney Harbour Bridge, Milsons Point, c.1950.
Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF PF414.

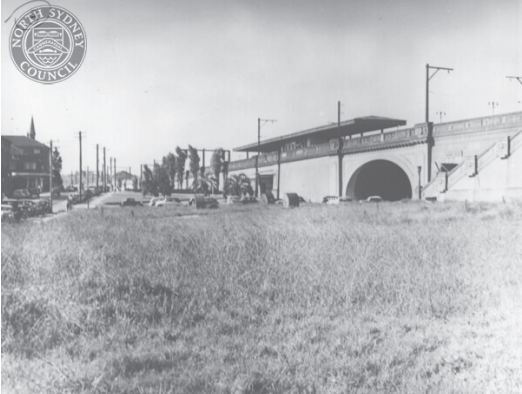


Figure 26: Bradfield Park, Milsons Point, looking north near Milsons Point Railway Station, c.1950.
Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF PF443.



Figure 29: View of Milsons Point from Sydney Harbour Bridge, 1939.
Source: Image courtesy Stanton Library Historical Services. Available online.



Figure 32: Gallipoli Legion Women's Bowling Club, Bradfield Park, Milsons Point. Photograph by Leonie Masson, 2001.
Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF CPF1037.



Figure 35: Group of members of the Gallipoli Legion Women's Bowling Club, Bradfield Park, Milsons Point. Photograph by Leonie Masson, 2001.
Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF CPF1039.



Figure 24: Jessie Stuart Broomfield drinking fountain and water trough, Bradfield Park north, Milsons Point. Photographer Charles Fairman, 2001 (?).
Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF PF2777.



Figure 27: Portion of Bradfield Park and railway line at Milsons Point, c.1950.
Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF PF445.



Figure 30: View of Milsons Point and Luna Park, undated c1939.
Source: State Archives & Records. Available online.



Figure 33: Gallipoli Legion Women's Bowling Club, Bradfield Park, Milsons Point. Photograph by Leonie Masson, 2001.
Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF CPF1038.



Figure 36: Jessie Stuart Broomfield drinking fountain, Bradfield Park. Photographer North Shore Historical Society, 1980.
Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF CPF16/1.

1.5 Current Situation

Sydney Harbour Bridge

The Sydney Harbour Bridge is a significant feature of Sydney Harbour which is a world renowned and recognisable Australian icon. The Northern Cycleway terminates in a set of stairs which step down the western side of the northern Approach of the bridge to Bradfield Park and land near Fitzroy Street. The central portion of the stair takes the form of a steep ramp.

Milsons Point Railway Station

Milsons Point Railway Station remains an operational station serving over 6,200 daily passengers on the T1 North Shore Line. The station comprises a platform, office and shelter, concourse, underbridges and subway entrances from Broughton Street and Alfred Street via Bradfield Park.¹⁷

Bradfield Park

Bradfield Park extends from Milsons Point Station to form a foreshore park located beneath the northern pylons of the Sydney Harbour Bridge. The park is part of the North Sydney Heritage Walk and features significant tree plantings and heritage interpretation.

North Sydney Council Building and Bowling Greens

Located in Bradfield Park Central, the former Kirribilli Bowling Club was acquired by North Sydney Council in 2001 and repurposed to provide community recreational facilities.

North Sydney Council hosts monthly markets on the bowling greens and in the Burton Street underpass. The Kirribilli Markets feature up to 220 stalls.¹⁸

La Capannina Restaurant

The southern section of the former Kirribilli Bowling Club building houses La Capannina Restaurant. Opened in 2011, this Italian restaurant has become a popular destination boasting unique views of the Sydney Harbour Bridge and Sydney Harbour.¹⁹

17: Sydney Trains, NSW TrainLink.
18: <https://kirribillimarkets.com/about-the-market>
19: <http://www.lacapannina.com.au/about/>



Figure 37: View of Sydney harbour Bridge and pylons from Alfred Street.
Source: TZG Architects, 2021.



Figure 38: View of Bradfield Park looking south.
Source: TZG Architects, 2021.



Figure 39: View across Bradfield Park to Sydney Harbour Bridge Northern Cycleway Stairs from Alfred Street.
Source: TZG Architects, 2021.



Figure 40: Sydney Harbour Bridge Northern Cycleway Stairs from Burton Street.
Source: TZG Architects, 2021.



Figure 41: View of Milsons Point Railway Station.
Source: TZG Architects, 2021.



Figure 42: View of Milsons Point Railway Station in the context of Bradfield Park.
Source: TZG Architects, 2021.



Figure 43: Former Kirribilli Bowling Club and bowling greens.
Source: TZG Architects, 2021.



Figure 44: Kirribilli Markets.
Source: Kirribillimarkets.com, 2021.

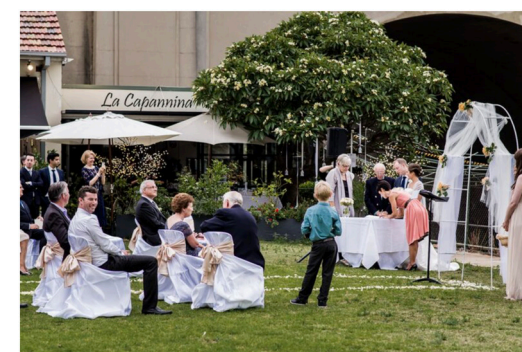


Figure 45: La Capannina Restaurant.
Source: <https://www.lacapannina.com.au/gallery/>

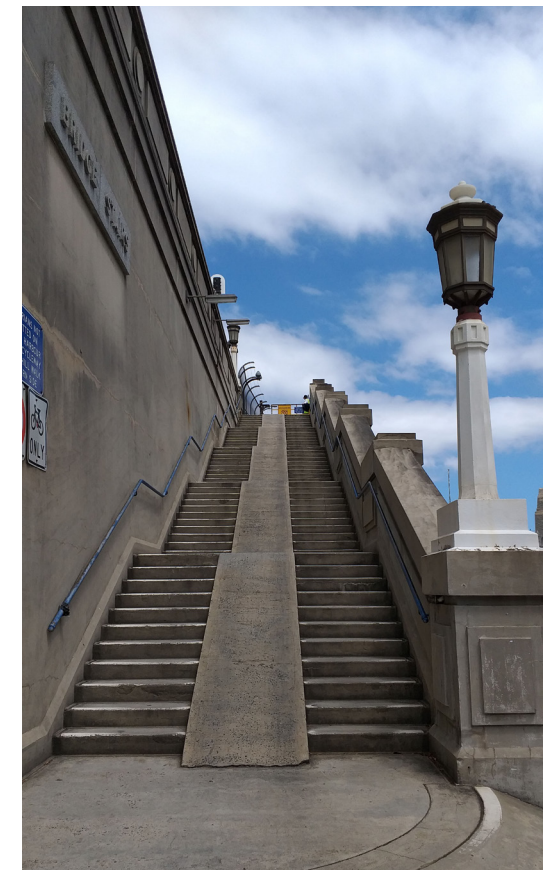


Figure 46: Sydney Harbour Bridge Northern Cycleway stairs.
Source: TZG Architects, 2020.

1.6 Statutory Context

1.6.1 The World Heritage Convention

The Convention Concerning the Protection of World Cultural and National Heritage (the World Heritage Convention) aims to promote international cooperation to protect heritage that is of such outstanding universal value that its conservation is important for current and future generations.

The concept of a buffer zone was first included in the *Operational Guidelines for the Implementation of the World Heritage Convention* in 1977 and recognises the value of the environment that surrounds a site. The buffer zone acts as an additional layer of protection for World Heritage sites. It is a space that is itself not of outstanding universal value, but that influences the value of a World Heritage site.

World Heritage List

The World Heritage List (WHL) contains sites that have been listed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as being of special cultural or physical significance. The Sydney Opera House is included in the World Heritage List and includes a buffer zone.²⁰

Bradfield Park North and Bradfield Park Central lie outside the Sydney Opera House World Heritage Buffer Zone, whilst, Bradfield Park South lies within this area.

1.6.2 Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (Cwlth) 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.

National Heritage List

The National Heritage List (NHL) has been established under the EPBC Act to list places of outstanding heritage significance to Australia. It includes natural, historic and Indigenous places that are of outstanding national heritage value to the Australian nation.

The Sydney Harbour Bridge are included in the National Heritage List.

1.6.3 Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) establishes the framework for cultural heritage values to be formally assessed in the land use planning and development consent process. The EP&A Act requires that environmental impacts are considered prior to land development; this includes impacts on cultural heritage items and places as well as archaeological sites and deposits.

The EP&A Act also requires State and local government authorities prepare local environmental planning instruments, such as the Sydney Local Environmental Plan 2012 (Sydney LEP) and Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (Sydney REP), to give statutory force to planning controls. These instruments may incorporate specific provisions for the conservation and management of environmental heritage.²¹

1.6.4 Heritage Act 1977

The Heritage Act 1977 (Heritage Act) provides protection for items of ‘environmental heritage’ in NSW. ‘Environmental heritage’ includes places, buildings, works, relics, movable objects or precincts considered significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values. Items considered to be significant to the State are listed on the State Heritage Register (SHR) and cannot be demolished, altered, moved or damaged, or their significance altered without approval from the Heritage Council of NSW in accordance with Section 57(1) of the Act.

State Heritage Register

The SHR was established under Section 22 of the State Heritage Act and is a list of places and objects of particular importance to the people of NSW, including archaeological sites. The SHR is administered by Heritage NSW, Department of Premier and Cabinet and includes a diverse range of over 1500 items, in both private and public ownership. To be listed, an item must be deemed to be of Heritage significance for the whole of NSW. The Sydney Harbour Bridge and Milsons Point Railway Station are listed on the SHR.

Section 170 Registers

Under the Heritage Act all government agencies are required to identify, conserve and manage heritage items in their ownership or control. Section 170 of the Heritage Act requires all government agencies to maintain a Heritage and Conservation Register that lists their heritage assets and includes an assessment of heritage significance.

They must also ensure that all items inscribed on its list are maintained with due diligence in accordance with State Owned Heritage Management Principles (contained within the State Agency Heritage Guide) approved by the Government on advice of the NSW Heritage Council. The Sydney Harbour Bridge approaches, viaducts and underbridges as well as the Milsons Point Railway Station are listed on the RMS and Railcorp Section 170 Registers.

1.6.5 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The Sydney Harbour Bridge and Bradfield Park foreshore is located within the Sydney REP (Sydney Harbour Catchment) 2005 and includes the buffer zone for the Sydney Opera House. Schedule 4 includes Sydney Harbour Bridge in its schedule of heritage items and identifies them as items of State significance. All REPs are considered a deemed State Environment Planning Policy (SEPP) for the purpose of planning legislation.

Sydney Harbour Catchment

- Clause 13 includes controls relating to harbour views
- Clause 15 outlines the planning principles for heritage conservation.
- Clause 26 outlines the matters to be taken into consideration to the maintenance, protection and enhancement of views.
- Part 5 of the REP contains heritage provisions with objectives in relation to heritage stated in Clause 53 (1) (2) and Clause 55.

1.6.6 North Sydney Council Planning Controls

North Sydney LEP 2013

The key local statutory planning instrument applying to the site is the North Sydney Local Environmental Plan 2013. Clause 5.10 of the LEP sets out controls relating to Heritage Conservation and has been prepared in accordance with the NSW Government’s Standard Instrument—Principal Local Environmental Plan. This clause is consistent with current heritage best practice guidelines, providing for protection of heritage buildings, places, works and trees, Heritage Conservation Areas (HCAs), and archaeological relics.

Schedule 5 of the LEP provides a list of identified Heritage Items and Heritage Conservation Areas. The Sydney Harbour Bridge, Milsons Point Railway Station and Bradfield Park are all listed as heritage items on this Schedule. There are also many heritage items located in close proximity to the site.

North Sydney DCP 2013

The site is located in the Lavender Bay Special Character Area in the Milsons Point Town Centre as defined by North Sydney Development Control Plan 2013.

North Sydney DCP provides detailed planning and design guidelines to support the planning controls in the LEP. It includes detailed objectives and controls to guide future developments and covers urban design, access and parking, landscaping, signage along with heritage.

1.6.7 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. The Sydney Harbour Bridge is listed on the Register of the National Estate (ID No. 1857).

RAIA Register of Significant Buildings in NSW

The Australian Institute of Architects maintains a non statutory register of significant buildings. The Sydney Harbour Bridge is included in this register.

20: TZG Heritage, Heritage Framework Circular Quay Renewal June 2020, p.73.

21: ibid.

Figure 47: View looking south from Milsons Point with fabrication workshops in foreground. 1.10.1931.
Source: RMS copy neg 34028. Filename:19311001HB34028.jpg



2.0
Heritage Significance

1. 10. 31.

2.1 Aboriginal Cultural Significance

Sydney’s Harbour, and the location of the Harbour Bridge, is a culturally significant place for Aboriginal people. This is evidenced by contemporary stories, still held by knowledge holders, the use of the land and water for ceremony, resources and access to Country north and south, and also in archaeological artefacts. Rock engravings, fire charred rock shelters, rock art including hand stencils, middens of whitened seashells from ancient meals and axe grinding grooves all provide evidence of the first inhabitants of North Sydney. The Aboriginal Heritage Office highlights the importance of culturally significant sites in the North Sydney area.

Aboriginal history has been handed down in ways of stories, dances, myths and legends. The dreaming is history. A history of how the world, which was featureless, was transformed into mountains, hills, valleys and waterways. The dreaming tells about how the stars were formed and how the sun came to be.

In the metropolitan area of Sydney there are thousands of Aboriginal sites, over 1000 just in the AHO partner Council areas [...] These sites are under threat every day from development, vandalism and natural erosion. The sites cannot be replaced and once they are destroyed, they are gone forever. The sites that are located in Lane Cove, North Sydney, Willoughby, Ku-ring-gai, Strathfield and Northern Beaches Council areas are still in reasonable condition and hold an important part in our history.

The Aboriginal people, who once occupied this area, left important evidence of their past and way of life before colonisation. All Aboriginal sites are significant to Aboriginal people because they are evidence of the past Aboriginal occupation of Australia and are valued as a link with their traditional culture. An emphasis is placed on the scientific investigation into stone technology for a great deal of insight is obtained by studying the manufacture techniques and animals associated with them that tells us about daily traditional life. Clues to what these sites were used for can also be surmised by talking with Elders from other parts of Australia where traditional knowledge has not been lost to the same degree.²²

It is likely that the area has significance to descendants of the two Aboriginal clans or bands of the Eora Nation, the Cammeraygal and Wallumedegal.

22: Aboriginal Heritage Office, A Brief History, <https://www.aboriginalheritage.org>. This has been extracted from a brochure produced as a joint initiative between the Aboriginal Heritage Office and Lane Cove, North Sydney, Willoughby, Ku-ring-gai, Strathfield and the Northern Beaches Councils. More information is available on the Aboriginal Heritage Office website.



Figure 48: This is possibly the first depiction of Cammeraygal territory. It is a detail of a map of Port Jackson/Sydney Harbour with water depth soundings created by Captain John Hunter in 1788. Balls Head is at the top left. Note the number of freshwater streams flowing into the Harbour. That opposite ‘Sidney Cove’ is emptying into Lavender Bay, called Gooweehahree by the Cammeraygal.

Source: National Library of Australia in *Aboriginal North Sydney*, 2019, Dr Ian Hoskins, North Sydney Council Historian, p.2



Figure 51: Map of Aboriginal Tribes of Sydney Harbour. Source: Michael Hromek after Tinsdale, ‘Aboriginal tribes of Australia : their terrain, environmental controls, distribution, limits, and proper names’, The Australian National University, <http://hdl.handle.net/1885/114913>.

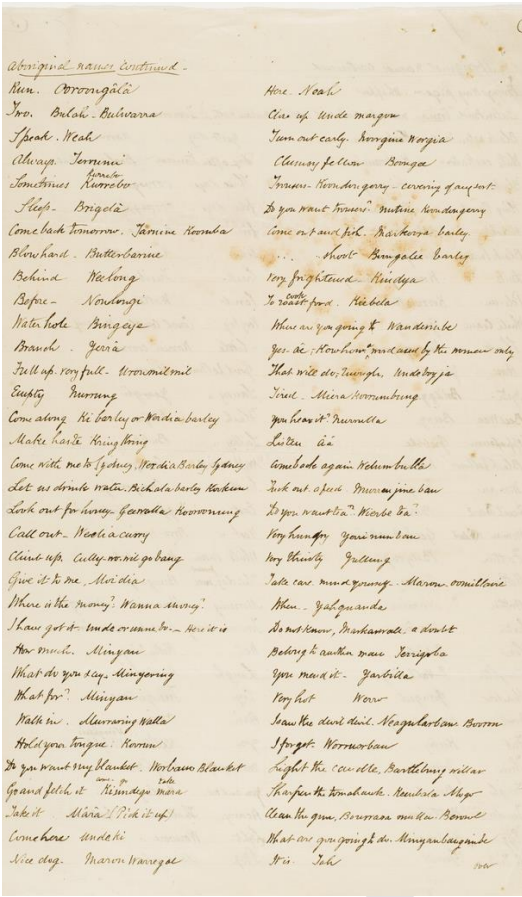


Figure 49: One of the five pages of names recorded by JF Mann, Aboriginal Names and words of the Cammeray Tribe (between 1884-1907).

Source: State Library of NSW in *Aboriginal North Sydney*, 2019, Dr Ian Hoskins, North Sydney Council Historian, p.5.



Figure 50: A campsite of the Cammeraygal Aborigines, it contains 11 carvings, the easiest to identify being two jumping kangaroos which are among the best preserved of the few remaining examples of Aboriginal rock art east of the Sydney central business district. Axe grinding grooves can be found on rocks beside a nearby creek.

Source: <http://www.visitsydneyaustralia.com.au/sites-lns.html>



Figure 52: Granite formations at Grey Rocks Beach near Moruya, Yuin Country, NSW. Granite from Yuin Country was mined for the Sydney Harbour Bridge pylons, main arch and piers of the approach spans. Source: Architecture Bulletin, Lost Sydney, September 2018.

2.2 Non-Aboriginal Archaeology

The construction of the Sydney Harbour Bridge and redevelopment of Bradfield Park involved extensive excavation and landscaping works. In addition, the introduction of vast fill deposits associated with the Harbour Tunnel in the early 1990s also modified the landscape so that any fragmentary remain of the former site, even of the construction of the SHB itself, would be likely located well below the existing ground surface.²³ However, the surviving sandstone walls at Bradfield Park have the potential to yield information about the early residential and commercial occupation of Milsons Point.²⁴ Despite this, the Sydney Harbour Bridge Conservation Management Plan (Draft) 2021 considers that Bradfield Park has little or no archaeological potential. The archaeological assessment carried out in 2009 of the area beneath the SHB immediately south of Fitzroy Street in Bradfield Park concurred with this assessment, when the area was being developed as a pedestrian plaza by the then RTA and North Sydney Council.²⁵

23: Sydney Harbour Bridge CMP (Draft) 2021, p. 53.
24: Sydney Harbour Bridge CMP 2007, p. 78. Refer also SHR and S170 listings.
25: Ibid

2.3 Heritage Listing Summary

2.3.1 Statutory Listings

NAME OF ITEM	ID NO.
Sydney Opera House - World Heritage Buffer Zone	166rev

National Heritage List

NAME OF ITEM	ID NO.
Sydney Harbour Bridge	S49

NSW State Heritage Register

NAME OF ITEM	ID NO.
Sydney Harbour Bridge, Approaches and Viaducts (road and rail)	00781
Milsons Point Railway Station group	01194

NAME OF ITEM	ID NO.
Sydney Harbour Bridge including approaches and viaducts (road and rail)	67

NAME OF ITEM	ORG	ID NO.
Sydney Harbour Bridge, approaches and viaducts (Road and Maritime Services)	RMS	4301067
Sydney Harbour Bridge (Rail Property Only)	Railcorp	4801059
Milsons Point (Fitzroy Street) Underbridge	Railcorp	4801822
Milsons Point (Lavender Street) Railway Underbridge	Railcorp	4801823
North Sydney (Arthur Street) Railway Underbridge	Railcorp	4801824
Milsons Point Railway Station	Railcorp	4801026

North Sydney LEP 2013 - Schedule 5

NAME OF ITEM	ID NO.
Sydney Harbour Bridge approach viaducts, arches and bays	I0530
Sydney Harbour Bridge approach viaducts, arches and bays under Warringah Freeway	I0530
Bradfield Park (including northern section)	I0538
Milsons Point Railway Station Group	I0539
Sydney Harbour Bridge Approaches and Curtilage	I539
Sydney Harbour Bridge Approaches Group Including Pylons, Pedestrian Stairs and R	I539
Sydney Harbour Bridge north pylons	I0541

2.3.2 Non Statutory Listings

NAME OF ITEM	ID NO.
Sydney Harbour Bridge (Bradfield Highway)	1857

Register of the National Trust of Australia (NSW)

NAME OF ITEM	ID NO.
Sydney Harbour Bridge	-

2.3.3 Heritage Items in the Vicinity

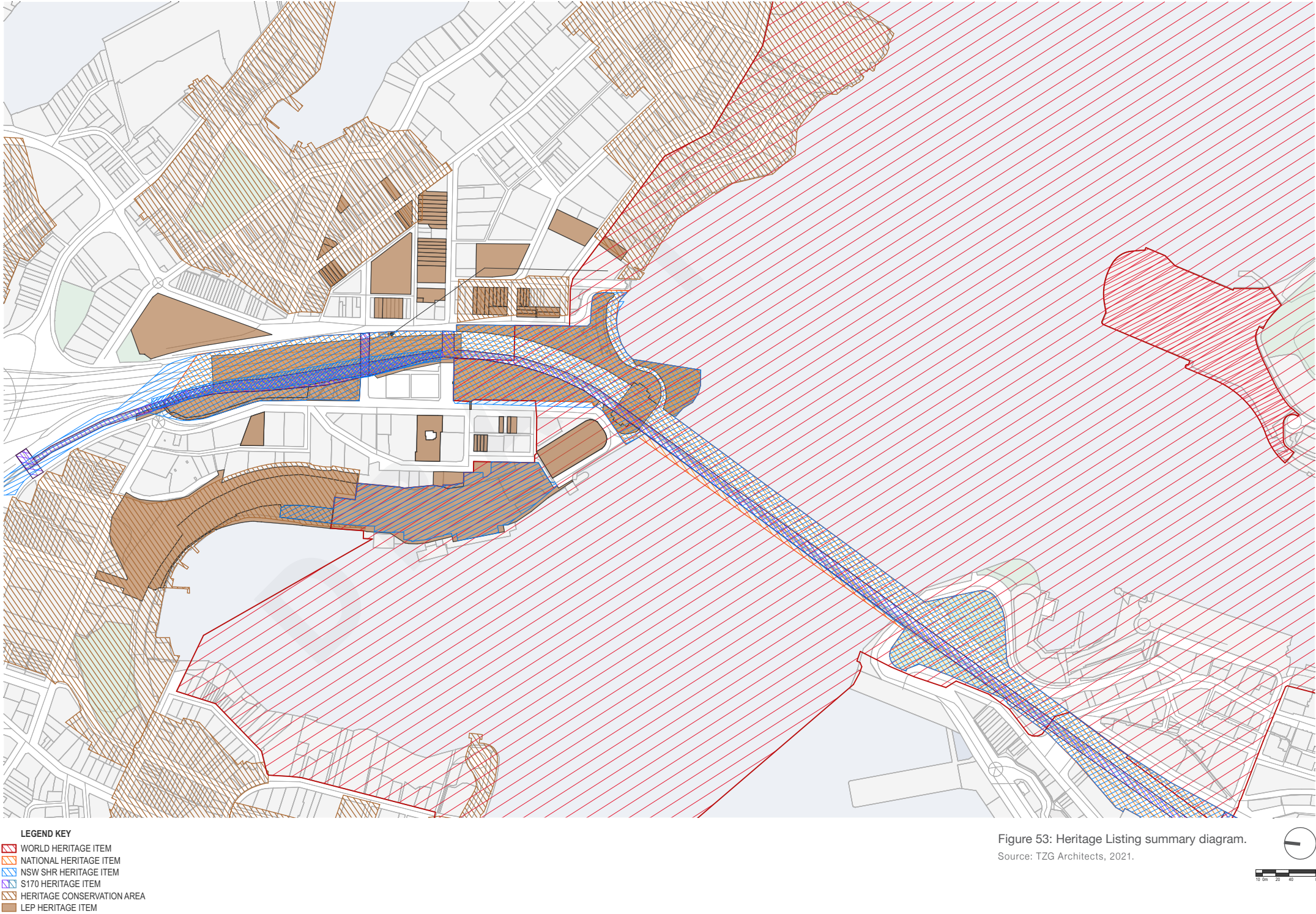
North Sydney LEP 2013 - Schedule 5

NAME OF ITEM	ADDRESS	ID NO.
North Sydney bus shelters	Various locations	I0407
Alfred Street (entrance to Luna Park)	Alfred Street South, Milsons Point	I0529
North Sydney Olympic Pool	4 Alfred Street South, Milsons Point	I0537
Camden House	48 and 56 Alfred Street South, Milsons Point	I0527
Chinese Christian Church	100 Alfred Street South, Milsons Point	I0528
Luna Park (State)	1 Olympic Drive, Milsons Point	I0536
Lavender Bay Railway Line	Between Luna Park and Waverton Railway Station, Milsons Point	I0387
Greenway Flats	Corner Broughton and McDougall Streets, Kirribilli	I0187
St Aloysius College (part of junior school)	29 Burton Street (14–24 Bligh Street), Kirribilli	I0188

2.3.4 Summary of Heritage Items in the Vicinity

The diagram adjacent summarises the various heritage items and levels of significance in the area of influence around the Sydney Harbour Bridge, Bradfield Park and in the vicinity of North Sydney.

Each level of significance is shown separately on the following pages starting with the World Heritage Listed Sydney Opera House and its Buffer Zone, to the locally listed items on the North Sydney LEP. The Statements of Significance for each item are also included on the following pages.



2.4 World Heritage List

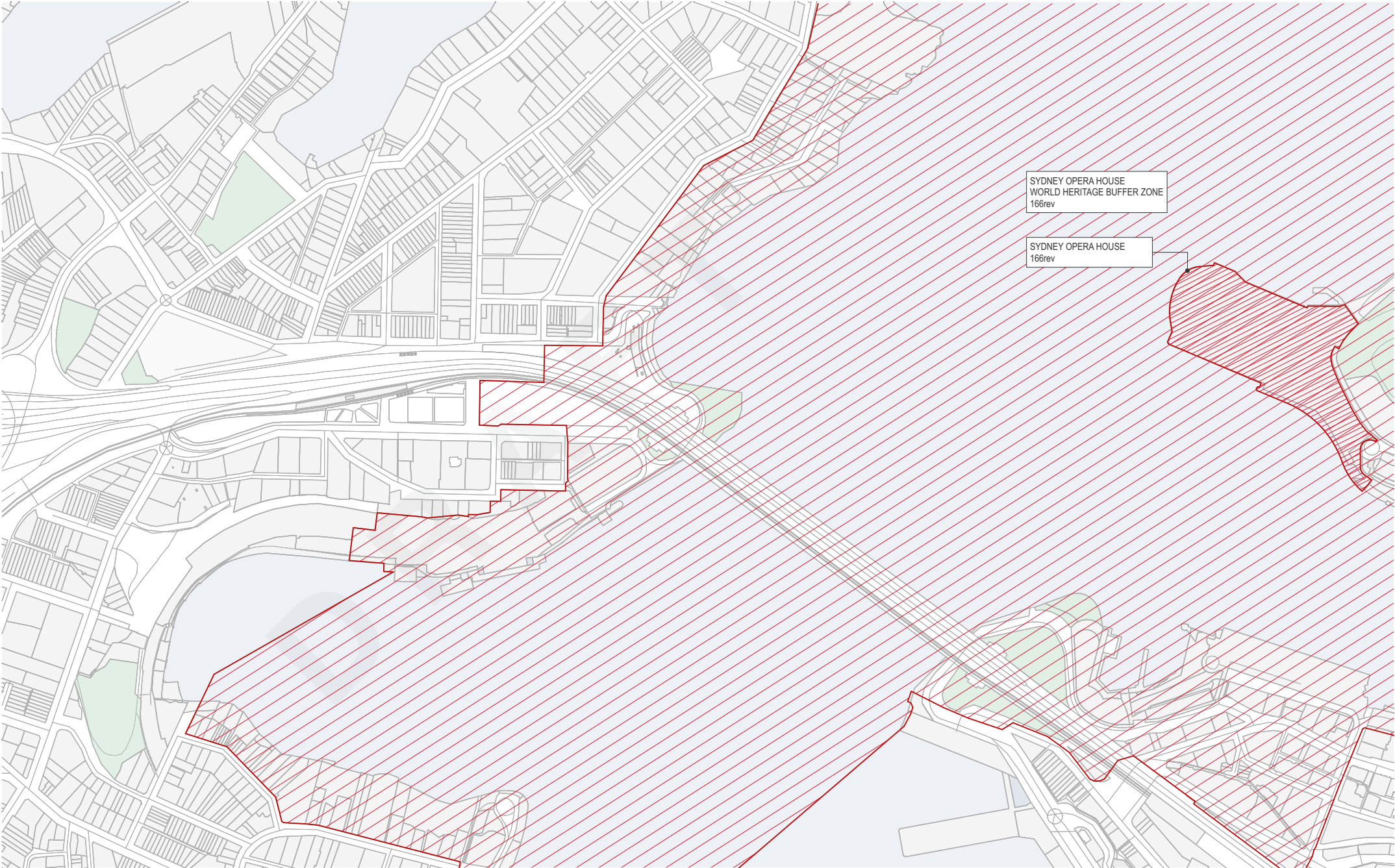
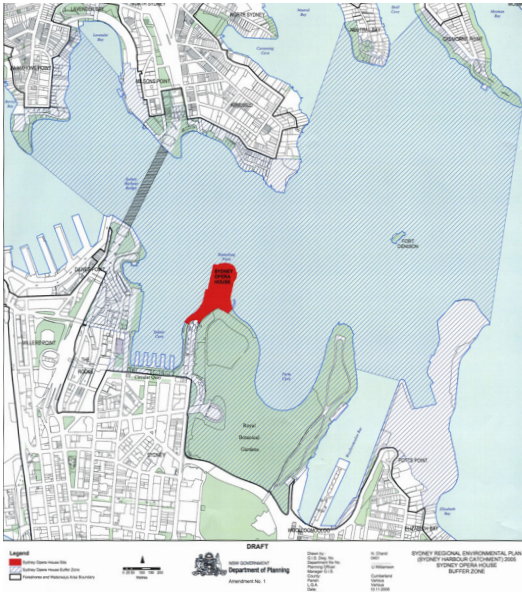
2.4.1 Sydney Opera House

On 28 June 2007, the World Heritage Committee meeting in Christchurch New Zealand resolved to inscribe the Sydney Opera House on the World Heritage list. The World Heritage Committee Statement of Outstanding Universal Value was:

A twentieth century architectural masterpiece sited on a prominent peninsular in Sydney Harbour. In association with the Sydney Harbour Bridge it has become an internationally recognised symbol of Sydney and Australia, which is also widely admired by local citizens. The building has exceptional aesthetic significance because of its quality as a monumental sculpture in the round, both day and night, and because of the appropriateness of its design to its picturesque setting. Its public spaces and promenades have a majestic quality, endowed by powerful structural forms and enhanced by vistas to the harbour and the city.

The matters to be taken into consideration in relation to development within the Sydney Opera House buffer zone include the need for development to preserve views and vistas between the Sydney Opera House and other public places within that zone and the need for development to avoid any diminution of the visual prominence of the Sydney Opera House when viewed from other public places within that zone.

26: <http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5054880>



- LEGEND KEY**
- WORLD HERITAGE ITEM
 - NATIONAL HERITAGE ITEM
 - NSW SHR HERITAGE ITEM
 - S170 HERITAGE ITEM
 - HERITAGE CONSERVATION AREA
 - LEP HERITAGE ITEM

Figure 54: World Heritage diagram showing Sydney Opera House World Heritage Buffer Zone. Note: the subject site lies outside this area. Source: TZG Architects, 2021.

2.5 National Heritage List

2.5.1 Sydney Harbour Bridge - No. S49

Assessor's Summary of Significance

The building of the Sydney Harbour Bridge was a major event in Australia's history, representing a pivotal step in the development of modern Sydney and one of Australia's most important cities. The bridge is significant as a symbol of the aspirations of the nation, a focus for the optimistic forecast of a better future following the Great Depression. With the construction of the Sydney Harbour Bridge, Australia was felt to have truly joined the modern age, and the bridge was significant in fostering a sense of collective national pride in the achievement.

The Sydney Harbour Bridge was an important economic and industrial feat in Australia's history and is part of the nationally important story of the development of transport in Australia. The bridge is significant as the most costly engineering achievement in the history of modern Australia, and this was extraordinary feat given that it occurred at the severest point of the Great Depression in Australia.

The bridge is also significant for its aesthetic values. Since its opening in 1932, the Sydney Harbour Bridge has become a famous and enduring national icon, and remains Australia's most identifiable symbol. In its harbour setting, it has been the subject for many of Australia's foremost artists, and has inspired a rich and diverse range of images in a variety of mediums – paintings, etchings, drawings, linocuts, photographs, film, poems, posters, stained glass - from its construction phase through to the present.

The Sydney Harbour Bridge is also significant as one of the world's greatest arch bridges. Although not the longest arch span in the world, its mass and load capacity are greater than other major arch bridges, and no other bridge in Australia compares with the Sydney Harbour Bridge in its technical significance. In comparing Sydney Harbour Bridge with overseas arch bridges, Engineers Australia has drawn attention to its complexity in combining length of span with width and load carrying capacity. The construction of Sydney Harbour Bridge combined available technology with natural advantages provided by the site. The designers took advantage of the sandstone base on which Sydney was built, which enabled them to tie back the support cables during construction of the arch, and to experiment with massive structures. Although designed more than 80 years ago, the bridge has still not reached its loading capacity.

The bridge is also significant for its important association with the work of John Job Crew Bradfield, principal design engineer for the New South Wales Public Works Department, who ranks as one of Australia's greatest civil, structural and transport engineers.

CRITERIA	VALUES
<p>(a) Events, Processes</p> <p>The place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history.</p>	<p>The building of the Sydney Harbour Bridge as a transport facility linking the city with the north shore was a major event in Australia's history, and represented a pivotal step in the development of modern Sydney and one of Australia's most important cities. The bridge became a symbol for the aspirations of the nation, a focus for 'optimistic prognostications of a better future' following the Depression. The bridge represented an important step in transforming the city of Sydney into a modern metropolis. Internationally, the bridge was recognised as a symbol of progress and a vision of a splendid future.</p> <p>The building of the Sydney Harbour Bridge was an important part of the technical revolution of the 1930s and seen as evidence of Australia's industrial maturity. The bridge represented the mechanical age displacing the pastoral and agricultural way of life on which Australia's economy had been based. The scale of the operations was enormous and at the time of its construction, it was the widest long-span bridge in the world.</p> <p>The Sydney Harbour Bridge includes a steel arch spanning the harbour between Milsons Point on the north side and Dawes Point on the south side, and elevated approaches to the arch from both the north and south sides. The arch is made up of two 28-panel arch trusses set in vertical planes, 30 metres apart centre to centre, and braced together laterally. Two granite-faced concrete pylons, with a height of 89 metres above mean sea level, are located at each end of the arch. A deck carrying road and rail traffic is suspended from the arch. Pairs of hangers, ranging in length from 7.3 metres to 58.8 metres, support cross-girders, each weighing 110 tonnes, which support the deck. The northern and southern approaches each contain five spans, constructed as pairs of parallel-chord, six-panel steel trusses. The spans are supported by pairs of concrete piers faced with granite. The combined length of the approach spans is 646 metres.</p> <p>The Sydney Harbour Bridge is an outstanding cultural landmark for the nation and represents a highly significant place in Australia's cultural history. The opening of the Sydney Harbour Bridge was a momentous occasion, drawing remarkable crowds estimated at nearly one million people.</p> <p>Since its opening in 1932, the Sydney Harbour Bridge has become a famous and enduring national icon and symbol of Australia. The bridge remains one of Australia's most identifiable symbols</p>
<p>(e) Aesthetics, Characteristics</p> <p>The place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group.</p>	<p>Sydney Harbour Bridge is an integral component of the Sydney Harbour vista and represents one of the most recognisable and iconic images in the world. It is the picturesque blending of the natural environment and man- made structures around the harbour foreshores that has proved an inspiration for generations of artists and writers. In its harbour setting, it has inspired a rich and diverse range of images in a variety of mediums – paintings, etchings, drawings, linocuts, photographs, film, poems, posters, stained glass - from the date of its construction through to the present day.</p> <p>The bridge is conceivably one of Australia's most-photographed cultural landmarks, and striking images of the bridge have been captured by some of Australia's best-known photographers.</p> <p>The Sydney Harbour Bridge has also been replicated in tourist posters, postcards, crafts and the folk arts, its image reproduced in media including glass, ceramic, metal, shells and crochet cotton, embroidery and etchings in a huge array of objects.</p>
<p>(f) Creative or technical achievement</p> <p>The place has outstanding heritage value to the nation because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period.</p>	<p>The Sydney Harbour Bridge may be considered the world's greatest arch bridge. Although not the longest arch span in the world, its mass and load capacity are greater than other major arch bridges. No other bridge in Australia compares in its technical significance with the structure of the Sydney Harbour Bridge and its pylons and constructed approaches between Argyle Street in the south and Arthur Street in the north.</p> <p>The construction of Sydney Harbour Bridge combined available technology with natural advantages provided by the site. The bridge is an outstanding technical and construction achievement of the Twentieth Century. The designers took advantage of the sandstone base on which Sydney was built - which enabled them to tie back the cables during construction of the arch and to experiment with massive structures. Although designed during the 1920s and 1930s the bridge has still not reached its loading capacity.</p>
<p>(g) Social Value</p> <p>the place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.</p>	<p>It was part of John Job Crew Bradfield's vision for the bridge that it be used at times of national rejoicing. Since its opening it has regularly supported flags, banners, and especially fireworks, becoming a focus for national and local celebrations. Community ceremonial and celebratory occasions centred on Sydney Harbour Bridge, either for the people of Sydney or the broad Australian community, are well recognised and have been widely noted. Since 1932, the broad Australian community has identified the Sydney Harbour Bridge as one of the most nationally and internationally recognised symbol of Australia and the bridge in its harbour setting represents a composite national symbolic image.</p>
<p>(h) Significant People</p> <p>The place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history.</p>	<p>John Job Crew Bradfield ranks with other engineers whose close involvement in a broad range of projects contributed to Australia's national development. As principal design engineer for the New South Wales Public Works Department, Bradfield was largely responsible for finally bringing the Sydney Harbour Bridge to fruition. As Chief Engineer, he prepared the general design specification and supervised the whole project on behalf of the Government of New South Wales, also integrating the bridge into the Sydney road, tram and rail system.</p> <p>Bradfield was nationally recognised through his appointments to the Australian National Research Council and the Australian Commonwealth Standards Advisory Committee. The Institution of Engineers, Australia awarded him the Peter Nicol Russell Memorial Medal in 1932, and he also received the Kernot Memorial Medal from the University of Melbourne in 1933, and the Telford Gold Medal from the Institution of Civil Engineers, London in 1934.</p>

Nominator’s Summary of Significance

The Sydney Harbour Bridge includes a steel arch spanning the harbour between Milsons Point on the north side and Dawes Point on the south side, and elevated approaches to the arch from both the north and south sides.

The total length of the bridge, including the approach spans, is 1149 metres. The arch is made up of two 28-panel arch trusses set in vertical planes, 30 metres apart centre to centre, and braced together laterally; it is 57 metres deep beside the pylons and 18 metres deep in the middle of the arch (Godden Mackay, 1992: ref no 0076). It is anchored by two bearings at each end, which take the weight of the bridge and allow for expansion and contraction of the steel. Under maximum load, the thrust is approximately 20,000 tonnes on each bearing (Australian Government, Culture and Recreation Portal).

The span of the arch is 503 metres and the top of the arch is 134 metres above mean sea level. The arch is founded on sandstone rock excavated to a depth of 12 metres and filled with mass concrete. A total of 39,000 tonnes of structural steel was used in the arch, over two-thirds of it silicon steel (Australian Academy of Technological Sciences and Engineering, 2000). Two granite-faced concrete pylons, with a height of 89 metres above mean sea level, are located at each end of the arch (Australian Government, Culture and Recreation Portal).

A deck carrying road and rail traffic is suspended from the arch. Pairs of hangers, ranging in length from 7.3 metres to 58.8 metres, support cross-girders, each weighing 110 tonnes. The cross-girders support the concrete bridge deck (Nicholson, 2000: 26- 27). The width of the deck is almost 49 metres and the clearance for shipping is also 49 metres. The deck currently caters for eight lanes of road traffic, two railway tracks, and two pedestrian footways.

The northern and southern approaches each contain five spans, constructed as pairs of parallel-chord, six-panel steel trusses. The spans are supported by pairs of concrete piers faced with granite (Nicholson, 2000: 10-11). The combined length of the approach spans is 646 metres.

CRITERIA	VALUES
CRITERION (a) The place has outstanding heritage value to the nation because of the place’s importance in the course, or pattern, of Australia’s natural or cultural history.	<p>The building of the Sydney Harbour Bridge was a major event in Australia’s history, representing a pivotal step in the development of modern Sydney and one of Australia’s most important cities. The bridge became a symbol for the aspirations of the nation, a focus for ‘optimistic prognostications of a better future’ following the Depression. With the construction of the Sydney Harbour Bridge, ‘Australia was felt to have truly joined the modern age’. The bridge was significant in fostering a sense of collective national pride in the achievement. It was hailed as an icon of the modern age – an important symbol for the modern city and of modern Australian society. At the time and since, the construction of the bridge represented ‘a triumph of the modern age’ in Australia, linked to nationalistic aspirations of Australian mateship, faith in ‘the ideals of progress in society for the common good’, ‘a monument to the skill, the labour and the determination of the Australian people’. The bridge, along with the Sydney Opera House, represented an important step in transforming the city of Sydney into a modern metropolis. The Chief Engineer JJC Bradfield saw the bridge as an outstanding engineering feat and transport facility that was integral to the development of Sydney that could become ‘the Queen city of the Empire’ (Lalor 2005). Internationally, the bridge was recognised as ‘a symbol of progress and a vision of the future splendid’ like other significant physical and technological achievements of the modern era such as the Statue of Liberty, the Great Wall of China and the Eiffel Tower.</p> <p>The building of the Sydney Harbour Bridge was an important part of the technical revolution of the 1930s and was seen as evidence of Australia’s industrial maturity. The bridge represented the mechanical age displacing the pastoral and agricultural way of life on which Australia’s economy was based and the age of horse and buggy. It signified the era of steel bridges, commuter trains and cars.</p> <p>The Sydney Harbour Bridge was an important economic and industrial feat in Australia’s history and is part of the nationally important story of the development of transport in Australia. The bridge was the most costly engineering achievement in the history of modern Australia and required the demolition of some 800 houses. This was an extraordinary achievement given that it occurred at the severest point of the Depression in Australia. The construction of the Sydney Harbour Bridge marked an important event in the history of Australia’s building industry. The scale of the operations was enormous and at the time of its construction, it was the widest long- span bridge in the world.</p> <p>A large number of people were killed during the building of the bridge (sixteen people from injuries incurred in bridge related workplaces) – this compared to eleven deaths during the building of the famous Golden Gate Bridge in San Francisco, twenty one deaths for the Snowy Mountains Scheme, and thirty five during the construction of the West Gate Bridge, Melbourne.</p> <p>The Sydney Harbour Bridge continues to be an important national story. It features in documentary programs, is a key event in Australia’s history that is taught in schools around Australia and is a significant part of Australian popular culture.</p> <p>The Sydney Harbour Bridge is an outstanding cultural landmark for the nation and represents a highly significant place in Australia’s cultural history. The opening of the Sydney Harbour Bridge was a momentous occasion, drawing remarkable crowds estimated at nearly one million people, when the nation’s entire population was only 6.6 million. The ceremony was attended by almost the entire population of Sydney, as well as huge numbers from around New South Wales and thousands from interstate. Francis Edward de Groot, a member of the New Guard disrupted the opening ceremony when, disguised as a military horseman, he slashed the ceremonial ribbon before the Premier was able to officially open the bridge. The incident has become a part of Australian folklore and a symbol of the perceived national character trait of rebellion against authority.</p> <p>Since its opening in 1932, the Sydney Harbour Bridge has become a famous and enduring national icon and symbol of Australia. The bridge ‘remains Australia’s most identifiable symbol’ – a symbol of something that is quintessentially Australian, ‘like kangaroos and koalas’ (Nicholson, 2000). The Sydney Harbour Bridge is an important focus of national commemorations, celebrations and other events throughout its history. Some key examples include: the Australian Lancaster Q (for Queenie) flew under the Sydney Harbour Bridge as part of a tour around Australia to raise funds for the war effort in 1943; over a quarter of a million people marched across the bridge in a symbolic apology to Indigenous Australians and the people of the Stolen Generation during the Reconciliation Walk (28 May 2000); Olympic rings were displayed on the bridge during the opening of the Sydney Olympic Games (2000); and the American flag was flown on the bridge in tribute to visiting fire fighters who had been present at the World Trade Centre on September 11, 2001.</p> <p>The Sydney Harbour Bridge has outstanding value to the nation against Criterion (a).</p>
CRITERION (b) The place has outstanding heritage value to the nation because of the place’s possession of uncommon, rare or endangered aspects of Australia’s natural or cultural history.	<p>Based on the evidence available, Sydney Harbour Bridge does not have outstanding value to the nation against Criterion (b).</p>

CRITERIA	VALUES
CRITERION (c) The place has outstanding heritage value to the nation because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history.	<i>Based on the evidence available, Sydney Harbour Bridge does not have outstanding value to the nation against Criterion (c).</i>
CRITERION (d) The place has outstanding heritage value to the nation because of the place's importance in demonstrating the principal characteristics of: a class of Australia's natural or cultural places; or a class of Australia's natural or cultural environments.	<i>Based on the evidence available, Sydney Harbour Bridge does not have outstanding value to the nation against Criterion (i).</i>
CRITERION (e) The place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group.	<p><i>The Chief Engineer JCC Bradfield was committed to a design for the bridge that combined functionality and beauty. He insisted that pylons be added to the original design, largely because they would make the bridge more attractive.</i></p> <p><i>Sydney Harbour Bridge is an integral component of the Sydney Harbour vista and, with the Sydney Opera House, represents one of the most recognisable and iconic images in the world. It is the picturesque blending of the natural environment and man-made structures around the harbour foreshores that is the inspiration for John D Moore's painting Sydney Harbour (Prunster, 1982: 18, 60).</i></p> <p><i>The bridge, in its harbour setting, has inspired a rich and diverse range of images in a variety of mediums – paintings, etchings, drawings, linocuts, photographs, film, poems, posters, stained glass - from its construction phase through to the present. It has been the subject for many of Australia's foremost artists, including Sidney Nolan, Grace Cossington Smith, Lloyd Rees, Will Ashton, Margaret Preston, Brett Whiteley and John Olsen (Prunster, 1982: 26-109). In the late 1920s and early 1930s the emerging steel colossus of the modern age that the bridge represented provided inspiration to modernist such as Robert Wakelin, Dorrit Black and Frank Weitzel, while Jessie Traill's etchings of the bridge under construction capture the coming into being of this colossus. Although international artist Javacheff Christo conceived the idea for a Wrapped Bridge in 1969 (Prunster, 1982: 86) it was not realised . In 2005, the National Library of Australia acquired Harbour Bridges, by Lola Ryan of the Dharawal/Eora people, of shells and mixed media on cardboard, for its Aboriginal and Torres Strait Islander Art collection (artonview, 2006: 46).</i></p> <p><i>The bridge and the Sydney Opera House are conceivably Australia's most- photographed cultural landmarks, and striking images of the bridge have been captured by some of Australia's best-known photographers, including Max Dupain, Harold Cazneaux, Henri Mallard and David Moore (Prunster, 1982: 26-109). Harold Cazneaux's photographs of the bridge at various stages of construction are in the tradition of Whistler, who romanticised urban or industrial subjects in art with his images of bridges, barges, scaffolding, rigging and boatmen, and of the photographer James Hedderly's photographs of the Thames riverside (Prunster, 1982: 17). Henri Mallard's photography of the Sydney Harbour Bridge captured the workers and their culture.</i></p> <p><i>The Sydney Harbour Bridge has inspired poets and writers, including C J Dennis - I dips me lid - Kenneth Slessor and Hugh McRae (Prunster, 1982: 7, 15), and topical songs such as Bridge of our dreams come true, The bridge we've been waiting for (National Library of Australia: http://nla.gov.au/nla.mus-an6631851; http://nla.gov.au/nla.mus-an10787298) and On the day the bridge was opened.</i></p> <p><i>The Sydney Harbour Bridge has also been replicated in tourist posters, postcards, crafts and the folk arts, its image reproduced in media including glass, ceramic, metal, shells and crochet cotton, embroidery and etchings in a huge array of objects (Prunster, 1982: 110, 120-134).</i></p> <p><i>The Sydney Harbour Bridge has outstanding value to the nation against Criterion (e).</i></p>

CRITERIA	VALUES
CRITERION (f) The place has outstanding heritage value to the nation because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period.	<p><i>'Though not quite the longest span, Sydney Harbour Bridge ... is undoubtedly the greatest of the world's arch bridges' (Australian Academy of Technological Sciences and Engineering, 2000: 426).</i></p> <p><i>The Sydney Harbour Bridge may be considered the world's greatest arch bridge. Although not the longest arch span in the world, its mass and load capacity are greater than other major arch bridges. Engineers Australia has noted that no other bridge in Australia compares with the Sydney Harbour Bridge in its technical significance. In comparing Sydney Harbour Bridge with overseas arch bridges, Engineers Australia notes its complexity in combining span with width and load carrying capacity (Engineers Australia, 2005: 7).</i></p> <p><i>The project was the greatest labour intensive project to employ nineteenth century work practices of sledge and cold chisel (Jahn, 1997: 123). At the turning of the first sod for the bridge on the North Shore, in July 1923, Bradfield explained that the bridge would be the heaviest ever built and would set new construction records because its individual members would be the largest ever constructed, lifted or set in place (Lalor, 2005: 93).</i></p> <p><i>At the time of its construction, the Sydney Harbour Bridge was most closely compared with the Bayonne Bridge in New York, completed the year before, and which until 1978 remained the world's longest steel-arch span. The 503-metre arch of the Sydney Harbour Bridge is 0.6 metres shorter than Bayonne. A total of 39,000 tonnes of structural steel was used in the Sydney Harbour Bridge arch, over two-thirds of it silicon steel, with a yield point of 309 MPA (Australian Academy of Technological Sciences and Engineering, 2000: 426). In all 52,800 tonnes were used in the construction of the arch and approach spans, compared with approximately 26,500 tonnes in the Bayonne Bridge.</i></p> <p><i>' ... the Sydney Harbour Bridge was the widest-ever long-span bridge, with four rail tracks and six lanes of roadway ... The Sydney Harbour Bridge may be considered the world's greatest arch bridge. Although not the longest arch span in the world, its mass and load capacity are greater than other major arch bridges. Engineers Australia has noted that no other bridge in Australia compares with the Sydney Harbour Bridge in its technical significance. In comparing Sydney Harbour Bridge with overseas arch bridges, Engineers Australia notes its complexity in combining span with width and load carrying capacity (Browne, 1996: 39).</i></p> <p><i>The width of the deck of Sydney Harbour Bridge is 49 metres, compared with the Bayonne Bridge which is 26 metres wide and carries four lanes of traffic.</i></p> <p><i>The New River Gorge Bridge in West Virginia, completed in 1977, although 15 metres longer, is less than half the width of the Sydney Harbour Bridge and its mass of steel is significantly less (http://www.nps.gov/neri/bridge.htm). It has since been superseded by the Lupu Bridge in Shanghai, which opened in 2003. The West Gate Bridge across the Yarra River, Melbourne is 2.5 kilometres long with its largest span of 336 metres. The Tasman Bridge, Tasmania opened in 1964 although over 1400 metre in length, its largest viaduct span was 46 metres.</i></p> <p><i>The construction of Sydney Harbour Bridge combined available technology with natural advantages provided by the site. The bridge is an outstanding technical and construction achievement and the designers took advantage of the sandstone base on which Sydney was built - which enabled them to tie back the cables during construction of the arch - to experiment with massive structures. Although designed more than 80 years ago, the bridge has still not reached its loading capacity. A 1987 report from McMillan, Britton & Kell Pty Ltd, Consulting Civil and Structural Engineers, prepared in connection with a proposal to add additional traffic lanes to the bridge, concluded that the bridge had sufficient capacity to carry two additional double-lane decks.</i></p> <p><i>' ... the structure is loaded to less than its design capacity ... and the estimated maximum live load force at present is less than the design live load force ...' (O'Connor et al, 1987: 3-4).</i></p> <p><i>More than 70 years after opening, the bridge remains structurally unmodified and has still not reached its maximum load capacity. The 1987 bridge development scheme report concluded that '... it can be expected to continue to serve its original purpose far into the future' (O'Connor et al, 1987: 3).</i></p> <p><i>The Sydney Harbour Bridge has outstanding value to the nation against Criterion (f).</i></p>
CRITERION (g) The place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.	<p><i>It was part of JCC Bradfield's vision for the bridge that it be used "at times of national rejoicing". Over the years since its opening it has regularly supported flags, banners, and especially fireworks, becoming a focus for national and local celebrations (Heritage Group, NSW Department of Public Works and Services, 1998: 126).</i></p> <p><i>Community ceremonial and celebratory occasions centred on Sydney Harbour Bridge, either for the people of Sydney or the broad Australian community, are well recognised and have been widely noted.</i></p> <p><i>The bridge has been the centrepiece of events associated with the 1988 Australian Bi- centenary, the Reconciliation Walk in May 2000, the 2000 Sydney Olympics, annual New Year's Eve festivities, National Aids Week and many other social and cultural occasions.</i></p> <p><i>For over forty years the broad Australian community identified the Sydney Harbour Bridge as one of the most nationally and internationally recognised symbol of Australia; since the construction of the Sydney Opera House, it and the bridge in their harbour setting represent a composite symbolic image.</i></p> <p><i>The Sydney Harbour Bridge has outstanding value to the nation against Criterion (g).</i></p>

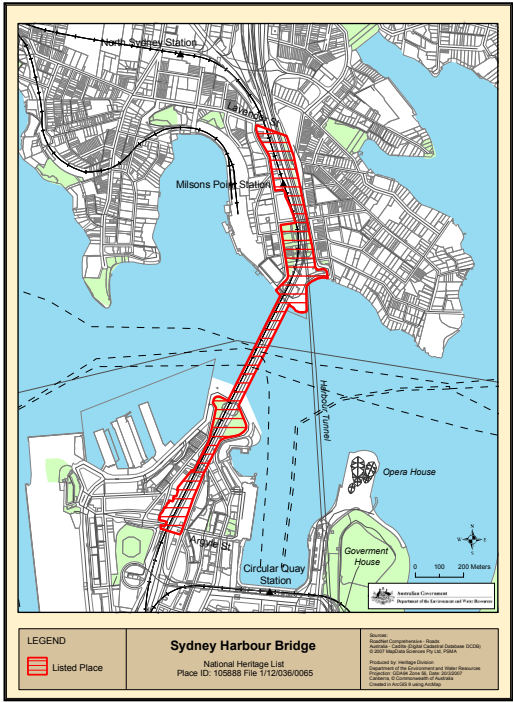
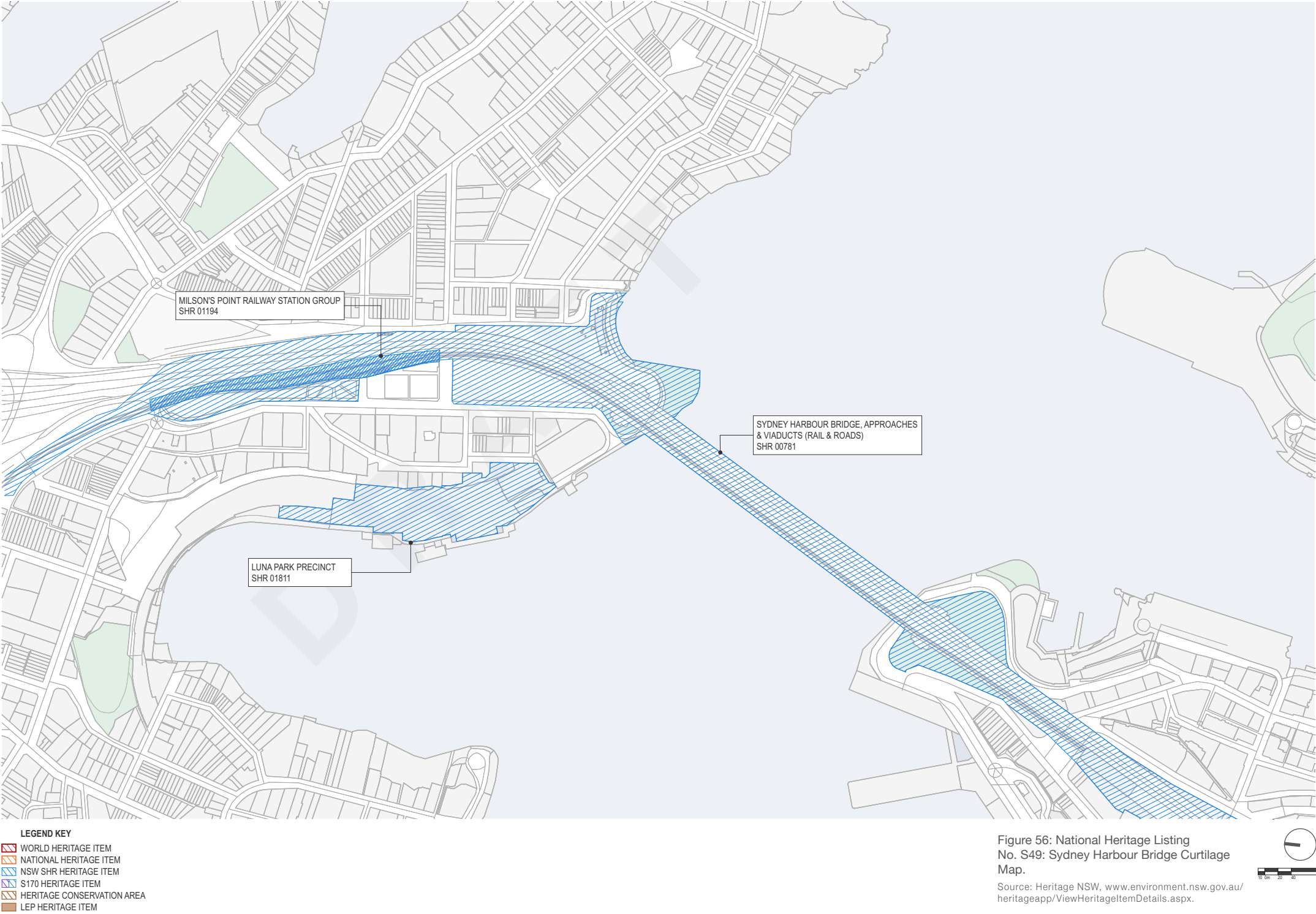


Figure 55: National Heritage Listing
No. S49: Sydney Harbour Bridge Curtilage Map.
Source: Heritage NSW, www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx.

CRITERIA	VALUES
CRITERION (h) The place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history.	<p>John Job Crew Bradfield ranks with other engineers – including Essington Lewis, Guillaume Delprat and Sir Ian McLennan of BHP, Sir John Coode, Sir Lawrence Wackett, Sir James Kirby, Larry Hartnett, Bill Bradfield, John Watkins, and Sir James Rowland - whose close involvement in a broad range of projects contributed to Australia's national development. Architect Graham Jahn, Fellow and former National President of the Royal Australian Institute of Architects, describes Bradfield as '... one of Australia's greatest civil, structural and transport engineers...' (Jahn, 1997: 123).</p> <p>As principal design engineer for the New South Wales Public Works Department, J J C Bradfield was largely responsible for finally bringing the Sydney Harbour Bridge to fruition (6). Bradfield had been involved with the bridge proposal since the 1900 competition, in which all of the 24 schemes were rejected (Jahn 1997). In 1912 the New South Wales Government appointed Bradfield Chief Engineer for Metropolitan Railway Construction and the Sydney Harbour Bridge.</p> <p>As Chief Engineer, Bradfield prepared the general design and specification and supervised the whole project on behalf of the Government of New South Wales. He also integrated the bridge into the Sydney road, tram and rail system, including construction of an underground railway in the Sydney CBD. He had recommended Dorman Long and Company, the successful tenderers, who retained the services of English consulting engineer Sir Ralph Freeman for the detailed design of the structure.</p> <p>Bradfield's work and influence extended far beyond Sydney and the Harbour Bridge. He was involved in the construction of the Cataract Dam (the Wollondilly Region of NSW), the first of the great dams for Sydney, completed in 1907, which when built was the largest engineering project ever undertaken in Australia, and the fourth largest of its type in the world. He worked on the design for Burrinjuck Dam, the first major dam built for irrigation in New South Wales. Construction of the dam began in 1907 and water flows commenced in 1912. Bradfield was also responsible for constructing about 500 kilometres of the New South Wales North Coast Railway (Carroll, 1988: 155).</p> <p>After retiring from the New South Wales Public Service in 1933, Bradfield was appointed consulting engineer for the design and construction of the Story Bridge in Brisbane, which was opened in 1940. He helped to plan and design the University of Queensland at St Lucia, and advocated ambitious schemes to irrigate western Queensland and central Australia. He was technical adviser on construction of the Hornibrook Highway near Brisbane (Spearritt 1970).</p> <p>Bradfield was nationally recognised through his appointments to the Australian National Research Council and the Australian Commonwealth Standards Advisory Committee. The Institution of Engineers, Australia awarded him the Peter Nicol Russell Medal in 1932, and he also received the Kernot Memorial Medal from the University of Melbourne in 1933, and the Telford Gold Medal from the Institution of Civil Engineers, London in 1934 (Spearritt 1970).</p> <p>J J C Bradfield was the first Sydney Engineering graduate admitted to the university's Doctorate in Engineering (usyd) and from 1942 he was Deputy Chancellor of the University of Sydney in 1942-43 (Spearritt 1970).</p> <p>The Sydney Harbour Bridge has outstanding value to the nation against Criterion (h).</p>
CRITERION (i) The place has outstanding heritage value to the nation because of the place's importance as part of Indigenous traditions.	<p>Based on the evidence available, Sydney Harbour Bridge does not have outstanding value to the nation against Criterion (i).</p>

2.6 State Heritage Register

The study area is located within the Sydney Harbour Bridge Approaches and Viaducts curtilage (SHR 00781) and adjacent to the Milsons Point Railway Station Group (SHR 01194). The Luna Park Precinct (SHR 01811) is also locate nearby to the west of the site.



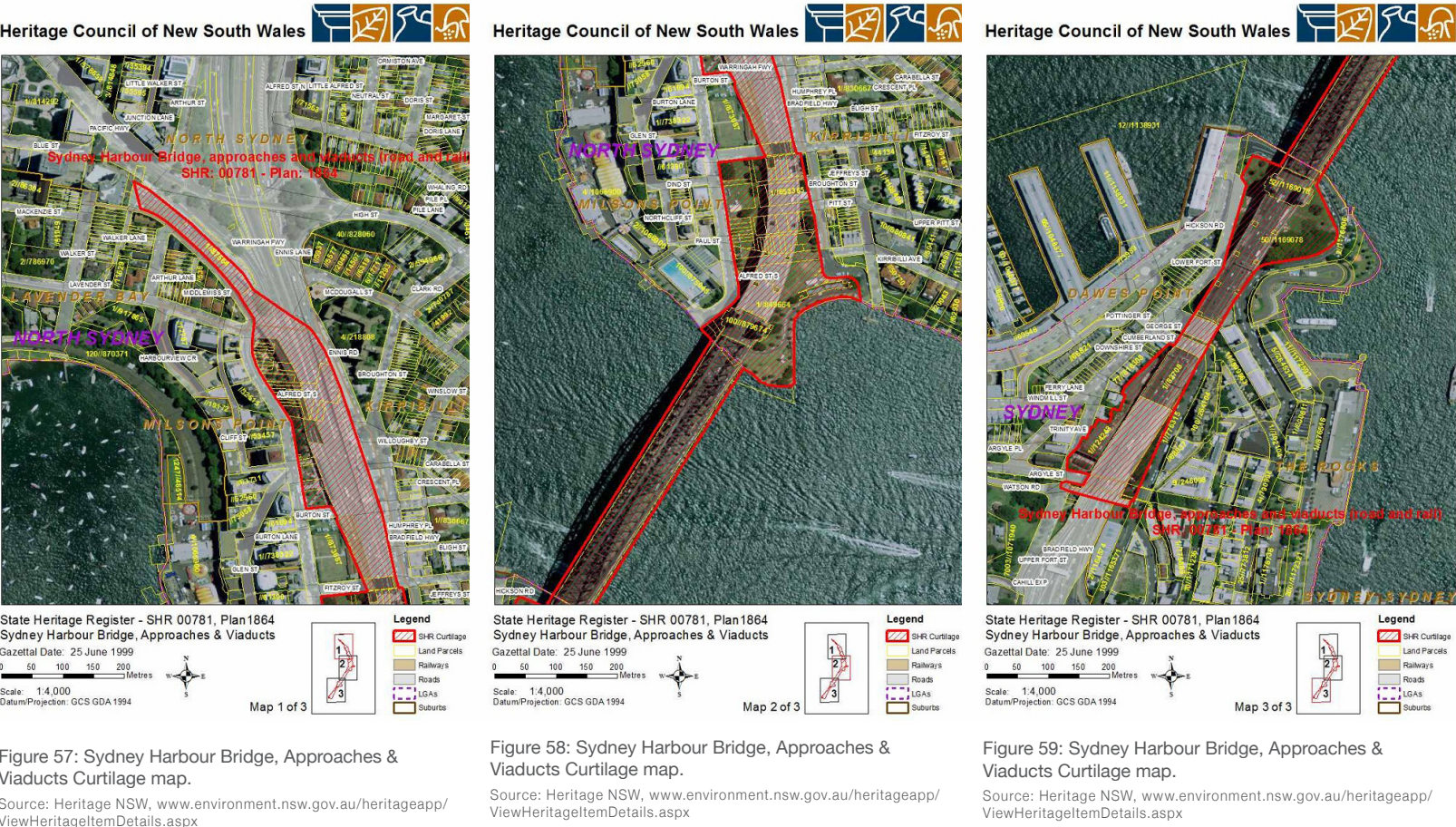
Sydney Harbour Bridge, approaches and viaducts (road and rail) - SHR 00781

Statement of Significance

The bridge is one of the most remarkable feats of bridge construction. At the time of construction and until recently it was the longest single span steel arch bridge in the world and is still in a general sense the largest. The bridge, its pylons and its approaches are all important elements in townscape of areas both near and distant from it. The curved northern approach gives a grand sweeping entrance to the bridge with continually changing views of the bridge and harbour. The bridge has been an important factor in the pattern of growth of metropolitan Sydney, particularly in residential development in post World War II years. In the 1960s and 1970s the Central Business District had extended to the northern side of the bridge at North Sydney which has been due in part to the easy access provided by the bridge and also to the increasing traffic problems associated with the bridge (Walker and Kerr 1974).

CRITERIA	VALUES
(SHR Criteria a) [Historical significance]	<p>The bridge is one of the most remarkable feats of bridge construction. At the time of construction and until recently it was the longest single span steel arch bridge in the world and is still in a general sense the largest. (Walker and Kerr 1974)</p> <p>BRADFIELD PARK NORTH (SANDSTONE WALLS):</p> <p>“The archaeological remains are demonstrative of an earlier phase of urban development within Milsons Point and the wider North Sydney precinct. The walls are physical evidence that a number of 19th century residences existed on the site which were resumed and demolished as part of the Sydney Harbour Bridge construction” [Statement of Heritage Impact - Sandstone Walls: Bradfield Park North, Milsons Point (2003: 8), McFadyen and Stuart, HLA Envirosciences].</p>
SHR Criteria c) [Aesthetic significance]	<p>The bridge, its pylons and its approaches are all important elements in townscape of areas both near and distant from it. The curved northern approach gives a grand sweeping entrance to the bridge with continually changing views of the bridge and harbour. (Walker and Kerr 1974)</p>
SHR Criteria d) [Social significance]	<p>The bridge has been an important factor in the pattern of growth of metropolitan Sydney, particularly in residential development in post World War II years. In the 1960s and 1970s the Central Business District had extended to the northern side of the bridge at North Sydney which has been due in part to the easy access provided by the bridge and also to the increasing traffic problems associated with the bridge. (Walker and Kerr 1974)</p>
SHR Criteria e) [Research potential]	<p>BRADFIELD PARK NORTH (SANDSTONE WALLS):</p> <p>“The archaeological remains have some potential to yield information about the previous residential and commercial occupation of Milsons Point prior to the construction of the Sydney Harbour Bridge transport link” [Statement of Heritage Impact - Sandstone Walls: Bradfield Park North, Milsons Point (2003: 8), McFadyen and Stuart, HLA Envirosciences].</p>
Integrity/Intactness:	<p>Good except for removal of railway works on eastern side.</p>

Sydney Harbour Bridge, approaches and viaducts (road and rail) - State Heritage Register - No. 00781 Curtilage Maps



2.6.1 SHR Historic Themes

AUSTRALIAN THEME (ABBREV)	NEW SOUTH WALES THEME	LOCAL THEME
3. Economy- Developing local, regional and national economies	Events-Activities and processes that mark the consequences of natural and cultural occurrences	Developing national landmarks-].
3. Economy- Developing local, regional and national economies	Events-Activities and processes that mark the consequences of natural and cultural occurrences	Holding opening and dedication ceremonies-
3. Economy- Developing local, regional and national economies	Technology-Activities and processes associated with the knowledge or use of mechanical arts and applied sciences	Technologies of bridge building-
3. Economy- Developing local, regional and national economies	Transport-Activities associated with the moving of people and goods from one place to another, and systems for the provision of such movements	Engineering the public road system-
3. Economy- Developing local, regional and national economies	Transport-Activities associated with the moving of people and goods from one place to another, and systems for the provision of such movements	Engineering the public railway system-
4. Settlement- Building settlements, towns and cities	Towns, suburbs and villages-Activities associated with creating, planning and managing urban functions, landscapes and lifestyles in towns, suburbs and villages	Creating landmark structures and places in urban settings-
5. Working-Working	Labour-Activities associated with work practises and organised and unorganised labour	Working on public infrastructure projects-
7. Governing- Governing	Government and Administration-Activities associated with the governance of local areas, regions, the State and the nation, and the administration of public programs - includes both principled and corrupt activities.	Developing roles for government - building and operating public infrastructure-
9. Phases of Life- Marking the phases of life	Persons-Activities of, and associations with, identifiable individuals, families and communal groups	Associations with Dr J J Bradfield, civil engineer-

Specific Exemptions for Works requiring Heritage Council of NSW Approval (gazetted 13 July 2007)

- Maintenance and minor repairs necessary to preserve and maintain the functioning of the structure as a transport and services corridor, for example pavement resurfacing, track laying, electric catenary replacement, traffic management, toll collection and navigational infrastructure, and pipework and cabling
- Minor works necessary to preserve and maintain the functioning of the bridge, for example drainage modifications, modifications to road, rail, navigational, traffic management and toll collection and other infrastructure;
- Minor works necessary to preserve and maintain the functioning of utility supply and communications for example modifications and improvements to power supply systems, communications cabling and water supply systems including fire hydrants;
- Minor works necessary to preserve and enhance the security of the Bridge such as security fencing, video surveillance and detection systems;
- Minor works necessary to upgrade or enhance the structural integrity of the Bridge that do not alter its overall form or shape or significantly change the appearance of bridge elements;
- Minor works internal to the Bridge structure or structural members that do not physically change the external appearance of the Bridge or bridge members;
- Temporary works including containment areas, scaffolding and enclosures necessary for the carrying out of maintenance, enhancement or upgrading works;
- Minor internal changes to office spaces, retail and other tenancy spaces and recreational facilities;
- Installation of safety or information signage, not being for commercial or advertising purposes;
- Temporary and reversible works for the operation of special events;
- Maintenance of roadways, footpaths, parklands and vegetation;
- Minor subdivision in terms of State Environmental Planning Policy No. 4;
- Change of use from an approved use to a similar permissible use;
- Works that in the opinion of the Executive Director of the Heritage Office, Department of Planning, are required for the security of the Bridge and bridge users, and that need to remain confidential.

In exercising this provision, the Executive Director of the Heritage Office, Department of Planning shall have regard to the general conditions, guidelines and definitions regarding standard exemptions as issued and amended from time to time and in Standard Exemptions for Works Requiring Heritage Council Approval, as amended from time to time and published by the Heritage Office, in determining which works require approval under s57(2) of the Heritage Act 1977.

2.6.2 Milsons Point Railway Station Group - SHR 01194

Statement of Significance

Milsons Point station has state historical significance as an essential component of the northern approaches to the Sydney Harbour Bridge. The form and detail of the subway and tunnels in particular are significant as part of the overall design and specifications for the bridge as set down by Chief Engineer JJC Bradfield. The Milsons Point station retains a number of original features and decorative elements from its original construction phase including the platform building and entrance way awning from the Alfred Street side.

CRITERIA	VALUES
SHR Criteria a [Historical significance]	Milsons Point Station has state historical significance as an essential component of the northern approaches of the Sydney Harbour Bridge and as a linking station in JJC Bradfield's city railway network. The station is unusual on the NSW system for being constructed by the specially created Sydney Harbour Bridge Branch of the Department of Public Works rather than NSW Government Railways.
SHR Criteria b [Associative significance]	Milsons Point Station is significant for its association with JJC Bradfield, chief engineer and designer for the Sydney Harbour Bridge and his wider Sydney Harbour Bridge and city railway network scheme.
SHR Criteria c) [Aesthetic significance]	Milsons Point Station has aesthetic significance for its retention of the original design's decorative features such as the Alfred Street awning, Alfred Street light fittings and cream and maroon tiling on the platform access stairs. The use of reinforced concrete for the construction of the station building is an early example of this construction technique on a large scale.
SHR Criteria d) [Social significance]	The place has the potential to contribute to the local community's sense of place and can provide a connection to the local community's history.
SHR Criteria f) [Rarity]	Milsons Point Station is the only intact station built as part of the construction of the Sydney Harbour Bridge. It retains original features of the 1932 design which have been completely removed from its sister station at North Sydney.
SHR Criteria g) [Representativeness]	Milsons Point Station is a representative externally of the Sydney Harbour Bridge architectural style and internally representative of the City Underground finishes as displayed in Museum and St James Stations.
Integrity/Intactness:	The Milsons Point Station group is largely intact and retains a high level of integrity.



Figure 60: Milsons Point Station Group Curtilage map.
Source: Heritage NSW, www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx

2.7 Section 170 Registers

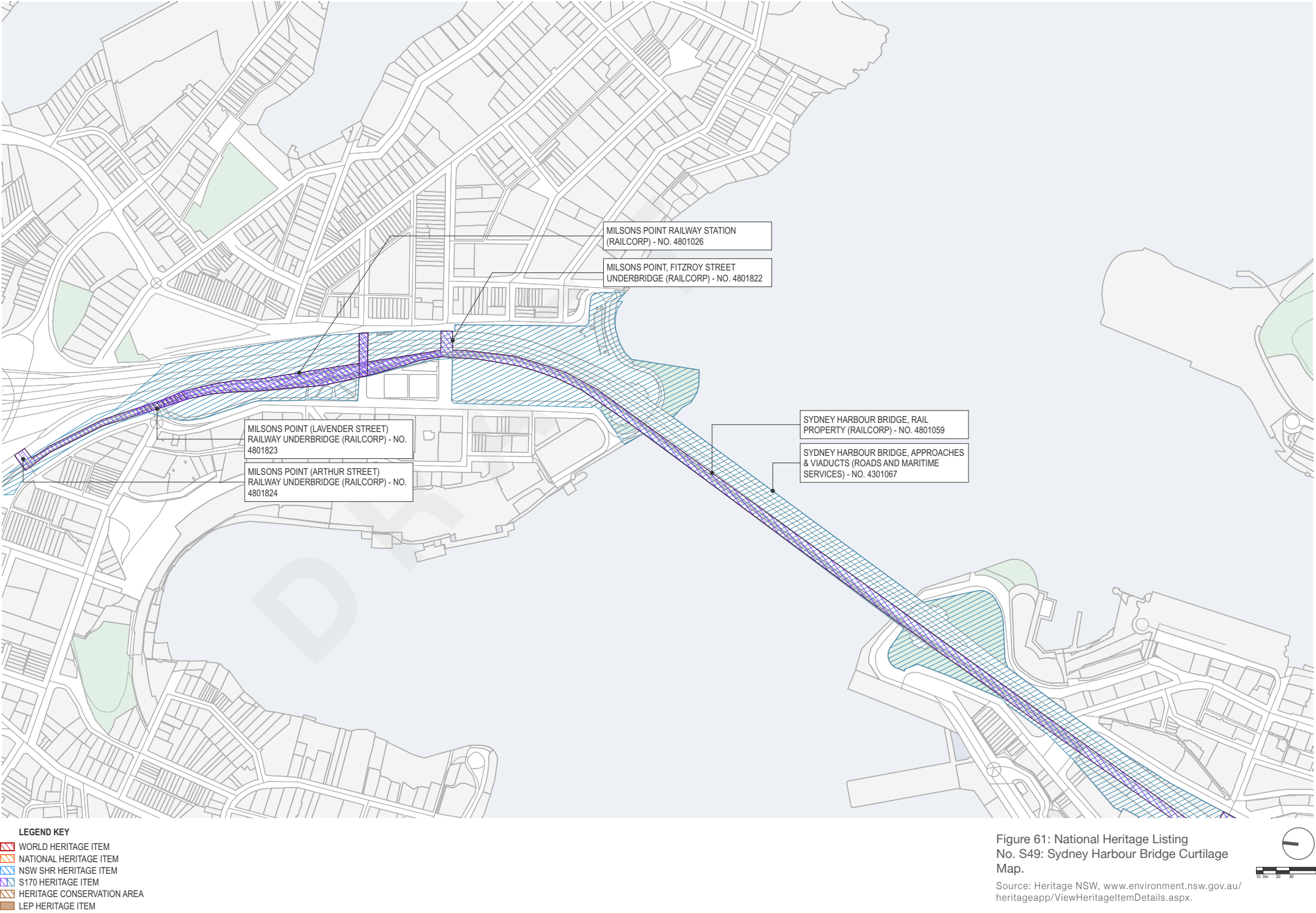
There are various listings contained on the Roads and Maritime Services and Railcorp Section 170 Registers associated with the Sydney Harbour Bridge:

RMS Section 170 Register

- Sydney Harbour Bridge, approaches and viaducts No. 4301067.

Railcorp Section 170 Register

- Sydney Harbour Bridge (Rail Property Only), No. 4801059.
- Milsons Point Railway Station, No. 4801026.
- Milsons Point (Fitzroy Street) Underbridge, No. 4801822.
- Milsons Point (Lavender Street) Railway Underbridge, No. 4801823
- North Sydney (Arthur Street) Railway Underbridge, No 4801824.



Sydney Harbour Bridge, approaches and viaducts - RMS S170
Register No. 4301067

Statement of Significance

The bridge is a monumental landmark in the centre of the city of Sydney and an important visual element in the cityscape when viewed from many key points around the harbour.

The bridge was the outcome of the personal vision and commitment of Dr JJC Bradfield, Chief Engineer, Sydney Harbour Bridge, City Transit and Metropolitan Railway Construction, and the leading figure in the development of Sydney's transport system in the first part of the twentieth century. It is also associated with the British team of engineer Sir Ralph Freeman and contractors Dorman Long and Co. Its construction consumed a major portion of the public works capacity and budget of New South Wales, and was a very significant undertaking for the public sector at the time.

The bridge remains synonymous with the names of a broad range of personalities associated with either its construction or subsequent history, eg Premier Jack Lang, De Groot, Paul Hogan.

The approach span arches, slabs and retaining walls of the bridge are important examples of the use of in situ reinforced concrete on a massive scale, combined with the fine scale use of the material for detail components such as balustrades, step and bass relief decoration, and the scale and design of the viaducts forming the approach spans to the bridge are notable within the New South Wales context. The masonry pylons and abutments of the approach spans designed by the English architect Thomas Tait exhibit a sophisticated degree of Art Deco design influence comparable with other examples in Sydney and New South Wales.

The bridge has been in continuous use since 1932 as the main road and rail connection across Sydney Harbour. Together with the city railway system, it constituted a radical expansion of Sydney's transportation network, and allowed a major acceleration in the development of the northern residential suburbs, particularly in the post-World War II years, as well as the extension of the Central Business District into North Sydney in the 1960s and 1970s.

The bridge approach spans provide the physical evidence of extensive urban redevelopment within The Rocks/Milsons Point precinct and the wider North Sydney precinct where large parts of the early subdivision patterns and built forms were demolished prior to the construction of the bridge. The bridge approach spans and roadways (especially the Warringah Freeway at North Sydney) truncated established neighbourhoods, creating distinctive precincts whose landuse and built forms developed separately.

The construction of the bridge affected the lives of almost a generation of workers, and its role during the Depression as the so-called 'iron lung' which provided employment and protected workers and their families from hardship or the dole is still remembered.

The bridge became an early focal point for political tensions and national celebrations, starting with the 'De Groot' incident in 1932, and more recently the 'Walk for Reconciliation' in 2000, the Sydney Olympic Games in 2000 and the annual role it continues to play as part of New Year's Eve and Australia Day celebrations.

In terms of archaeological value, the surviving standing walls at Bradfield Park have the potential to yield further information about the early residential and commercial occupation of Milsons Point, and the archaeological remains in Dawes Point have the potential to yield further information about its early development, particularly the Dawes Point Battery and later alterations.

CRITERIA	VALUES
(SHR Criteria a) [Historical significance]	<p>The bridge was the outcome of the personal vision and commitment of Dr JJC Bradfield, Chief Engineer, Sydney Harbour Bridge, City Transit and Metropolitan Railway Construction, and the leading figure in the development of Sydney's transport system in the first part of the twentieth century.</p> <p>The bridge has been in continuous use since 1932 as the main road and rail connection across Sydney Harbour. Together with the city railway system, it constituted a radical expansion of Sydney's transportation network.</p> <p>The construction of the bridge allowed a major acceleration in the growth of the northern residential suburbs of metropolitan Sydney, particularly in the post-World War II years, as well as the extension of the Central Business District into North Sydney in the 1960s and 1970s.</p> <p>The bridge approach spans provide the physical evidence of extensive urban redevelopment within The Rocks/Milsons Point precinct and the wider North Sydney precinct. Large parts of the early subdivision patterns and built forms in both of these early parts of Sydney were demolished prior to the construction of the bridge.</p> <p>The bridge approach spans and roadways (especially the Warringah Freeway at North Sydney) truncated established and homogeneous neighbourhoods, creating distinctive precincts whose landuse and built forms developed separately.</p> <p>The construction of the bridge consumed a major portion of the public works capacity and budget of New South Wales, and was a very significant undertaking for the public sector at the time.</p> <p>The bridge became an early focal point for political tensions and national celebrations, starting with the 'De Groot' incident in 1932, and more recently the 'Walk for Reconciliation' in 2000, the Sydney Olympic Games in 2000 and the annual role it continues to play as part of New Year's Eve and Australia Day celebrations.</p>
SHR Criteria b) [Associative significance]	<p>The construction of the bridge is also associated with the British team of engineers, Sir Ralph Freeman and contractors Dorman Long and Co. The bridge was the outstanding work of Freeman's career but his contribution was marred by a dispute with Bradfield regarding who was actually responsible for its design.</p> <p>The bridge has strong associations with the families and descendents of the workers who built it, and who recognise its role during the Depression as the so-called 'iron lung' in providing employment and protection from hardship or the dole.</p> <p>The items in the SHB Movable Heritage Collection are memorabilia of the ceremonies and celebrations for the Opening Day of the bridge and are associated with the people from all classes who participated in the Opening Day events and activities.</p> <p>The technical items and instruments within the SHB Movable Heritage Collection were used by staff and workers associated with the construction and maintenance of the Sydney Harbour Bridge, sometimes over many years.</p>
SHR Criteria c) [Aesthetic significance]	<p>- The bridge is a monumental landmark in the centre of the city of Sydney and an important visual element in the cityscape when viewed from many key points within the city.</p> <p>- The pylons and abutment towers designed by English architect Thomas Tait exhibit a sophisticated degree of Art Deco design influence comparable with other examples in Sydney and New South Wales, such as the former Maritime Services Board building and the Hyde Park War Memorial.</p> <p>- The sweeping curve of the northern approach spans exhibits a dramatic aesthetic quality and is the subject of many works of art and photos.</p> <p>- The consistent detail treatment of the components that make up the approaches (ie arched and flat-topped voids utilised as tenancies, retaining walls, balustrades, steps, lighting) is of a high quality and makes a major contribution to the streetscapes of Milsons Point and The Rocks/Millers Point.</p> <p>- The approach span arches, slabs and retaining walls of the bridge are important examples of the use of in situ reinforced concrete on a massive scale, combined with the fine scale use of the material for detail components such as balustrades, step and bass relief decoration.</p> <p>- The scale and design of the viaducts forming the approach spans to the bridge are notable within the New South Wales context.</p> <p>- The masonry pylons and abutments of the approach spans designed by the English architect Thomas Tait exhibit a sophisticated degree of Art Deco design influence comparable with other examples in Sydney and New South Wales.</p> <p>- The SHB Movable Heritage Collection commemorates the technical achievement evident in the design and construction of the Sydney Harbour Bridge. It contains steel samples, rivets, bolts and examples of the instruments utilised for the fabrication of components for the bridge. The tools and equipment used by Dorman Long Company in the fabrication and construction of the bridge are also illustrative of the processes used during the manufacture, installation and testing of the Bridge.</p>

CRITERIA	VALUES
SHR Criteria d) [Social significance]	<p><i>The bridge is a focal point for cultural events and national celebrations, as exemplified by the 'Walk for Reconciliation' in 2000, the Sydney Olympic Games in 2000, the Sydney Running Festival, Bicycle NSW's Spring Cycle and the annual role it continues to play as part of New Year's Eve and Australia Day celebrations.</i></p> <p><i>As a major public work of the time, the bridge represented a substantial investment by the taxpayers of New South Wales, and the toll still paid by motorists crossing the bridge is a constant reminder to the citizens of New South Wales of the huge cost burden imposed by its construction.</i></p> <p><i>The construction of the bridge affected the lives of almost a generation of workers, and its role during the Depression as the so-called 'iron lung' which provided employment and protected workers and their families from hardship or the dole is still remembered.</i></p> <p><i>The bridge was an important factor in the pattern of growth of metropolitan Sydney, particularly in allowing the opening up of the northern suburbs for residential development.</i></p> <p><i>The SHB Movable Heritage Collection contains items which are family heirlooms and memorabilia associated with the Sydney Harbour Bridge that were collected or retained by members of the public and which would continue to be considered valuable to the families of these people.</i></p> <p><i>The bridge provides a reference point for the families and descendants of those who worked on its design and construction, its opening and subsequent operation over seventy years.</i></p> <p><i>Movable heritage items associated with the Sydney Harbour Bridge have a strong social significance for those who worked on the bridge, the staff of the RTA as the custodians of the bridge and to residents of Sydney who in the past watched the bridge being constructed and still use the bridge today.</i></p>
SHR Criteria e) [Research potential]	<p><i>The bridge allows for the understanding of working conditions in the 1930s.</i></p> <p><i>The archaeological remains in Dawes Point have the potential to yield further information about the early development of this very historic area of Sydney, particularly the Dawes Point Battery and later alterations.</i></p> <p><i>The SHB Movable Heritage Collection contains original fabric elements such as the samples of original steel shavings and rivets, which provide a future opportunity for materials testing and analysis without the requirement for taking samples directly from the standing structure.</i></p>
SHR Criteria f) [Rarity]	<p><i>- The bridge is a uniquely important development in Sydney's transportation network.</i></p> <p><i>- As it introduced a main road and rail connection across Sydney Harbour, the bridge was the single most important factor in the expansion of metropolitan Sydney north of the harbour.</i></p> <p><i>- The SHB Movable Heritage Collection is a collection of rare surviving relics relating to the construction methodology, technology and materials of the bridge, assembled as part of the overall construction program, the first time in Australia that the construction of a bridge had been approached in this manner.</i></p> <p><i>- The SHB Movable Heritage Collection comprises original relics of the ceremonies and celebrations for the Opening Day of the Bridge and represents a rare record of Sydney society in the period during the construction of the Bridge. It also contains rare surviving relics of the fiftieth birthday celebrations of the Bridge and of the Bicentennial celebrations in 1988.</i></p>
(g) Representativeness The place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history.	<p><i>- The bridge is representative of a significant stage in the development of Sydney and associated changes in modes of transport, including the growing reliance on private motor vehicles.</i></p> <p><i>- The SHB Movable Heritage Collection comprises components and materials which are representative of the technologies in use at the time and utilised for the construction of the bridge. It contains tools, instruments, documents and equipment used in the fabrication and construction of the bridge which are representative of the specialised technology of the period and which illustrate typical processes used during the manufacture, installation and testing of the bridge. The collection also comprises equipment representative of the ongoing operation and maintenance operations of the bridge, including toll collection.</i></p> <p><i>- The SHB Movable Heritage Collection contains original memorabilia of the ceremonies and celebrations for the Opening Day of the Bridge, such as newspaper special supplements, published books and souvenir editions, as well as badges, postcards and pictures. This material is representative of the aesthetic and cultural context during the construction of the bridge, as well as of the media technologies and materials prevalent at the time.</i></p>
Integrity/Intactness:	<p><i>Good except for removal of railway works on eastern side.</i></p>

Historic Themes

AUSTRALIAN THEME (ABBREV)	NEW SOUTH WALES THEME	LOCAL THEME
3. Economy-Developing local, regional and national economies	Transport-Activities associated with the moving of people and goods from one place to another, and systems for the provision of such movements	None

2.7.1 Sydney Harbour Bridge (Rail Property Only) - Railcorp Section 170 Register No. 4801059

Statement of Significance

The railway across the Sydney Harbour Bridge is of state significance as an integral component and part of the original design of the Harbour Bridge. The track, fittings, overhead wiring and catenaries are unique to suit this particular location. The bridge and railway were designed as the crowning features of Dr JJC Bradfield's concept for the modernisation and completion of the Sydney railway and transport network and form a major urban feature of Sydney, recognised worldwide as a symbol of the city. The design and construction were technically advanced achievements for the time. As it was a special Public Works Department project with a design team independent of railway traditions and with different constraints and parameters, greater use was made of concrete for the approaches and underbridges both structurally and architecturally.

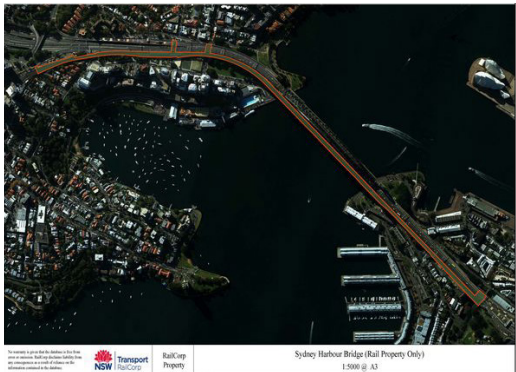


Figure 62: Sydney Harbour Bridge (Rail Property Only) - Railcorp Section 170 - No. 4801059 Curtilage Map.
Source: Heritage NSW, www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx

CRITERIA	VALUES
(SHR Criteria a) [Historical significance]	<i>The Sydney Harbour Bridge is seen as a symbol of Australia's industrial maturity. It is a link which promoted development of the North Shore and the redirection of the North Shore railway to link with the city. Along with the city railway, the Bridge (and the viaducts, tunnels, bridges and stations incorporated into the approaches) was the most important construction in the development of Sydney's transport system and has been in continuous use as such for over 75 years. The construction of the railway, including the bridge approaches and underbridges, was undertaken by a special Sydney Harbour Bridge Branch of the Department of Works and so utilises features otherwise uncommon in railway construction of the period, such as reinforced concrete.</i>
SHR Criteria b) [Associative significance]	<i>The Sydney Harbour Bridge, including the railway component, is associated with Dr JJC Bradfield, chief engineer and designer for the construction of the Sydney Harbour Bridge. It was Bradfield's vision for a Sydney rail and transport network that helped progress the development of the Harbour Bridge.</i>
SHR Criteria c) [Aesthetic significance]	<i>The railway property on the Sydney Harbour Bridge has some aesthetic significance as an integral part of the original design of the Bridge. The individual items, including tracks, catenaries, lattice iron work fencing and railway huts add to the aesthetic detail of the overall Bridge group. The construction of the approaches, including the railway underbridges, involved the first large-scale use of reinforced concrete for railway infrastructure, while the construction of the Bridge overall, including the railway component was one of the major engineering achievements in NSW in the twentieth century.</i>
SHR Criteria d) [Social significance]	<i>The railway property, as an essential component of the Sydney Harbour Bridge, symbol of Sydney and site of many commemorative events, it is likely to have social significance, but further research would be required to establish significance under this criterion.</i>
SHR Criteria f) [Rarity]	<i>The Sydney Harbour Bridge is a unique piece of urban infrastructure and a major Sydney landmark. In terms of railway bridges, it is a rare example of a combined road and railway bridge in the NSW system.</i>
Integrity/Intactness:	<i>Good except for removal of tramway works on eastern side.</i>
Recommended Management	<i>Manage in accordance with Conservation Management Plan prepared by GML for RTA, 2007. (Endorsed by Heritage Council until 16 March 2012). Manage in accordance with site specific exemptions attached to the State Heritage Register listing for the place (Item - 00781).</i> <i>1. Conservation principles: Conserve cultural heritage significance and minimise impacts on heritage values and fabric in accordance with the 'Australia ICOMOS Charter for Places of Cultural Significance'. 2. Specialist advice: Seek advice from a qualified heritage specialist during all phases of a proposed project from feasibility, concept and option planning stage; detailed design; heritage approval and assessment; through to construction and finalisation. 3. Documentation: Prepare a Statement of Heritage Impact (SOHI) to assess, minimise and prevent heritage impacts as part of the assessment and approval phase of a project. Prepare a Conservation Management Plan (CMP) prior to proposing major works (such as new additions, change of use or proposed demolition) at all places of State significance and all complex sites of Local significance. 4. Maintenance and repair: Undertake annual inspections and proactive routine maintenance works to conserve heritage fabric in accordance with the 'Minimum Standards of Maintenance & Repair'. 5. Movable heritage: Retain in situ and care for historic contents, fixtures, fittings, equipment and objects which contribute to cultural heritage significance. Return or reinstate missing features or relocated items where opportunities arise. 6. Aboriginal, archaeology and natural heritage: Consider all aspects of potential heritage significance as part of assessing and minimising potential impacts, including Aboriginal, archaeology and natural heritage. 7. Unidentified heritage items: Heritage inventory sheets do not describe or capture all contributory heritage items within an identified curtilage (such as minor buildings, structures, archaeology, landscape elements, movable heritage and significant interiors and finishes). Ensure heritage advice is sought on all proposed changes within a curtilage to conserve heritage significance. 8. Recording and register update: Record changes at heritage places through adequate project records and archival photography. Notify all changes to the Section 170 Heritage & Conservation Register administrator upon project completion.</i>

2.7.2 Milsons Point Railway Station
- Railcorp Section 170 Register No.
4801026

Statement of Significance

Milsons Point station has state historical significance as an essential component of the northern approaches to the Sydney Harbour Bridge. The form and detail of the subway and tunnels in particular are significant as part of the overall design and specifications for the bridge as set down by Chief Engineer JJC Bradfield. The Milsons Point station retains a number of original features and decorative elements from its original construction phase including the platform building and entrance way awning from the Alfred Street side.

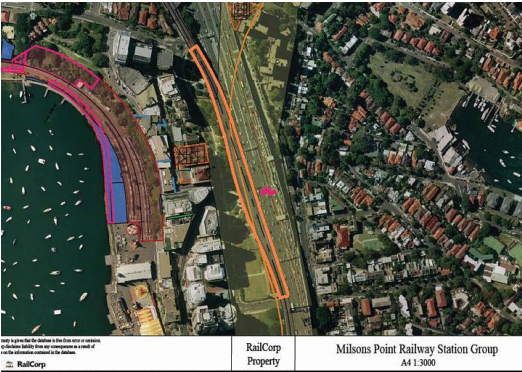


Figure 63: Milsons Point Railway Station) - Railcorp
Section 170 Register No. 4801026 Curtilage Map.
Source: Heritage NSW, www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx

CRITERIA	VALUES
(SHR Criteria a) [Historical significance]	Milsons Point Station has state historical significance as an essential component of the northern approaches of the Sydney Harbour Bridge and as a linking station in JJC Bradfield's city railway network. The station is unusual on the NSW system for being constructed by the specially created Sydney Harbour Bridge Branch of the Department of Public Works rather than NSW Government Railways.
SHR Criteria b) [Associative significance]	Milsons Point Station is significant for its association with JJC Bradfield, chief engineer and designer for the Sydney Harbour Bridge and his wider Sydney Harbour Bridge and city railway network scheme.
SHR Criteria c) [Aesthetic significance]	Milsons Point Station has aesthetic significance for its retention of the original design's decorative features such as the Alfred Street awning, Alfred Street light fittings and cream and maroon tiling on the platform access stairs. The use of reinforced concrete for the construction of the station building is an early example of this construction technique on a large scale.
SHR Criteria d) [Social significance]	The place has the potential to contribute to the local community's sense of place and can provide a connection to the local community's history.
SHR Criteria f) [Rarity]	Milsons Point Station is the only intact station built as part of the construction of the Sydney Harbour Bridge. It retains original features of the 1932 design which have been completely removed from its sister station at North Sydney.
SHR Criteria g) [Representativeness]	Milsons Point Station is a representative externally of the Sydney Harbour Bridge architectural style and internally representative of the City Underground finishes as displayed in Museum and St James Stations.
Integrity/Intactness:	The Milsons Point Station group is largely intact and retains a high level of integrity.
Recommended Management	<p>Manage in accordance with Conservation Management Plan prepared by GML for RTA, 2007. (Endorsed by Heritage Council until 16 March 2012). Manage in accordance with site specific exemptions attached to the State Heritage Register listing for the place (Item - 00781).</p> <p>1. Conservation principles: Conserve cultural heritage significance and minimise impacts on heritage values and fabric in accordance with the 'Australia ICOMOS Charter for Places of Cultural Significance'.</p> <p>2. Specialist advice: Seek advice from a qualified heritage specialist during all phases of a proposed project from feasibility, concept and option planning stage; detailed design; heritage approval and assessment; through to construction and finalisation.</p> <p>3. Documentation: Prepare a Statement of Heritage Impact (SOHI) to assess, minimise and prevent heritage impacts as part of the assessment and approval phase of a project. Prepare a Conservation Management Plan (CMP) prior to proposing major works (such as new additions, change of use or proposed demolition) at all places of State significance and all complex sites of Local significance.</p> <p>4. Maintenance and repair: Undertake annual inspections and proactive routine maintenance works to conserve heritage fabric in accordance with the 'Minimum Standards of Maintenance & Repair'.</p> <p>5. Movable heritage: Retain in situ and care for historic contents, fixtures, fittings, equipment and objects which contribute to cultural heritage significance. Return or reinstate missing features or relocated items where opportunities arise.</p> <p>6. Aboriginal, archaeology and natural heritage: Consider all aspects of potential heritage significance as part of assessing and minimising potential impacts, including Aboriginal, archaeology and natural heritage.</p> <p>7. Unidentified heritage items: Heritage inventory sheets do not describe or capture all contributory heritage items within an identified curtilage (such as minor buildings, structures, archaeology, landscape elements, movable heritage and significant interiors and finishes). Ensure heritage advice is sought on all proposed changes within a curtilage to conserve heritage significance.</p> <p>8. Recording and register update: Record changes at heritage places through adequate project records and archival photography. Notify all changes to the Section 170 Heritage & Conservation Register administrator upon project completion.</p>

2.7.3 Milsons Point (Fitzroy Street) Underbridge - Railcorp Section 170 Register No. 4801822

Statement of Significance

The Fitzroy Street underbridge is of state significance as an essential component of the northern approaches to the Sydney Harbour Bridge and as part of the greater scheme for the bridge as specified by JJC Bradfield. It was designed by the Sydney Harbour Bridge branch of the NSW Department of Public Works and so used techniques not common in NSW railways at the time, including the use of reinforced concrete on a large scale. It represents the northern end of the work of the Sydney Harbour Bridge branch and is a distinctive urban feature as part of the northern approaches of the Sydney Harbour Bridge.



Figure 64: Milsons Point (Fitzroy Street) Underbridge - Railcorp Section 170 Register No. 4801822 Curtilage Map.
Source: Heritage NSW, www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx

CRITERIA	VALUES
(SHR Criteria a) [Historical significance]	<i>The Fitzroy Street underbridge has historic significance as an essential component of the northern approaches to the Sydney Harbour Bridge. Constructed in 1927/28 by the Sydney Harbour Bridge Branch of NSW Public Works, it marked the end of the northern side managed and constructed by that department.</i>
SHR Criteria b) [Associative significance]	<i>The Fitzroy Street underbridge is associated with Dr JJC Bradfield, who was chief engineer and designer for the construction of the Sydney Harbour Bridge, and his design specifications for the construction of the Sydney Harbour Bridge.</i>
SHR Criteria c) [Aesthetic significance]	<i>The Fitzroy Street underbridge has aesthetic significance as a component of the continual form of the northern approaches, with its regular archways echoing the main arch of the bridge itself. The rendered concrete of the arch reflects the scheme of the approaches in general and forms part of a distinctive urban landmark. The underbridge has technical significance in being an early example of the use of reinforced concrete on a large scale for railway infrastructure.</i>
SHR Criteria g) [Representativeness]	<i>The Fitzroy Street underbridge is representative of the reinforced concrete construction techniques employed on the approaches to the Sydney Harbour Bridge and city rail network during the 1920s and 1930s.</i>
Integrity/Intactness:	<i>The Fitzroy Street underbridge is intact and retains a high level of integrity.</i>
Recommended Management	<i>Manage in accordance with Conservation Management Plan prepared by GML for RTA, 2007. (Endorsed by Heritage Council until 16 March 2012). Manage in accordance with site specific exemptions attached to the State Heritage Register listing for the place (Item - 00781).</i> <i>1. Conservation principles: Conserve cultural heritage significance and minimise impacts on heritage values and fabric in accordance with the 'Australia ICOMOS Charter for Places of Cultural Significance'. 2. Specialist advice: Seek advice from a qualified heritage specialist during all phases of a proposed project from feasibility, concept and option planning stage; detailed design; heritage approval and assessment; through to construction and finalisation. 3. Documentation: Prepare a Statement of Heritage Impact (SOHI) to assess, minimise and prevent heritage impacts as part of the assessment and approval phase of a project. Prepare a Conservation Management Plan (CMP) prior to proposing major works (such as new additions, change of use or proposed demolition) at all places of State significance and all complex sites of Local significance. 4. Maintenance and repair: Undertake annual inspections and proactive routine maintenance works to conserve heritage fabric in accordance with the 'Minimum Standards of Maintenance & Repair'. 5. Movable heritage: Retain in situ and care for historic contents, fixtures, fittings, equipment and objects which contribute to cultural heritage significance. Return or reinstate missing features or relocated items where opportunities arise. 6. Aboriginal, archaeology and natural heritage: Consider all aspects of potential heritage significance as part of assessing and minimising potential impacts, including Aboriginal, archaeology and natural heritage. 7. Unidentified heritage items: Heritage inventory sheets do not describe or capture all contributory heritage items within an identified curtilage (such as minor buildings, structures, archaeology, landscape elements, movable heritage and significant interiors and finishes). Ensure heritage advice is sought on all proposed changes within a curtilage to conserve heritage significance. 8. Recording and register update: Record changes at heritage places through adequate project records and archival photography. Notify all changes to the Section 170 Heritage & Conservation Register administrator upon project completion.</i>

2.7.4 Milsons Point (Lavender Street) Railway Underbridge - Railcorp Section 170 Register No. 4801823

Statement of Significance

The Lavender Street underbridge is of state significance as an essential component of the northern approaches to the Sydney Harbour Bridge and as part of the greater scheme for the bridge as specified by JJC Bradfield. It was designed by the Sydney Harbour Bridge branch of the NSW Department of Public Works and so used techniques not common in NSW railways at the time, including the use of reinforced concrete on a large scale. Its open-spandrel design is the only example of this type on the Harbour Bridge approaches (north or south) and is a distinctive landmark feature on the northern approach.

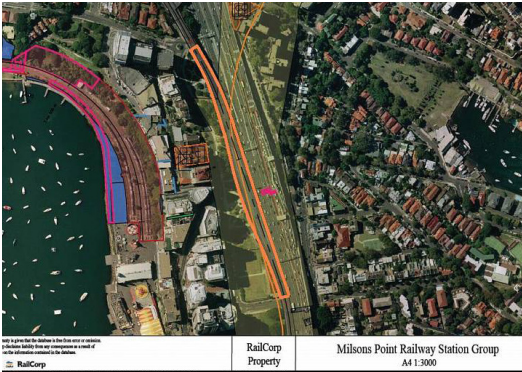


Figure 65: Milsons Point Railway Station) - Railcorp Section 170 Register No. 4801026 Curtilage Map.

Source: Heritage NSW, www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx

CRITERIA	VALUES
(SHR Criteria a) [Historical significance]	The Lavender Street underbridge has historic significance as an essential component of the northern approaches to the Sydney Harbour Bridge. Constructed in 1928/29 by the NSW Department of Public Works, it has one of the largest underbridge spans on the northern approach.
SHR Criteria b) [Associative significance]	The Lavender Street underbridge is associated with Dr JJC Bradfield, chief engineer and designer for the Sydney Harbour Bridge and his design specifications for the construction of the Sydney Harbour Bridge.
SHR Criteria c) [Aesthetic significance]	The Lavender Street underbridge has aesthetic significance as the only open-spandrel design underbridge on the approaches to the Sydney Harbour Bridge (north or south) and is a distinctive landmark feature on the northern approaches. It has technical significance in the use of reinforced concrete on a large scale for railway infrastructure.
SHR Criteria f) [Rarity]	The Lavender Street underbridge is the only open-spandrel design underbridge on the Sydney Harbour Bridge approaches.
SHR Criteria g) [Representativeness]	The Lavender Street underbridge is representative of the reinforced concrete construction techniques employed on the approaches to the Sydney Harbour Bridge and city rail network during the 1920s and 1930s.
Integrity/Intactness:	The Lavender Street underbridge is intact and has a high level of integrity.
Recommended Management	<p>Manage in accordance with Conservation Management Plan prepared by GML for RTA, 2007. (Endorsed by Heritage Council until 16 March 2012). Manage in accordance with site specific exemptions attached to the State Heritage Register listing for the place (Item - 00781).</p> <ol style="list-style-type: none">1. Conservation principles: Conserve cultural heritage significance and minimise impacts on heritage values and fabric in accordance with the 'Australia ICOMOS Charter for Places of Cultural Significance'.2. Specialist advice: Seek advice from a qualified heritage specialist during all phases of a proposed project from feasibility, concept and option planning stage; detailed design; heritage approval and assessment; through to construction and finalisation.3. Documentation: Prepare a Statement of Heritage Impact (SOHI) to assess, minimise and prevent heritage impacts as part of the assessment and approval phase of a project. Prepare a Conservation Management Plan (CMP) prior to proposing major works (such as new additions, change of use or proposed demolition) at all places of State significance and all complex sites of Local significance.4. Maintenance and repair: Undertake annual inspections and proactive routine maintenance works to conserve heritage fabric in accordance with the 'Minimum Standards of Maintenance & Repair'.5. Movable heritage: Retain in situ and care for historic contents, fixtures, fittings, equipment and objects which contribute to cultural heritage significance. Return or reinstate missing features or relocated items where opportunities arise.6. Aboriginal, archaeology and natural heritage: Consider all aspects of potential heritage significance as part of assessing and minimising potential impacts, including Aboriginal, archaeology and natural heritage.7. Unidentified heritage items: Heritage inventory sheets do not describe or capture all contributory heritage items within an identified curtilage (such as minor buildings, structures, archaeology, landscape elements, movable heritage and significant interiors and finishes). Ensure heritage advice is sought on all proposed changes within a curtilage to conserve heritage significance.8. Recording and register update: Record changes at heritage places through adequate project records and archival photography. Notify all changes to the Section 170 Heritage & Conservation Register administrator upon project completion.

2.7.5 North Sydney (Arthur Street) Railway Underbridge - Railcorp Section 170 Register No. 4801824

Statement of Significance

The Arthur Street Underbridge at North Sydney has state significance as an essential component of the northern approaches to the Sydney Harbour Bridge and as part of the greater scheme for the bridge as envisaged by Dr JJC Bradfield. It was designed and built by the Sydney Harbour Bridge Branch of the NSW Public Works Department and so was built using techniques not common in NSW railways construction at the time, including the use of reinforced concrete. The underbridge is one of a series of underbridges that make up a highly visible landmark as part of the northern approaches of the Sydney Harbour Bridge.

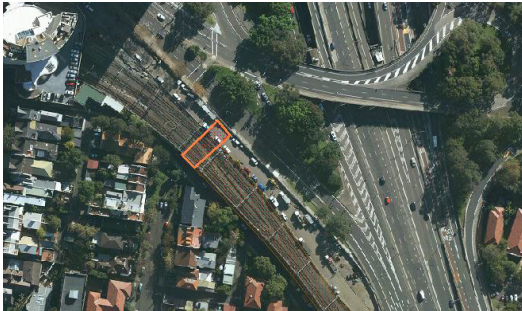


Figure 66: North Sydney (Arthur Street) Railway Underbridge - Railcorp Section 170 Register No. 4801824 Curtilage Map.
Source: Heritage NSW, www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx

CRITERIA	VALUES
SHR Criteria a) [Historical significance]	The Arthur Street underbridge has historic significance as an essential part of the northern approaches to the Sydney Harbour Bridge. It was constructed in 1927/28 by the Sydney Harbour Bridge branch of the NSW Department of Public Works and was one of the first completed sections of the overall bridge project.
SHR Criteria b) [Associative significance]	The Arthur Street underbridge has some association with Dr JJC Bradfield, chief engineer and designer of the Sydney Harbour Bridge and city underground network and his overarching scheme for the design and construction of the Sydney Harbour Bridge.
SHR Criteria c) [Aesthetic significance]	The Arthur Street underbridge has technical significance as a relatively early example of the use of reinforced concrete in major railway infrastructure projects. It has aesthetic significance as part of a continuous form of viaduct and arched underbridge construction utilised in the approaches of the Sydney Harbour Bridge which form a major urban landscape feature in Sydney.
SHR Criteria g) [Representativeness]	The Arthur Street underbridge is representative of the reinforced concrete construction techniques employed on the approaches to the Sydney Harbour Bridge and throughout the city underground railway in the 1920s and 1930s.
Integrity/Intactness:	The underbridge is intact and has a high level of integrity
Recommended Management	<p>Manage in accordance with Conservation Management Plan prepared by GML for RTA, 2007. (Endorsed by Heritage Council until 16 March 2012). Manage in accordance with site specific exemptions attached to the State Heritage Register listing for the place (Item - 00781).</p> <ol style="list-style-type: none">1. Conservation principles: Conserve cultural heritage significance and minimise impacts on heritage values and fabric in accordance with the 'Australia ICOMOS Charter for Places of Cultural Significance'.2. Specialist advice: Seek advice from a qualified heritage specialist during all phases of a proposed project from feasibility, concept and option planning stage; detailed design; heritage approval and assessment; through to construction and finalisation.3. Documentation: Prepare a Statement of Heritage Impact (SOHI) to assess, minimise and prevent heritage impacts as part of the assessment and approval phase of a project. Prepare a Conservation Management Plan (CMP) prior to proposing major works (such as new additions, change of use or proposed demolition) at all places of State significance and all complex sites of Local significance.4. Maintenance and repair: Undertake annual inspections and proactive routine maintenance works to conserve heritage fabric in accordance with the 'Minimum Standards of Maintenance & Repair'.5. Movable heritage: Retain in situ and care for historic contents, fixtures, fittings, equipment and objects which contribute to cultural heritage significance. Return or reinstate missing features or relocated items where opportunities arise.6. Aboriginal, archaeology and natural heritage: Consider all aspects of potential heritage significance as part of assessing and minimising potential impacts, including Aboriginal, archaeology and natural heritage.7. Unidentified heritage items: Heritage inventory sheets do not describe or capture all contributory heritage items within an identified curtilage (such as minor buildings, structures, archaeology, landscape elements, movable heritage and significant interiors and finishes). Ensure heritage advice is sought on all proposed changes within a curtilage to conserve heritage significance.8. Recording and register update: Record changes at heritage places through adequate project records and archival photography. Notify all changes to the Section 170 Heritage & Conservation Register administrator upon project completion.

2.8 SREP - Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 identifies many heritage items around Sydney Harbour including:

- 67, Sydney Harbour Bridge, including approaches and viaducts (road and rail), (State).

The SREP aims to protect the natural, scenic, environmental and cultural qualities of the Foreshores and Waterways Area. Clause 15 relates to Heritage Conservation and states:

- The planning principles for heritage conservation are as follows—
- (a) Sydney Harbour and its islands and foreshores should be recognised and protected as places of exceptional heritage significance,
 - (b) the heritage significance of particular heritage items in and around Sydney Harbour should be recognised and conserved,
 - (c) an appreciation of the role of Sydney Harbour in the history of Aboriginal and European settlement should be encouraged,
 - (d) the natural, scenic, environmental and cultural qualities of the Foreshores and Waterways Area should be protected,
 - (e) significant fabric, settings, relics and views associated with the heritage significance of heritage items should be conserved,
 - (f) archaeological sites and places of Aboriginal heritage significance should be conserved.

Clause 25 relates to the protection of the scenic qualities of the foreshore and waterways.

The SREP also includes a map of the Sydney Opera House Buffer Zone.

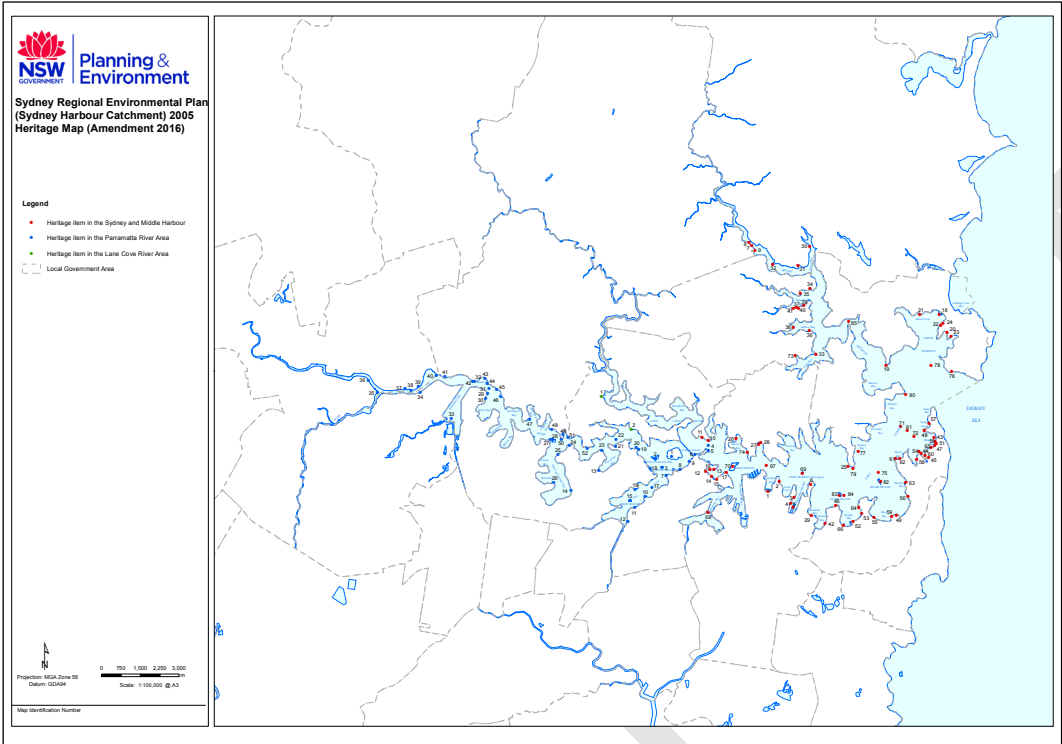


Figure 67: Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 Heritage Map (2016). Source: Available online.

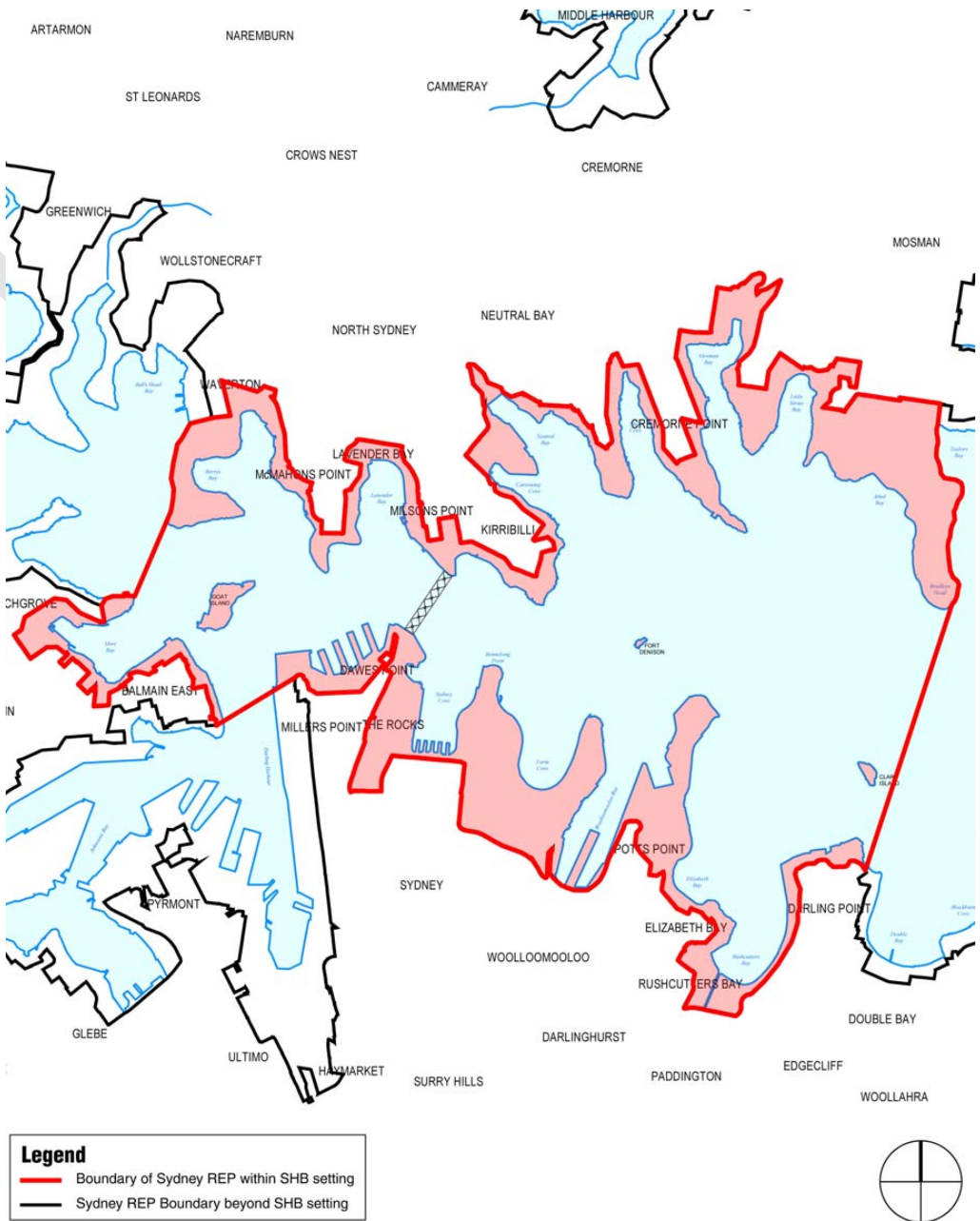


Figure 68: Sydney Harbour Bridge Setting Map. (Adapted from the Sydney Regional Environmental Plan (REP) Foreshores Waterways Area Map, Sheet 3 of 5.) Source: Sydney Harbour Bridge, Conservation Management Plan, Godden Mackay Logan, 2007, p.68.

2.9 North Sydney LEP 2013

The North Sydney Local Environment Plan 2013 identifies many heritage items in the vicinity of the site, as shown on the map to the right (Figure 70). The LEP also identifies Heritage Conservation Areas which are shown overleaf (Figure 71).

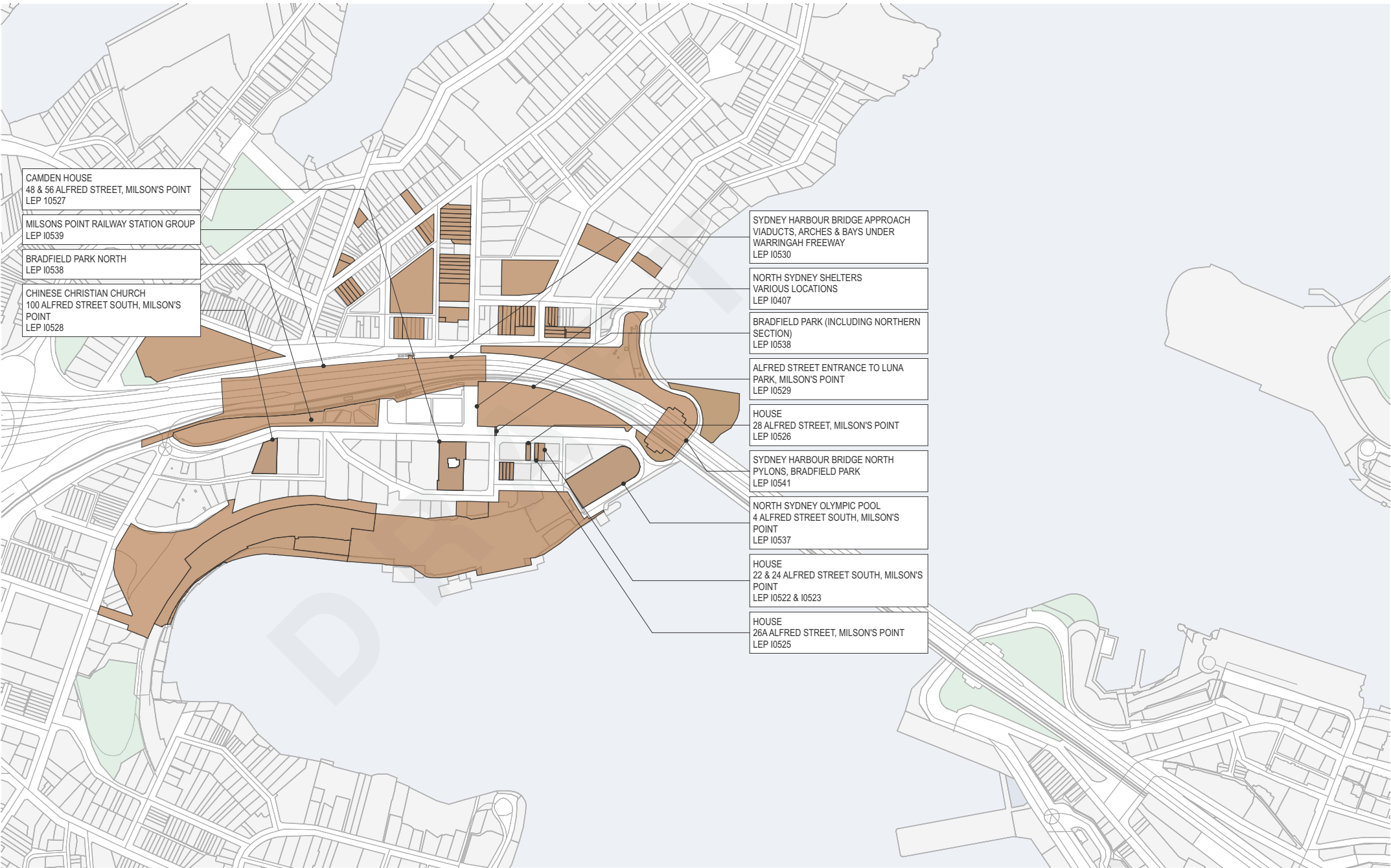
- Sydney Harbour Bridge, I0530
- Sydney Harnour Bridge north pylons, I0541
- Milsons Point Railway Station, I0539
- Bradfield Park including northen section, I0538
- Alfred Street entrance to Luna Park, I0529
- North Sydney Olympic Pool, I0537
- North Sydney shelters, I0407
- Chinese Christian Church, I0528
- House, I0526. I0522, I0523, I0525



Heritage

- Conservation Area - General
- Item - General
- Item - Landscape

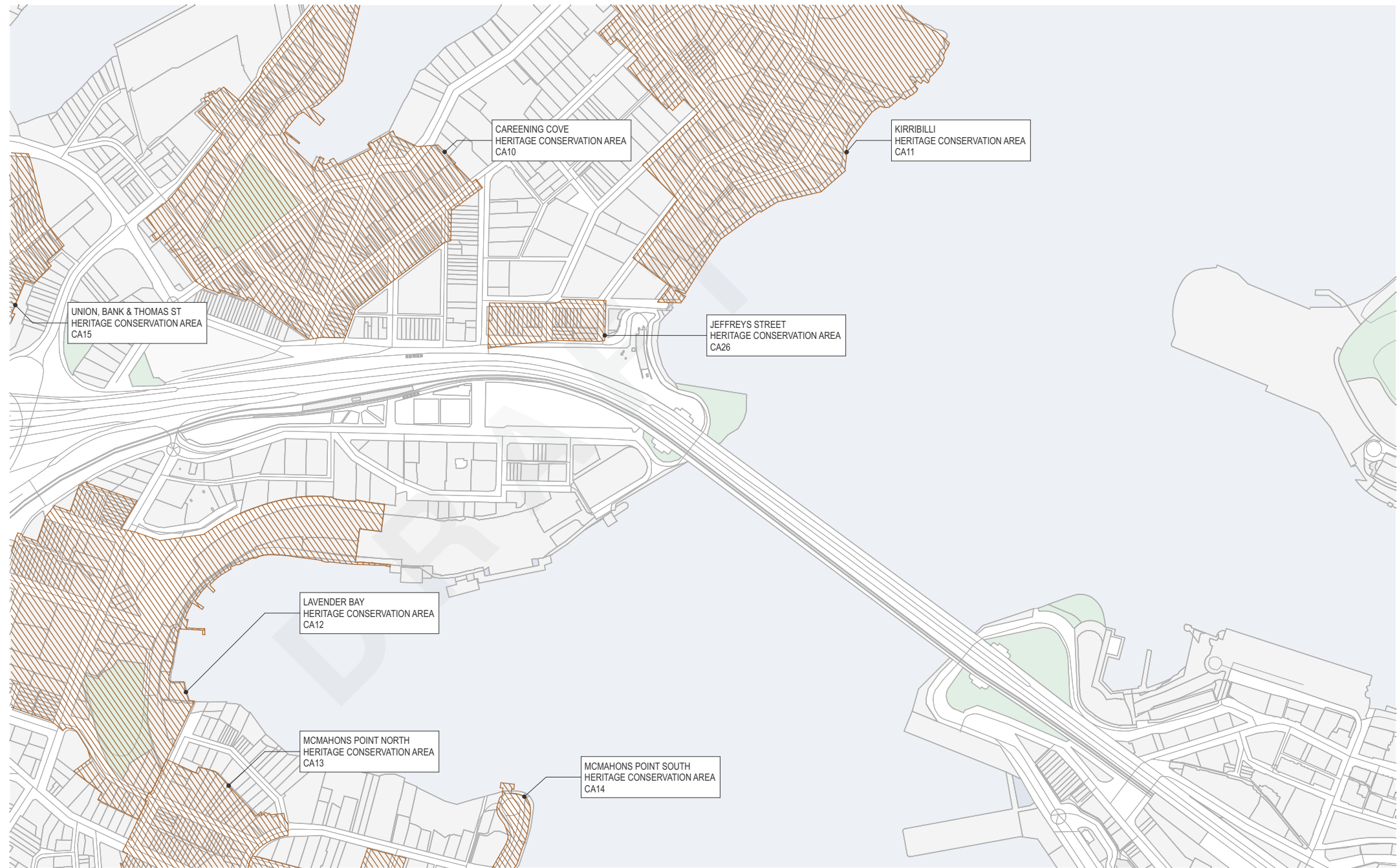
Figure 69: Extract from North Sydney LEP Heritage Map.
Source: North Sydney Council, available online.



LEGEND KEY

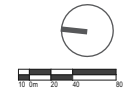
- WORLD HERITAGE ITEM
- NATIONAL HERITAGE ITEM
- NSW SHR HERITAGE ITEM
- S170 HERITAGE ITEM
- HERITAGE CONSERVATION AREA
- LEP HERITAGE ITEM

Figure 70: North Sydney LEP 2013 Heritage Items diagram - built and landscape.
Source: TZG Architects, 2021 based on North Sydney LEP 2013 Heritage Map 002.



- LEGEND KEY**
- WORLD HERITAGE ITEM
 - NATIONAL HERITAGE ITEM
 - NSW SHR HERITAGE ITEM
 - S170 HERITAGE ITEM
 - HERITAGE CONSERVATION AREA
 - LEP HERITAGE ITEM
 - CMP - KEY FORESHORE VANTAGE POINTS
 - SIGNIFICANT VIEWS - SYDNEY HARBOUR BRIDGE
 - SIGNIFICANT VIEWS OF MILSON'S POINT STATION

Figure 71: North Sydney LEP Heritage Conservation Areas diagram.
Source: TZG Architects, 2021.



2.9.1 Sydney Harbour Bridge approach viaducts, arches and bays - LEP - Listing No. I0530

Statement of Significance

The most important bridge in Australia both socially and aesthetically and one which historically has been one of the most important factors in the growth and development of the North Shore. A national cultural icon.

Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include information on landscape significance, interiors or the social history of sites and buildings. Inventory sheets are updated by Council as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conversation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

CRITERIA	VALUES
SHR Criteria f) [Rarity]	<i>This item is assessed as historically rare statewide. This item is assessed as aesthetically rare statewide. This item is assessed as socially rare statewide.</i>
SHR Criteria g) [Representativeness]	<i>This item is assessed as historically representative statewide.</i>
Integrity/Intactness:	<i>Sympathetic</i>
Recommended Management	<i>Manage in accordance with Conservation Management Plan prepared by GML for RTA, 2007. (Endorsed by Heritage Council until 16 March 2012). Manage in accordance with site specific exemptions attached to the State Heritage Register listing for the place (Item - 00781).</i> <i>1. Conservation principles: Conserve cultural heritage significance and minimise impacts on heritage values and fabric in accordance with the 'Australia ICOMOS Charter for Places of Cultural Significance'.</i> <i>2. Specialist advice: Seek advice from a qualified heritage specialist during all phases of a proposed project from feasibility, concept and option planning stage; detailed design; heritage approval and assessment; through to construction and finalisation.</i> <i>3. Documentation: Prepare a Statement of Heritage Impact (SOHI) to assess, minimise and prevent heritage impacts as part of the assessment and approval phase of a project. Prepare a Conservation Management Plan (CMP) prior to proposing major works (such as new additions, change of use or proposed demolition) at all places of State significance and all complex sites of Local significance.</i> <i>4. Maintenance and repair: Undertake annual inspections and proactive routine maintenance works to conserve heritage fabric in accordance with the 'Minimum Standards of Maintenance & Repair'.</i> <i>5. Movable heritage: Retain in situ and care for historic contents, fixtures, fittings, equipment and objects which contribute to cultural heritage significance. Return or reinstate missing features or relocated items where opportunities arise.</i> <i>6. Aboriginal, archaeology and natural heritage: Consider all aspects of potential heritage significance as part of assessing and minimising potential impacts, including Aboriginal, archaeology and natural heritage. 7</i> <i>. Unidentified heritage items: Heritage inventory sheets do not describe or capture all contributory heritage items within an identified curtilage (such as minor buildings, structures, archaeology, landscape elements, movable heritage and significant interiors and finishes). Ensure heritage advice is sought on all proposed changes within a curtilage to conserve heritage significance.</i> <i>8. Recording and register update: Record changes at heritage places through adequate project records and archival photography. Notify all changes to the Section 170 Heritage & Conservation Register administrator upon project completion.</i>

Historic Themes

AUSTRALIAN THEME (ABBREV)	NEW SOUTH WALES THEME	LOCAL THEME
3. Economy-Developing lo cal, regional and national economies	Transport-Activities associated with the moving of people and goods from one place to an other, and systems for the provision of such movements	None
7. Governing-Governing	Government and Administration-Activities associated with the governance of local areas, regions, the State and the nation, and the administration of public programs - includes bot h principled and corrupt activities.	None

2.9.2 Sydney Harbour Bridge approach viaducts, arches and bays under Warringah Freeway - LEP - Listing No. I0530

Statement of Significance

Part of the associated structures that comprise the Sydney Harbour Bridge. Major physical feature through North Sydney and one associated with profound changes to the physical and social status quo of the area. Important example of period design which includes a number of significant road overbridges of aesthetic and technical merit.

Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include information on landscape significance, interiors or the social history of sites and buildings. Inventory sheets are updated by Council as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently; it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conversation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

CRITERIA	VALUES
SHR Criteria f) [Rarity]	<i>This item is assessed as historically rare statewide. This item is assessed as aesthetically rare statewide. This item is assessed as socially rare statewide.</i>
Integrity/Intactness:	<i>Sympathetic</i>

Historic Themes

AUSTRALIAN THEME (ABBREV)	NEW SOUTH WALES THEME	LOCAL THEME
3. Economy-Developing local, regional and national economies	Transport-Activities associated with the moving of people and goods from one place to an other, and systems for the provision of such movements	None
7. Governing-Governing	Government and Administration-Activities associated with the governance of local areas, regions, the State and the nation, and the administration of public programs - includes both principled and corrupt activities.	None

2.9.3 Sydney Harbour Bridge approaches and curtilage - LEP - Listing No. I539

Statement of Significance

Part of the associated structures that comprise the Sydney Harbour Of technological and architectural significance in bridge innovation and design. An icon for Sydney of international importance and culture significance. Of environmental significance as a landmark feature and a physical gateway for Sydney. The Bridge contributes to providing evidence for social history in the technical achievements and working conditions of the 1930's and for its ongoing importance as a focus for local and national celebration.

CRITERIA	VALUES
SHR Criteria a) [Historical significance]	<i>Historically the building of the bridge is shown to be the major event in the development of modern Sydney and was taken as evidence of Australia's industrial maturity. The Bridge is the link which promoted the development of the North Shore. It also has a strong association with important figures such as J.J.C Bradfield and Jack Lang. Has historic significance at a State level..</i>
SHR Criteria c) [Aesthetic significance]	<i>In terms of span it ranks third in the world but its reputation as the world's greatest steel arch rests on its combination of span, width and load bearing capacity, and for the difficulties overcome in its erection. Has aesthetic significance at a State level. Has cultural significance at a State level. Cultural:Visually it's the major landmark in the harbour and remains the structure most characteristic of Sydney. The unpainted, rendered walls, pilasters and parapets of the approaches are distinctive and intact examples of inter-war stripped classical design.</i>
SHR Criteria d) [Social significance]	<i>The bridge is said to give people a sense of awe and pride just to look at it , especially if they worked on it. The Bridge is an internationally recognised symbol for modern Australia and is a popular focus at times of local and national celebration. The Bridge is evidence of the working conditions in the 1930's. It was the major public works of the time representing a substantial investment by the taxpayers of NSW. Has social significance at a State level. Visually it's the major landmark in the harbour and remains the structure most characteristic of Sydney. The unpainted, rendered walls, pilasters and parapets of the approaches are distinctive and intact examples of inter-war stripped classical design. Has cultural significance at a State level.</i>
SHR Criteria f) [Rarity]	<i>The urban viaducts formed by the approaches are rare in NSW. Is rare at a State level.</i>
SHR Criteria g) [Representativeness]	<i>Reinforced concrete technology in NSW was still in its infancy in the 1930's. The arches, slabs and retaining walls are important examples of its use. Is representative at a State level.</i>
Recommended Management	<i>Ownership of the bridge and approaches is vested with the Roads and Traffic Authority (RTA). The conservation policy specifies the bridge must; maintain the clarity of the structural form, maintain the original form of the granite-clad pylons and piers, conserve the arrangement of internal spaces, and restore the excitement of crossing the bridge. These management goals are achieved by constant conservation and maintenance works.</i> <i>The building should be retained and conserved. A Heritage Assessment and Heritage Impact Statement, or a Conservation Management Plan, should be prepared for the building prior to any major works being undertaken. There shall be no vertical additions to the building and no alterations to the façade of the building other than to reinstate original features. The principal room layout and planning configuration as well as significant internal original features including ceilings, cornices, joinery, flooring and fireplaces should be retained and conserved. Any additions and alterations should be confined to the rear in areas of less significance, should not be visibly prominent and shall be in accordance with the relevant planning controls.</i>

Historic Themes

AUSTRALIAN THEME (ABBREV)	NEW SOUTH WALES THEME	LOCAL THEME
3. Economy-Developing local, regional and national economies	Transport-Activities associated with the moving of people and goods from one place to an other, and systems for the provision of such movements	None
7. Governing-Governing	Government and Administration-Activities associated with the governance of local areas, regions, the State and the nation, and the administration of public programs - includes both principled and corrupt activities.	None

2.9.4 Sydney Harbour Bridge North Pylons - LEP - Listing No. I0541

The LEP listing does not contain a Statement of Significance.



Figure 72: Panorama of Alfred Street, Milsons Point in three parts showing Bradfield Park. Department of Planning 1968.
 Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF PF491/1.

2.9.5 Bradfield Park (including northern section)- LEP - Listing No. I0538

Statement of Significance

Important local park with extensive views of Sydney harbour and the city skyline. Important locale for the historic icon of the Bow of the H.M.A.S. Sydney, a significant ship in Australian history. Associated with the harbour bridge construction and named for J.J.C. Bradfield. Formerly central township of Milsons Point and historically a most significant area for the North Shore.

Heritage Inventory sheets are often not comprehensive, and should be regarded as a general guide only. Inventory sheets are based on information available, and often do not include information on landscape significance, interiors or the social history of sites and buildings. Inventory sheets are updated by Council as further information becomes available. An inventory sheet with little information may simply indicate that there has been no building work done to the item recently: it does not mean that items are not significant. Further research is always recommended as part of preparation of development proposals for heritage items, and is necessary in preparation of Heritage Impact Assessments and Conversation Management Plans, so that the significance of heritage items can be fully assessed prior to submitting development applications.

Bradfield Park Plan of Management, 2014

Section 3.2 of the Bradfield Park Plan of Management (POM) 2014 describes the heritage and character of Bradfield Park as follows:

Bradfield Park occupies an important place in the early development of Sydney. Construction of the Harbour Bridge, formation of Bradfield Park and the establishment of the adjacent special use recreation areas of Luna Park and the North Sydney Olympic Pool have all had a significant impact both on the use and the visual appearance of this northern harbour foreshore area.

Bradfield Park is listed on the State Heritage Register, and the majority of the Park is identified as a heritage item in Council's Local Environmental Plan 2013. The Park is also considered as part of the Sydney Harbour Bridge Conservation Management Plan 2007. An updated version of this document is currently being prepared, and has been at draft stage since 2013.

This document assesses the setting and the views to and from the Sydney Harbour Bridge within Sydney Harbour, the fabric of the Bridge and other associated elements including the surrounding parklands and subsurface remains. It primarily addresses how Roads & Maritime Services should manage any potential impacts on Bradfield Park, rather than providing a framework for management of the park itself.

The historic significance of Bradfield Park and the various items of heritage significance within the Park should be acknowledged and interpreted, a process that has commenced with the installation of a Heritage Walk and interpretive signage in Bradfield Park North. Interpretive signage has been scheduled for installation in Bradfield Plaza, and it is planned to continue the Heritage Walk south, as new areas of the Park are upgraded.

The landscape character of Bradfield Park has evolved over time in response to many factors. The Park was originally formed in the aftermath of major earthworks undertaken during construction of the Sydney harbour bridge. The northern foreshores of Sydney Harbour were extensively reshaped, and vegetation was removed so that the character of the Park today bears little relationship to the original appearance and nature of the site.

The Sydney Harbour Bridge Conservation Management Plan 2013 (draft) notes that the development of Bradfield Park is considered to have little or no archaeological potential due to the extensive excavation and landscaping works that occurred when the Park was first created.

The Bradfield Park and Kirribilli Foreshore Master Plan addresses past failure to create a strong and cohesive landscape character in the Park. Landscaping works in Bradfield Park North have given the Park a more attractive and cohesive character that is being extended as further sections of the Park are upgraded. The new landscape works also provide increased visual amenity and shade.

The cast-iron 'bicentennial' fencing along the Bradfield Park foreshore echoes the fencing on the foreshore of the southern side of the Harbour around Dawes Point and visually unifies the 2 sides of the harbour. The row of Canary Island Date Palms lining the foreshore in Bradfield Park further emphasises this link. Other opportunities to establish links between the two sides of the harbour should be pursued as the resulting consistency contributes to the aesthetic value of Sydney harbour as a whole.

Retaining views out of Bradfield Park is an important issue as many visitors to the Park come for the express purpose of watching harbour activities and viewing the city. Before carrying out any new planting in the Park, its potential effect on views out of the Park must be considered.

Due to its size and location Bradfield Park makes a significant contribution to the visual amenity of Sydney Harbour. Together with other vegetated areas such as the Botanic Gardens and Dawes Point on the southern side of the harbour, the Park forms a partial green belt along the harbour foreshore that softens the transition from the water to dense urban development. When assessing any new proposals for additional planting and other landscaping, consideration must be given to the appearance of the Park from the water and from the southern side of the harbour.

Bradfield Park is part of a buffer zone developed to protect the setting of the Sydney Opera House as a result of the Opera House's inscription on the World Heritage List in 2007. The buffer zone is managed through the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005. The Harbour REP contains principles and provisions for planning for the Sydney Harbour Catchment including the Sydney Opera House site (called the Foreshores and Waterways Area).

The buffer zone is subject to additional planning rules and provisions aimed at further protecting the World Heritage values of the Sydney Opera House. The Minister for Planning is required to ensure that any development within the buffer zone satisfies certain criteria for consideration before granting consent under the Harbour REP. Issues for consideration include a range of matters such as ecology and environmental protection, protection and enhancement of views, public access and preserving the scenic quality of the foreshores and waterways.

To be approved, a development in the buffer zone will need to preserve the World Heritage values of the Sydney Opera House; to preserve views and vistas between the property and other public places within the buffer zone; and to avoid any diminution of the Sydney Opera House when viewed from other public places within that zone. Any proposed development within the buffer zone would need to address these matters in its application.

27: Bradfield Park Plan of Management 2014, North Sydney Council, p.13-14.

CRITERIA	VALUES
SHR Criteria f) [Rarity]	This item is assessed as historically rare statewide. This item is assessed as aesthetically rare statewide. This item is assessed as socially rare statewide.
-SHR Criteria g) [Representativeness]	This item is assessed as historically representative regionally. This item is assessed as aesthetically representative locally. This item is assessed as socially representative locally.
Integrity/Intactness:	Unsympathetic

Historic Themes

AUSTRALIAN THEME (ABBREV)	NEW SOUTH WALES THEME	LOCAL THEME
3. Economy-Developing local, regional and national economies	Transport-Activities associated with the moving of people and goods from one place to an other, and systems for the provision of such movements	None
4. Settlement-Building settlements, towns and cities	Accommodation-Activities associated with the provision of accommodation, and particular types of accommodation – does not include architectural styles – use the theme of Creative Endeavour for such activities.	None

2.9.6 Milsons Point Railway Station Group - LEP - Listing No. I0539

The LEP listing does not contain a Statement of Significance.

2.10 Sydney Harbour Bridge CMP - Statement of Significance 2007 & 2021

CONSERVATION MANAGEMENT PLAN 2007-2012	CONSERVATION MANAGEMENT PLAN (DRAFT) 2021
<p>STATEMENT OF SIGNIFICANCE</p> <p>National Heritage Values</p> <p>The Sydney Harbour Bridge is of outstanding heritage value as a feat of bridge engineering and construction, especially for a young nation that had previously not taken on a project of this scale and complexity. Even today, it continues to be the widest long-span bridge in the world and is recognised as the world's greatest steel arch bridge because of its combination of size, load bearing capacity and the difficulties overcome in its construction.</p>	<p>STATEMENT OF SIGNIFICANCE</p> <p>National heritage values</p> <p>The SHB is of outstanding heritage value as a feat of bridge engineering and construction, especially for a young nation that had previously not taken on a project of this scale and complexity. Even today, it continues to be the widest long-span bridge in the world and is recognised as the world's greatest steel arch bridge because of its combination of size, load bearing capacity and the difficulties overcome in its construction.</p>
<p>The bridge is a symbol of national pride. At the time of its construction, it represented progress and modernity and symbolised Australia's industrial maturity, particularly as it was constructed with extensive use of Australian engineering expertise, materials and labour. For Australians, the bridge was seen as a great achievement and a symbol of hope at a time of the world-wide Depression.</p>	<p>The SHB is a symbol of national pride.</p> <p>At the time of its construction, it represented progress, modernity and symbolised Australia's industrial maturity, particularly as it was constructed with extensive use of Australian engineering expertise, materials and labour. For Australians, the SHB was seen as a great achievement and a symbol of hope at a time of the worldwide Depression.</p>
<p>The steel arched form, Art Deco inspired granite pylons and composite approach spans create an iconic and dramatic composition that consistently evokes a positive response from observers. The bridge is seen as a major element of one of the most internationally recognised views of Australia and the city of Sydney, which also comprises the Sydney Opera House, the harbour and its foreshores and the city skyline. Its iconic shape has been used as the inspiration for countless decorative objects, ornaments and tourist products.</p>	<p>The steel arched form, Art Deco inspired granite pylons and composite approach spans create an iconic and dramatic composition that consistently evokes a positive response from observers. The SHB is seen as a major element of one of the most internationally recognised views of Australia and the city of Sydney; which also comprises the SOH, the harbour, its foreshores and the city skyline. Its iconic shape has been used as the inspiration for countless decorative objects, ornaments and tourist products.</p>
<p>The dramatic aesthetic quality of the bridge and its setting has, since the commencement of its construction, been an inspiration to artists, photographers and film makers. It has and continues to be the subject of many works of Australian art, captured by acclaimed artists such as Grace Cossington-Smith and Roland Wakelin.</p>	<p>The dramatic aesthetic quality of the SHB and its setting has, since the commencement of its construction, been an inspiration to artists, photographers and film-makers. It was, and continues to be, the subject of many works of Australian art, captured by acclaimed artists such as Grace Cossington-Smith and Roland Wakelin.</p>

STATEMENT OF SIGNIFICANCE (Continued)

State Heritage Values

The bridge is a monumental landmark in the centre of the city of Sydney and an important visual element in the cityscape when viewed from many key points around the harbour.

The bridge was the outcome of the personal vision and commitment of Dr JJC Bradfield, Chief Engineer, Sydney Harbour Bridge, City Transit and Metropolitan Railway Construction, and the leading figure in the development of Sydney's transport system in the first part of the twentieth century. It is also associated with the British team of engineer Sir Ralph Freeman and contractors Dorman Long and Co. Its construction consumed a major portion of the public works capacity and budget of New South Wales, and was a very significant undertaking for the public sector at the time.

The bridge remains synonymous with the names of a broad range of personalities associated with either its construction or subsequent history, eg Premier Jack Lang, De Groot, Paul Hogan.

The approach span arches, slabs and retaining walls of the bridge are important examples of the use of in situ reinforced concrete on a massive scale, combined with the fine scale use of the material for detail components such as balustrades, step and bass relief decoration, and the scale and design of the viaducts forming the approach spans to the bridge are notable within the New South Wales context. The masonry pylons and abutments of the approach spans designed by the English architect Thomas Tait exhibit a sophisticated degree of Art Deco design influence comparable with other examples in Sydney and New South Wales.

The bridge has been in continuous use since 1932 as the main road and rail connection across Sydney Harbour. Together with the city railway system, it constituted a radical expansion of Sydney's transportation network, and allowed a major acceleration in the development of the northern residential suburbs, particularly in the post-World War II years, as well as the extension of the Central Business District into North Sydney in the 1960s and 1970s.

The bridge approach spans provide the physical evidence of extensive urban redevelopment within The Rocks/Milsons Point precinct and the wider North Sydney precinct where large parts of the early subdivision patterns and built forms were demolished prior to the construction of the bridge. The bridge approach spans and roadways (especially the Warringah Freeway at North Sydney) truncated established neighbourhoods, creating distinctive precincts whose landuse and built forms developed separately.

The construction of the bridge affected the lives of almost a generation of workers, and its role during the Depression as the so-called 'iron lung' which provided employment and protected workers and their families from hardship or the dole is still remembered.

The bridge became an early focal point for political tensions and national celebrations, starting with the 'De Groot' incident in 1932, and more recently the 'Walk for Reconciliation' in 2000, the Sydney Olympic Games in 2000 and the annual role it continues to play as part of New Year's Eve and Australia Day celebrations.

In terms of archaeological value, the surviving standing walls at Bradfield Park have the potential to yield further information about the early residential and commercial occupation of Milsons Point, and the archaeological remains in Dawes Point have the potential to yield further information about its early development, particularly the Dawes Point Battery and later alterations.

The SHB Movable Heritage Collection is significant as a collection of relics associated with the design, construction, official opening and ongoing operation of the bridge. The collection contains the only known relics of the temporary support structure utilised for the erection of the arch steelwork, and evidence of the operations carried out in England for the construction of the bridge.

The collection includes items which are significant as representative examples of the materials, technical instruments, technical documentation, components and manufacturing outputs associated with the construction of the Sydney Harbour Bridge. It also contains examples of unique and specialised documents and objects used in association with the Opening Day social activities and celebrations, which are themselves evidence of the social customs and attitudes of the time. The collection contains exhibits which showcase the wide range of objects, activities and publications inspired by or produced in association with the operations of the Sydney Harbour Bridge throughout its history.

Some exhibits in the collection also have value as relics of their period, illustrating aspects of the social context, mores and activities of Sydney at the time of the construction of the Bridge. The SHB Movable Heritage Collection demonstrates the ways in which icons of the era were commemorated through retention of specific materials and objects, and illustrates the social importance of the Bridge at the time of construction.

STATEMENT OF SIGNIFICANCE (Continued)

State heritage values

The SHB is a monumental landmark in the centre of the city of Sydney and an important visual element in the cityscape when viewed from many key points around the harbour.

The SHB was the outcome of the personal vision and commitment of Dr JJC Bradfield, Chief Engineer, SHB, City Transit and Metropolitan Railway Construction, and the leading figure in the development of Sydney's transport system in the first part of the twentieth century. It is also associated with the British team of engineers, Sir Ralph Freeman, and contractors Dorman Long and Co. Its construction consumed a major portion of the public works capacity and budget of New South Wales, and was a very significant undertaking for the public sector at the time.

The SHB remains synonymous with the names of a broad range of personalities associated with either its construction or subsequent history, for example, Premier Jack Lang, De Groot and Paul Hogan.

The approach span arches, slabs and retaining walls of the SHB are important examples of the use of in situ reinforced concrete on a massive scale, combined with the fine scale use of the material for detail components such as balustrades, step and bass relief decoration. The scale and design of the viaducts forming the approach spans to the SHB are also notable within the New South Wales context. The masonry pylons of the approach spans designed by the English Architect, Thomas Tait, exhibit a sophisticated degree of Art Deco design influence comparable with other examples in Sydney and New South Wales.

The SHB has been in continuous use since 1932 as the main road and rail connection across Sydney Harbour. Together with the city railway system, it constituted a radical expansion of Sydney's transportation network, and allowed a major acceleration in the development of the northern residential suburbs, particularly in the post-World War II years, as well as the extension of the Central Business District into North Sydney in the 1960s and 1970s.

The SHB approach spans provide the physical evidence of extensive urban redevelopment within The Rocks/Milsons Point precinct and the wider North Sydney precinct where large parts of the early subdivision patterns and built forms were demolished prior to the construction of the SHB. The SHB approach spans and roadways (especially the Warringah Freeway at North Sydney) truncated established neighbourhoods, creating distinctive precincts whose land use and built forms developed separately.

The construction of the SHB affected the lives of almost a generation of workers, and its role during the Depression as the so-called 'Iron Lung', which provided employment and protected workers and their families from hardship or 'the dole', is still remembered. The SHB became an early focal point for political tensions and national celebrations, starting with the 'De Groot' incident in 1932; and more recently the 'Walk for Reconciliation' in 2000, the Sydney Olympic Games in 2000, and the annual role it continues to play as part of New Year's Eve and Australia Day celebrations.

In terms of archaeological value, the surviving standing walls at Bradfield Park have the potential to yield further information about the early residential and commercial occupation of Milsons Point; and the archaeological remains in Dawes Point have the potential to yield further information about its early development, particularly the Dawes Point Battery and later alterations.

The SHB Movable Heritage Collection is significant as a collection of relics associated with the design, construction, official opening and ongoing operation of the SHB. The collection contains the only known relics of the temporary support structure utilised for the erection of the arch steelwork, and evidence of the operations carried out in England for the construction of the SHB.

The collection includes items which are significant as representative examples of the materials, technical instruments, technical documentation, components and manufacturing outputs associated with the construction of the SHB. It also contains examples of unique and specialised documents and objects used in association with the Opening Day social activities and celebrations, which are themselves evidence of the social customs and attitudes of the time. The collection contains exhibits which showcase the wide range of objects, activities and publications inspired by or produced in association with the operations of the SHB throughout its history.

Some exhibits in the collection also have value as relics of their period, illustrating aspects of the social context, mores and activities of Sydney at the time of the construction of the SHB. The SHB Movable Heritage Collection demonstrates the ways in which icons of the era were commemorated through retention of specific materials and objects, and illustrates the social importance of the SHB at the time of construction.

2.11 Gradings of Significance - SHB
CMP (Draft) 2021

GRADING	JUSTIFICATION	STATUS
Exceptional (E)	Rare or outstanding element directly contributing to an item's local and State significance.	Fulfil criteria for Local or State listing
High (H)	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.	Fulfil criteria for Local or State listing
Moderate (M)	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Fulfil criteria for Local or State listing
Little (L)	Alterations detract from significance. Difficult to interpret.	Does not fulfil criteria for Local or State listing
Intrusive (I)	Damaging to the item's heritage significance.	Does not fulfil criteria for Local or State listing

BRIDGE COMPONENT	EXCEPTIONAL	HIGH	MODERATE	LITTLE	INTRUSIVE
Approaches (Precincts 1 and 5)	<p>Overall form of the approaches, including:</p> <ul style="list-style-type: none">– the rendered retaining walls divided into bays (A.9, 5.1);– the four concrete arch bridges of the northern approaches (Arthur, Burton, Fitzroy, Lavender Streets (5.3);– the exterior form and detail of the three arch viaduct of the southern approaches (5.1, 5.2); and– the arch bridge over Argyle Street (5.1, 5.3).– The concrete abutments at the ends of the approaches adjacent to the approach spans. The 10 flat-topped occupancies between Middlemiss Street and the Pacific Highway.	<ul style="list-style-type: none">– The 17 bays of flat-topped occupancies in Ennis Road.– All original structural elements supporting the railway and roadway: retaining walls, concrete arched occupancies and bridges, flat-topped beam and slab construction and dividing walls (A.9, 1.1, 1.2, 1.3, 1.4, 5.1, 5.2, 5.3).– The arch bridges over Arthur, Burton, Fitzroy & Lavender Streets (1.3)– Off-form concrete arch above Argyle Street (1.3, 5.3).– Rendered architectural elements (eg walls, parapets, pilasters and spandrels) (A.9, 1.1, 1.2, 1.3, 1.4, 5.1, 5.2, 5.3).– Former toll house near Argyle Street, original elements (A.4)– Ennis Road awnings bays 12–18 (1.3).– Hickson Road retaining wall (4.2).Cable tunnel and cable shelves (Argyle Street arch) (5.3).– Bridge stairs: the whole of the rendered reinforced concrete structure of the southern and northern stairs on both eastern and western sides, pilasters, arches, parapets, ornamentation and lettering, carborundum cement treads, risers and landings. (A.6)– Vestiges of tram station (eg stairs). (1.3)– Vestiges of tram tunnels (A.6).– Bronze plaques (A.5, A.6).Switch room doors, cable tunnel and shelves (A.6)– Original light fittings including: Bronze lanterns on Lavender Street arch (Type A (A.1)– Cast iron lanterns and concrete posts on bridge stairs (Type D) (A.6) (A.1);– Type E fitting on Toll House (A.1);– Type F fittings on Milsons Point Station (A.1).– Recessed lights in the subway (A.6)– Movable heritage in the Museum (5.2).	<ul style="list-style-type: none">– Occupancy front and rear walls, concrete canopies, steel windows and original glazing (1.2, 1.3, 5.1, 5.2).– Awnings except Ennis Road bays 12–18 (1.2, 1.3, 5.2).– Internal mezzanines, services and other internal alterations to Occupancies (1.1, 1.2, 1.3, 5.1, 5.2).– Original stormwater drainage systems (1.1, 1.2, 1.3, .5.1).– Concrete blockhouse (A.4)– Security grilles of Ennis Rd occupancy used as tollhouse (A.4)	<ul style="list-style-type: none">– The form of internal alterations, mezzanines etc (5.1)– Recent alterations to occupancies (1.1, 1.2, 1.3, 5.1, 5.2).– Wearing surfaces of road, rail, foot and cycle ways (1.1, 5.1).– Road gantries and signage (A.4).– Movable medians (A.4)– Computers, control equipment, realy switchgear (A.4)– Flood lighting (A.1).– Ennis Road awnings and grilles over first floor windows (1.3).– Modern tiling on walls of subway and cement patching of stairs (A.6).– Cycleway ramp conversion of bridge stairs (A.6).– In-line cycleway ramp from Observatory Hill Park (A.6).	<ul style="list-style-type: none">– Face-fixed services, airconditioners (1.2, 1.3, 1.4, 5.2).– Aluminium windows (1.2, 1.3, 5.2).– Advertising on surfaces of original render (1.2, 1.3).– Paint finishes, graffiti, cement washes (A.6, A.9, 1.1, 1.2, 5.1, 5.2).– Plant growth, dirt, water staining and lime deposits (1.1, 5.1, 5.2).– Pay parking machines in Burton Street arch (1.4).– Light in Burton Street arch (1.4).– Security fences added to secure areas including four main arch bearings, along the south-east footway under Cahill Expressway next to tram tunnels (3.2)– Creepers, wire trellises, modern light poles, conduits and fittings attached to Hickson Road retaining wall (4.2).– Brick sheds next to Hickson Road retaining wall (4.2).– Security cameras (A.6, 5.3).– Wide window & external services of toll house (A.4)– Excessive signage, advertising and noticeboard at north-western stairs (A.6).– Blue painted handrails in stairwells (A.6).– Security door (5.20)

BRIDGE COMPONENT	EXCEPTIONAL	HIGH	MODERATE	LITTLE	INTRUSIVE
The Setting	Existing unobstructed views of the SHB and approach spans, including: <ul style="list-style-type: none">– views of the SHB end-on from the northern and southern approach roads;– views of the SHB from ground level nearby and from the water; and– views of the steel structure and pylons from deck level.– the setting of Bradfield Park as it affords uncompromised views of the SHB from ground level (2.1).– Dawes Point (Tar-ra) Park	N/A	N/A	N/A	N/A
Milsons Point Station (Precinct 1)	N/A	<ul style="list-style-type: none">– Fabric dating from the original construction period (1.5)– Structure, original finishes and awnings of Milsons Point station (1.3, 1.5).– Date crest over both entrances to station (1.1, 1.3, 1.5).– Rendered architectural elements (1.5).– Vestiges of tram station (e.g. stairs) (1.5).– Brackets and light fittings to Ennis Road and Alfred Street entrances (A.1, 1.5).– Walls, floors, and roof structures of the subway, platform and associated structures (1.5).– Stone surround to Alfred St entrance (1.5).– Wall tiling (1.5).– Clock mounting boards (minus clocks) (1.5).– Overhead cable gantries and stanchions (1.5).	N/A	<ul style="list-style-type: none">– Railway tracks (A.2, 1.5).– Concrete sleepers (A.2, 1.5).– Timber transoms (A.2,1.5).– Overhead power cables (1.5).– Signalling equipment (1.5).– Platform landscaping and lighting (1.5).	<ul style="list-style-type: none">– Lift (1.5)– Stainless steel bins at Ennis Road entrance (1.5).– Glass panels at Arthur Street entrance (1.5).– Drycleaner at entrance to station (1.5).
Bradfield's Park (Precinct 2)	N/A	N/A	N/A	<ul style="list-style-type: none">– Bronze plaques along approach spans within the park (2.1, A.5).	N/A

2.11.1 Gradings of Significance for Precinct 1 - Conservation Management Plan (Draft) 2021

The Sydney Harbour Bridge Conservation Management Plan (Draft) 2021, grades the significance of elements and spaces within the curtilage of the Bridge and includes the Milsons Point Railway Station and Bradfield Park.

The adjacent diagram illustrates the significance assessment of elements above based on the NSW Heritage Office's publication *Assessing Heritage Significance (2001)* and using the standard gradings of 'Exceptional', 'High', 'Moderate', 'Little' and 'Intrusive'.

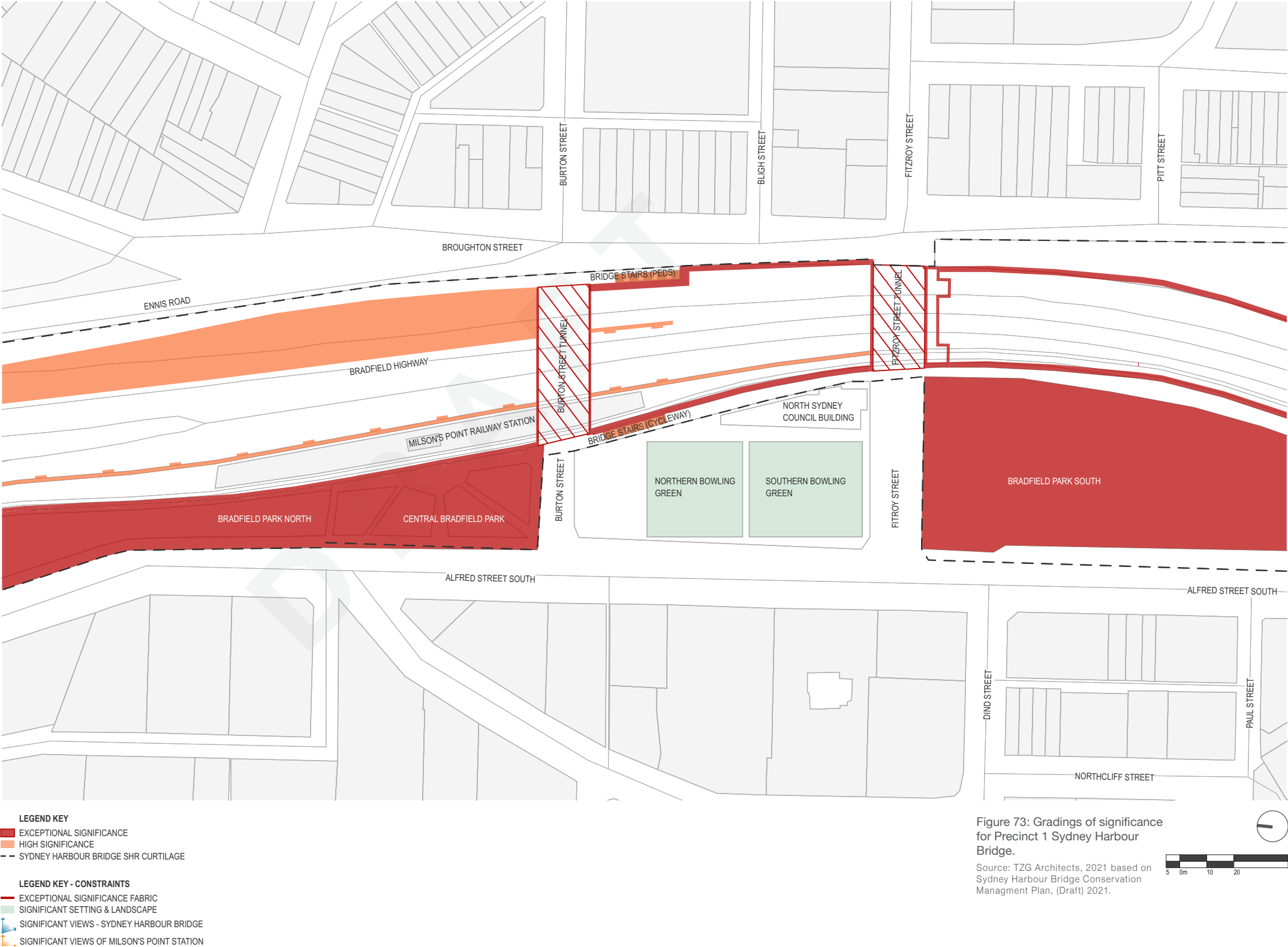


Figure 73: Gradings of significance for Precinct 1 Sydney Harbour Bridge.

Source: TZG Architects, 2021 based on Sydney Harbour Bridge Conservation Management Plan, (Draft) 2021.

2.12 Significant Views

The Sydney Harbour Bridge is an iconic structure that is captured in many significant views of the city. The SHB Conservation Management Plan identifies key vantage points that offer significant views of the bridge, as does the Sydney Opera House CMP, along with City of Sydney and North Sydney Council. Significant views relevant to the study area are identified in the diagram to the left.

Vantage Points identified in SHB CMP

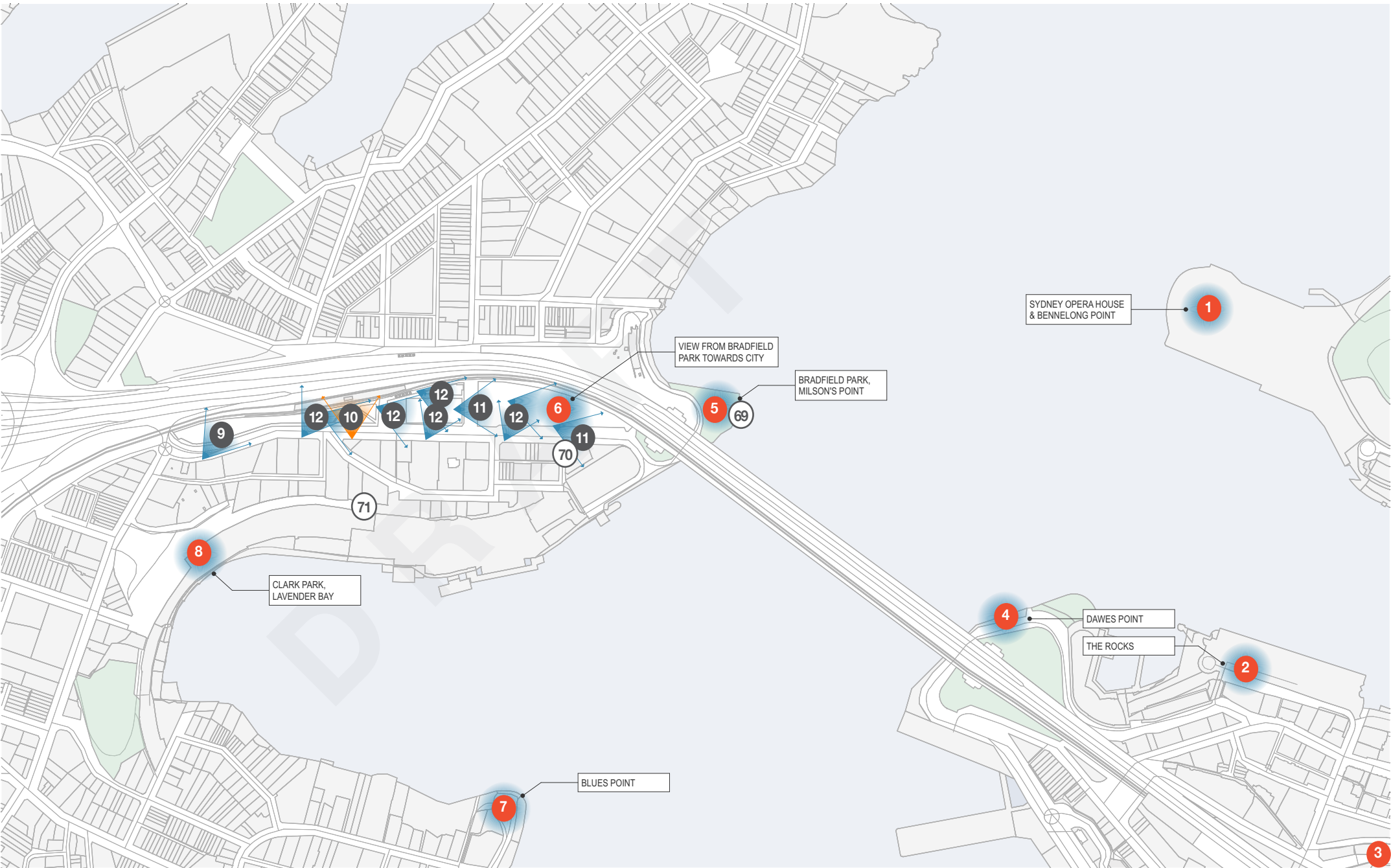
- 1 View from SOH (including Luna Park, Milsons Point and SHB).
- 2 View from The Rocks.
- 3 View from Observatory Hill (including Millers Point, Milsons Point and SHB)
- 4 View from Dawes Point.
- 5 View from Milsons Point (including Luna Park, SHB and SOH).
- 6 View from Bradfield Park (including Circular Quay, City of Sydney skyline, SHB and SOH).
- 7 View from Blues Point.
- 8 View from Clark Bay, Lavender Bay.

North Sydney Council

- The following views are identified in the DCP:
- i. Views to Sydney Harbour from Bradfield Park No. 1 Lookout (69) Olympic Park Lookout (70) Alfred Street, Paul Street.
 - ii. Views to Lavender Bay from Luna Park Lookout (71) Harbour View Crescent.

Other significant views

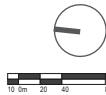
- 9 Views toward Northern Approaches of Sydney Harbour Bridge from Alfred Street and Bradfield Park.
- 10 View of entrance to Milsons Point Station from Alfred Street and Bradfield Park.
- 11 Views of Pylons of Sydney Harbour Bridge from Alfred Street and Bradfield Park.
- 12 Views of Sydney Harbour Bridge from Alfred Street and Bradfield Park.



LEGEND KEY
● CMP - KEY FORESHORE VANTAGE POINTS
➡ SIGNIFICANT VIEWS - SYDNEY HARBOUR BRIDGE
➡ SIGNIFICANT VIEWS OF MILSON'S POINT STATION

28: Sydney Harbour Bridge CMP (Draft) 2021, p. 94.

Figure 74: Significant views diagram.
Source: TZG Architects, 2021 based on Sydney Harbour Bridge Conservation Management Plan, (Draft) 2021, Cox TINSW Sydney Harbour Bridge Cycleway Access - North, Urban Design and Heritage Framework, November 2020 and SMM/TZG analysis.



2.13 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 Sydney Harbour Bridge holds many intrinsic and intangible heritage values that should be conserved and celebrated, including historic associations, stories, memories and meanings. It also has cultural and spiritual value to Aboriginal people.

The site of the Sydney Harbour Bridge is a place that was occupied and utilised 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 granite that was used in the construction of the Bridge was sourced from Moruya. Aboriginal elders from both Eora and Yuin, the Country in which the stone was mined, are highly conscious of this connection and hold ceremonies to honor both the stone and the location in which it was harvested. Some Yuin elders still perform ceremony at the site of harvesting and visit their displaced Country when they come to Sydney.

The lasting high esteem in which the Sydney Harbour Bridge is held is demonstrated by its selection as the subject matter for some of Australia’s most iconic artists including Grace Cossington Smith, Brett Whitely, Sam Hood, Harold Cazneaux and Max Dupain, along with poets such as C.J. Dennis. These depictions evidence the intangible heritage values of the place that have been captured and celebrated over time. These continue to be celebrated in the form of New Years Eve and Australia Day festivities that take place involving the Sydney Harbour Bridge.

Whilst the Sydney Harbour Bridge holds many intangible heritage values, it should be emphasised that many of these experiences are inextricably connected to the form, function and location of the place and its component parts. This particularly relates to the site’s significant setting and context, including the intactness and integrity of significant views to the surrounding context comprising the bridge itself, Milsons Point Station, Bradfield Park and the harbour beyond including the Sydney Opera House.

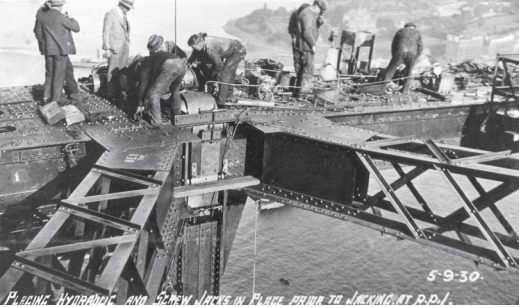


Figure 75: Workmen high on the arch placing hydraulic and screw jacks in place prior to jacking at PP1. 5/9/1930. Source: RMS Print 35886. Available online.



Figure 76: Untitled. (The Sydney Harbour Bridge in construction: Milsons Point roadway), photograph by Henri Mallard, 1947.

Source: Art Gallery of NSW. Available online <https://www.artgallery.nsw.gov.au/collection/works/98.1984/>.

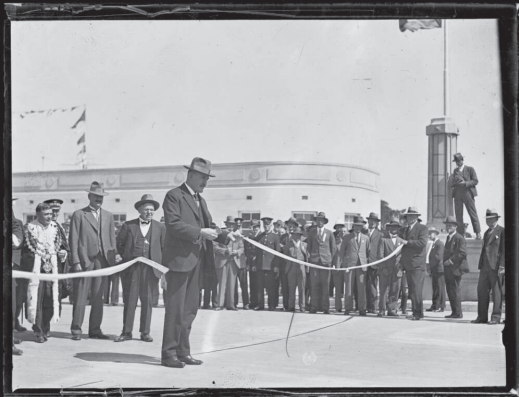


Figure 77: Jack T. Lang cutting the ribbon to open the southern end of the Sydney Harbour Bridge, Sydney, 19 March 1932 [picture]. Source: National Library of Australia. Available online at: <https://nla.gov.au/443/tarkine/nla.obj-159937143>



Figure 78: Sydney Bridge Celebrations, 1932 by Douglas Annand Arthur James Whitmore Contributed By State Archives & Records New South Wales [SR Document No.65]

Source: <https://dictionaryofsydney.org/media/1467>



Figure 79: Elephants from Wirth's Circus on Sydney Harbour Bridge, 3 April 1932 by Sam Hood From the collections of the State Library of New South Wales [hood_05793 / Home and Away - 5793].

Source: (Mitchell Library), <https://dictionaryofsydney.org/media/2887>.

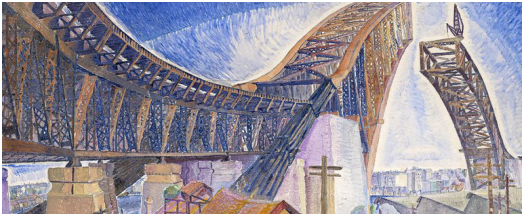


Figure 80: The Bridge in curve, painting by Grace Cossington Smith, 1930. Source: Art Gallery of NSW. Available online: <https://www.artgallery.nsw.gov.au/exhibitions/sydney-moderns/>.

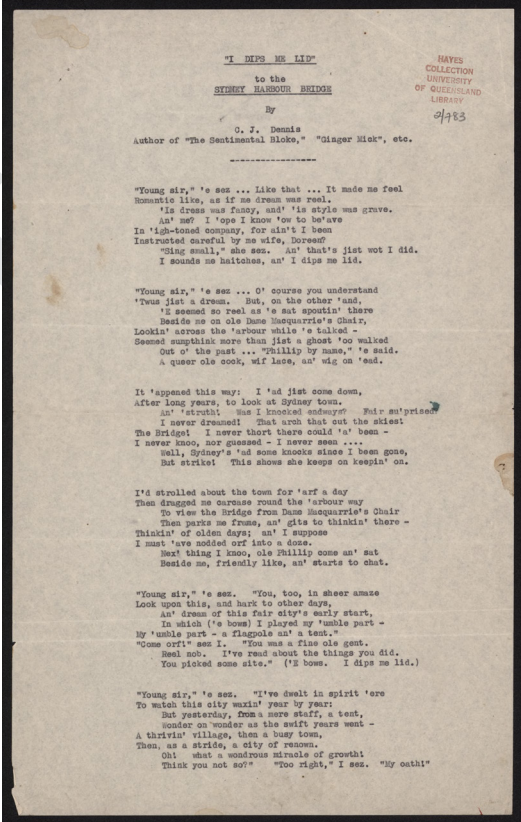


Figure 81: 'I Dips me Lid' to the Sydney Harbour Bridge, a poem by C. J. Dennis.

Source: <https://espace.library.uq.edu.au/view/UQ:692913>



Figure 82: The Balcony 2, painting by Brett Whitely, 1975. Source: Art Gallery of NSW. Available online: <https://www.artgallery.nsw.gov.au/collection/works/116.1981/>

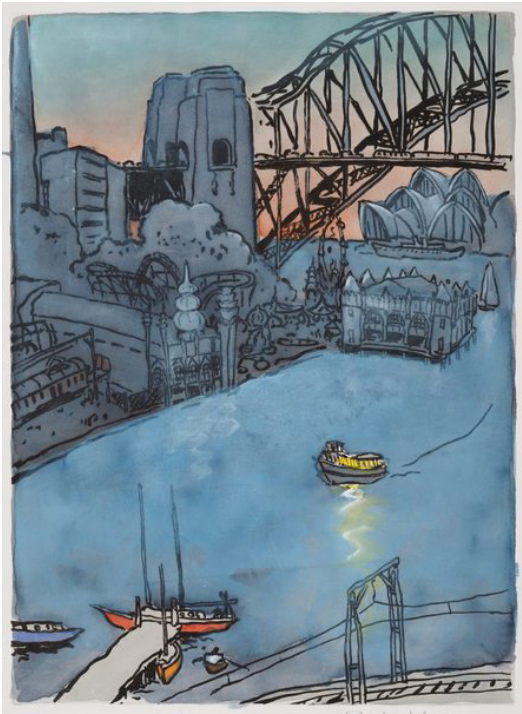


Figure 83: Morning Star, painting by Peter Kingston, 1947. Source: Art Gallery of NSW. Available online: <https://www.artgallery.nsw.gov.au/collection/works/37.2003/>.



Figure 84: Fireworks cascade and candles on the Bridge during the 'Olympics Closing Fireworks' celebrations. 1/10/2000.

Source: RMS Archives available online. RMS Transparency 50261.



Figure 85: 'Eternity' on Sydney Harbour Bridge. Source: Contributed By City of Sydney Archives [017\017936]. (NSCA CRS 1004/2)

Figure 86: View of Milsons Point and Luna Park, undated, c1939.
Source: State Archives & Records. Available online.



3.0

Constraints and Opportunities

3.1 Overview

The heritage values of items within and adjacent to the Sydney Harbour Bridge Northern Cycleway site result in a number of constraints and opportunities that apply in the future use and management of the place. These constraints and opportunities should be taken into account in any future redevelopment of the Northern Cycleway.

Potential constraints and opportunities arise from the following:

- Heritage significance
- Integrity and physical condition
- Significant views
- Heritage Interpretation
- Design



Figure 87: Sydney Harbour Bridge, 1947. David Moore photographer.
Source: <https://www.artgallery.nsw.gov.au/collection/works/230.1986/>

3.2 Heritage Significance

The Australia ICOMOS Burra Charter 1999, known as the Burra Charter, is widely accepted in Australia as the underlying methodology by which all works to places identified as having National, State and local significance are undertaken.

Items within, or adjacent to, the study area are identified to be of World, National, State and local heritage significance and any renewal of the area should take a significance-based approach. The heritage significance of the items within, and in close proximity to, the Sydney Harbour Bridge site should be respected and retained. This requirement is based on those aspects of the items that contribute to their overall significance, as outlined in the Assessment of Significance and Statement of Significance for each heritage item included in Section 2 of this Heritage Framework, along with the gradings of significant fabric and spatial qualities outlined in the Sydney Harbour Bridge Conservation Management Plan.

Heritage significance should not be seen as an imposition, rather an opportunity to provide meaningful, holistic placemaking, historical connections and sustainable outcomes. Items of heritage significance, and their corresponding curtilage, however, impose physical constraints on new development within the site. This applies to both elements within the site and to heritage listed items located adjacent to the site. Future development within the site should take these constraints into consideration, and explore opportunities as identified in the discussion that follows.

Conservation Principles

The Burra Charter provides specific guidelines and principles for actions that should occur in relation to significant places and structures. Measures that are particularly relevant to the Study Area include the following:

Article 2: Conservation and management

- Places of cultural significance should be conserved. (Article 2.1)

Article 3: Cautious approach

- Conservation is based on a respect for the existing fabric, use, associations and meanings. It requires a cautious approach of changing as much as necessary but as little as possible. (Article 3.1)

Article 5: Values

- Conservation of a place should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of others. (Article 5.1)

Article 7: Use

- Where the use of a place is of cultural significance it should be retained. (Article 7.1)
- A place should have a compatible use. (Article 7.2)

Article 8: Setting

- Conservation requires the retention of an appropriate setting. This includes retention of the visual and sensory setting, as well as the retention of spiritual and other cultural relationships that contribute to the cultural significance of the place. New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate. (Article 8)

Article 15: Change

- Change may be necessary to retain cultural significance, but is undesirable where it reduces cultural significance. The amount of change to a place and its use should be guided by the cultural significance of the place and its appropriate interpretation. (Article 15.1)
- Changes which reduce cultural significance should be reversible, and be reversed when circumstances permit. (Article 15.2)
- Demolition of significant fabric of a place is generally not acceptable. However, in some cases minor demolition may be appropriate as part of conservation. Removed significant fabric should be reinstated when circumstances permit. (Article 15.3)
- The contributions of all aspects of cultural significance of a place should be respected. If a place includes fabric, uses, associations or meanings of different periods, or different aspects of cultural significance, emphasising or interpreting one period or aspect at the expense of another can only be justified when what is left out, removed or diminished is of slight cultural significance and that which is emphasised or interpreted is of much greater cultural significance. (Article 15.4)

Article 21: Adaptation

- Adaptation is acceptable only where the adaptation has minimal impact on the cultural significance of the place. (Article 21.1)
- Adaptation should involve minimal change to significant fabric, achieved only after considering alternatives. (Article 21.2)

Article 22: New work

- New work such as additions or other changes to the place may be acceptable where it respects and does not distort or obscure the cultural significance of the place, or detract from its interpretation and appreciation. (Article 22.1)
- New work should be readily identifiable as such, but must respect and have minimal impact on the cultural significance of the place. (Article 22.2)

Article 25: Interpretation

- The cultural significance of many places is not readily apparent, and should be explained by interpretation. Interpretation should enhance understanding and engagement, and be culturally appropriate. (Article 25)

Article 33: Removed fabric

- Significant fabric which has been removed from a place including contents, fixtures and objects, should be catalogued, and protected in accordance with its cultural significance.
- Where possible and culturally appropriate, removed significant fabric including contents, fixtures and objects, should be kept at the place. (Article 33)
- Should any proposal be considered that may affect the heritage significance of the items within or adjacent to the CQR site, a suitably experienced heritage specialist should be engaged to provide advice in the context of the Burra Charter. Any potential impacts to existing site components, fabric and visual relationship should be related to the assessed level of significance, as outlined in Section 6 of this Heritage Framework.

3.2.1 Issues Arising from Heritage Significance

The following general issues relating to heritage significance should be taken into consideration:

Aboriginal Heritage

The following specific issues relate to constraints arising from Aboriginal archaeology. Note that no known Aboriginal sites are located within the site.

- TfNSW to carry out a due diligence assessment to determine whether Aboriginal cultural values would likely be affected by the works.
- If archaeologically or culturally significant Aboriginal sites are located, conservation should be considered. Any impacts should be undertaken in consultation with the Aboriginal stakeholders.
- If Aboriginal skeletal material is located, conservation in situ may be required as a reflection of its significance to Aboriginal people.
- Aboriginal cultural themes should be a central part of any heritage interpretation approach.

Non-Aboriginal Archaeology

The following specific issues relate to constraints arising from Non-Aboriginal archaeological items located within the site, in particular Bradfield Park:

- An archaeological assessment would be required prior to impacts to provide a detailed appraisal of archaeological potential and significance within the site.
- Impacts to significant archaeology should be avoided where possible. Intact State significant archaeology should be conserved in situ. Conserve archaeological resources of SHR listed sites.

Built Heritage and Setting

The cultural significance of heritage items located within and adjacent to the SHB Northern Cycleway site should be conserved and managed in accordance with the SHB CMP and accepted conservation principles and practice. The following general issues relating to heritage significance should be taken into consideration:

- Any alterations or additions to heritage items within or adjacent to the site should be in accordance with this Heritage Framework and the Burra Charter.
- Advice from a qualified heritage specialist should be sought during all phases of any future redevelopment of the site.
- Generally, any changes to the items or their setting should be supported by a Statement of Heritage Impact (SoHI) as part of the assessment and approval phase.
- Any fabric or spatial qualities that are identified as being of 'exceptional' or 'high' significance should be retained and conserved as part of any future development within the site to maintain the item's cultural significance.
- Any fabric or spatial qualities that do not contribute to an item's significance could be changed as required to maintain the current function and cultural significance of the item.
- Changes should not be made based on aesthetic reasons only.
- Any new development should adopt a form and fabric that respects the cultural significance of heritage items and their setting.
- Any development within the site should take into account the significant views and vistas associated with heritage items within and adjacent to the site.

3.2.2 Opportunities arising from heritage significance

The following general issues relating to heritage significance should be taken into consideration:

- The opportunity to remove intrusive fabric should be taken as part of any new development.
- The opportunity to repair and conserve existing significant fabric should be taken.
- Adaptive reuse of significant elements should be undertaken in accordance with the principles of the Burra Charter and Heritage Council guidelines.
- Opportunities for interpretation should be explored to enhance public appreciation and understanding of the heritage significance of items within the SHB site. There is currently little interpretation related to Aboriginal cultural values.

3.3 Integrity and Physical Condition

The Sydney Harbour Bridge and Milsons Point Station are generally in good condition. The ongoing use of these items is dependent on the maintenance of their condition and historic fabric by TfNSW.

Bradfield Park is maintained by North Sydney Council and is generally in good condition. The 1955 North Sydney Council Building, located adjacent to the bowling greens, is in fair condition.

The integrity of heritage items within the site is relatively high. Fabric that compromises the integrity and condition of these items is identified as having 'Little' or 'Intrusive' significance within the gradings of significance and may be appropriate to undergo a greater amount of change.

3.4 Significant Views

Significant views identified in this report enable an appreciation of the setting and context of heritage items within and adjacent to the SHB Northern Cycleway site, and should be maintained and enhanced in accordance with their significant values.

Issues Relating to Significant Views

The following general issues relating to significant views should be taken into consideration:

- Existing views from public spaces in Bradfield Park and Alfred Street are considered to be the minimum.
- Views to and from the Sydney Harbour Bridge and the harbour beyond from Bradfield Park and Alfred Street should be respected. These views should be maintained and where possible enhanced.
- The visual connection between heritage items within and adjacent to the site should be maintained. This includes both immediate views between Bradfield Park, Milsons Point Station and the Sydney Harbour Bridge and distant views across Sydney Harbour.
- The visual qualities of the setting of the place should be maintained and enhanced where possible. Views to the sky should be enabled and views across Bradfield Park should be maintained to uphold the visual connection with the harbour setting of the bridge.
- New development should consider the cumulative impact on views.

Opportunities Relating to Significant Views

The following general opportunities relating to significant views should be taken into consideration:

- There is an opportunity to enhance views from Bradfield Park to the approaches to the Sydney Harbour Bridge through removal of the North Sydney Council building.
- There are opportunities to improve significant views from Bradfield Park through sensitive landscaping.

3.5 Key Heritage Considerations

3.5.1 Sydney Opera House Buffer Zone

The Sydney Opera House is listed on the World Heritage List and includes a World Heritage Buffer Zone which aims to protect significant views from the around the harbour. Bradfield Park North lies outside this area whilst, Bradfield Park South lies within it.

Key Considerations:

- Minimise impacts on views within the Sydney Opera House World Heritage Buffer Zone.

3.5.2 Sydney Harbour Bridge

The Sydney Harbour Bridge is of National heritage significance. The (draft) CMP prepared in 2021 states that the cultural heritage values of the SHB ‘relate to its historical and social associations, its fabric and associated components, and its setting.’

Sydney Harbour Bridge CMP

The CMP states:

- 1.1 The Sydney Harbour Bridge is a place of outstanding cultural significance in the local, State and National context which should be retained and conserved.
- 1.2 Any change in ownership, future uses, maintenance, repair and/or adaptation works and asset management programs should include retention and appropriate care of the significant elements and attributes of the place as a matter of highest priority.
- 1.3 All current and future owners, managers and consent authorities responsible for the care and management of the SHB and/or its setting should be advised of, and be jointly responsible for, the conservation of the heritage significance of the SHB.
- 1.4 Conservation of the SHB should accord with the definitions and principles of The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013, and include all significant components and attributes of the place, including its setting, fabric, movable items, archaeological relics and non-tangible values.

- 1.5 Alternatives to actions with adverse heritage impacts to the heritage values of the SHB must be explored and assessed before such actions are undertaken.
- 1.6 The SHB must be protected from physical or environmental damage by appropriate security, maintenance and management procedures.

Key Considerations:

- Sydney Harbour Bridge CMP is the key reference document.
- Retain ongoing historical use as a major vehicle, railway, pedestrian and cycleway connection across Sydney Harbour.
- Retain and conserve the significant fabric of the Sydney Harbour Bridge retaining walls, pylons, arches, approaches and viaducts.
- Retain the cultural heritage significance and heritage values of the Sydney Harbour Bridge.
- Impacts to significant fabric should be minimised.
- Impacts to the significant setting of the bridge should be minimised.
- Impacts to significant views to and from the Sydney Harbour Bridge should be minimised.
- A Statement of Heritage Impact is required to accompany any proposed change to the Sydney Harbour Bridge.

3.5.4 Milsons Point Station

The Milsons Point Railway Station is an integral part of the Sydney Harbour Bridge and is of State heritage significance. The RailCorp Section 170 listing (4801026) includes management recommendation for the station as follows:

Manage in accordance with the Sydney Harbour Bridge Conservation Management Plan prepared by GML for RTA, 2007. (Endorsed by Heritage Council until 16 March 2012). Manage in accordance with site specific exemptions attached to the State Heritage

Register listing for the Sydney Harbour Bridge (Item - 00781).

1. Conservation principles: Conserve cultural heritage significance and minimise impacts on heritage values and fabric in accordance with the ‘Australia ICOMOS Charter for Places of Cultural Significance’.
2. Specialist advice: Seek advice from a qualified heritage specialist during all phases of a proposed project from feasibility, concept and option planning stage; detailed design; heritage approval and assessment; through to construction and finalisation.
3. Documentation: Prepare a Statement of Heritage Impact (SOHI) to assess, minimise and prevent heritage impacts as part of the assessment and approval phase of a project. Prepare a Conservation Management Plan (CMP) prior to proposing major works (such as new additions, change of use or proposed demolition) at all places of State significance and all complex sites of Local significance.
4. Maintenance and repair: Undertake annual inspections and proactive routine maintenance works to conserve heritage fabric in accordance with the ‘Minimum Standards of Maintenance & Repair’.
5. Movable heritage: Retain in situ and care for historic contents, fixtures, fittings, equipment and objects which contribute to cultural heritage significance. Return or reinstate missing features or relocated items where opportunities arise.

6. Aboriginal, archaeology and natural heritage: Consider all aspects of potential heritage significance as part of assessing and minimising potential impacts, including Aboriginal, archaeology and natural heritage.
7. Unidentified heritage items: Heritage inventory sheets do not describe or capture all contributory heritage items within an identified curtilage (such as minor buildings, structures, archaeology, landscape elements, movable heritage and significant interiors and finishes). Ensure heritage advice is sought on all proposed changes within a curtilage to conserve heritage significance.
8. Recording and register update: Record changes at heritage places through adequate project records and archival photography. Notify all changes to the Section 170 Heritage & Conservation Register administrator upon project completion.

Key Considerations:

- Retain ongoing historical use as a major railway station and components the Northern approaches of the Sydney Harbour Bridge.
- Retain significant fabric including original features of the 1932 design.
- Retain the visual connection/relationship with the Sydney Harbour Bridge and Bradfield Park.
- Retain the two main entrances to the station, one of which leads out into Bradfield Park.
- Impacts to significant fabric should be minimised.
- Impacts to the significant setting of the station should be minimised.
- Impacts to significant views to and from the station should be minimised.
- A Statement of Heritage Impact is required to accompany any proposed change to Milsons Point Station.

3.5.3 Bradfield Park

Bradfield Park is a prominent piece of open space within the North Sydney area, containing a number of distinctive features. The Bradfield Park Plan of Management (POM) prepared in 2014 sets out guidelines governing the management of the park. The strategies highlighted in the POM include:

- 1.5.1 Provide a range of recreational facilities and services for people of all ages and abilities.
- 1.5.2 Improve equity of access to open space and recreation facilities.
- 1.5.3 Provide a welcoming and vibrant waterfront with integrated green public spaces and enhanced foreshore areas.

Key Considerations:

- Retain significant fabric including cast-iron ‘bicentennial’ fencing and the bow fo the HMAS Sydney located on the foreshore.
- Retain extensive views out of Bradfield Park and its contribution to the visual amenity of Sydney Harbour.
- Preserve the World Heritage values of the Sydney Opera House buffer zone which includes Bradfield Park south.
- Retain the ongoing recreational use and access including the Bradfield Park Heritage Walk.
- Consult local community and engage public involvement for future development plans.
- Continue Bradfield Park Heritage Walk south.
- Include interpretation in any changes to the park.
- A Statement of Heritage Impact is required to accompany any proposed change to Bradfield Park, even outside the curtilage, due to its proximity to the Sydney Harbour Bridge.

29: SHB CMP pp.122-123

30: Milsons Point Railway Station S170 heritage inventory.

31: Bradfield Park Plan of Management, 2014, North Sydney Council, p.2.

3.5.5 Summary of Heritage Constraints

- 1 Minimise impacts to existing significant heritage fabric of SHB. Changes should be as reversible as possible in accordance with the ICOMOS Burra Charter.
- 2 Curtilage of World, National, State and Local Heritage listings.
- 3 Minimise impacts to the significant setting and landscape.
- 4 Minimise impacts on significant views
- 5 Retain original building foundation footprints - archaeology.



- Legend
- EXCEPTIONAL SIGNIFICANCE FABRIC
 - SIGNIFICANT SETTING & LANDSCAPE
 - SIGNIFICANT VIEWS - SYDNEY HARBOUR BRIDGE
 - SIGNIFICANT VIEWS OF MILSON'S POINT STATION
 - WORLD HERITAGE BUFFER ZONE
 - SHB NATIONAL HERITAGE CURTILAGE
 - SHR HERITAGE ITEM
 - LEP HERITAGE ITEM

Figure 88: Sydney Harbour Bridge - Northern Cycleway - Summary of Heritage Constraints.
Source: TZG Architects, 2021.

3.6 Heritage Interpretation

Heritage interpretation is a means of sharing and exploring cultures and histories within communities, and is an integral part of the experience of significant heritage places. Through the use of a range of media and techniques, accessible to target audience groups, heritage interpretation can:

- Reveal meanings and significance
- Provide information to enhance understanding
- Make explicit a sense of place
- Explore relationships and histories that connect people and place
- Act as a catalyst for community curiosity and engagement.

Interpretation can highlight both the tangible and the intangible. Heritage interpretation should encompass both Aboriginal and non-Aboriginal heritage, values and histories of a site.

Historic Themes

The Sydney Harbour Bridge Interpretation Plan, prepared by Godden Mackay Logan in February 2007 identifies the following key historic themes:

Telling the Story of the Sydney Harbour Bridge

- Indigenous Occupation, the Bridge and the Reconciliation March
- A Harbour Crossing
- Sydney’s Grand Transport Plans
- The Arch That Cut the Skies
- The Opening
- The Bridge in Art, Photography, Literature and Popular Artefacts
- Using and Celebrating the Bridge

The Interpretation Plan identifies the area adjacent to the Alfred Street South Exit to Milsons Point Railway Station as a potential location for directional and interpretive signage. It also suggests the following theme be explored in this location:

- Sydney’s Grand Transport Plans
- John Bradfield, Urban Visionary

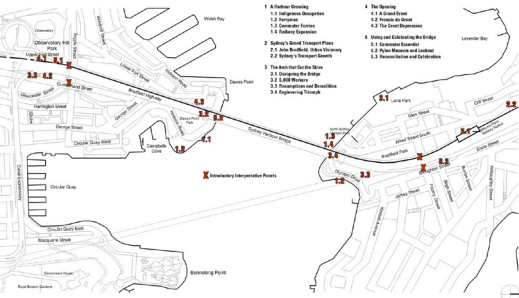


Figure 89: Introductory interpretation panels and thematic signage possibilities.
Source: Godden Mackay Logan, Sydney Harbour Bridge Interpretation Plan, 2007, p.65.

Requirement for interpretation

The Bradfield Park Plan of Management recommends exploring additional interpretation as part of any upgrade to Bradfield Park. It is important that this is considered in light of the overall Interpretation Plan for the Sydney Harbour Bridge and existing interpretation.

Existing Interpretation

North Sydney Council installed interpretive signs as part of the Bradfield Park North Heritage Walk in 2007. These provide a general history of the Bradfield Park North site. The walk was opened on 17 March 2007, by then Mayor of North Sydney Genia McCaffery, coinciding with the celebrations to mark the 75th anniversary of the opening of the Sydney Harbour Bridge.

There are currently many layers of interpretation that exist within the public domain in the form of plaques, paving inlays tracing building footprints and sculptures.

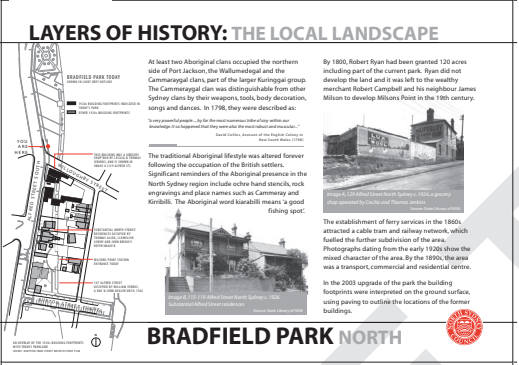


Figure 90: Interpretation sign, Bradfield Park North.
Source: North Sydney Council.

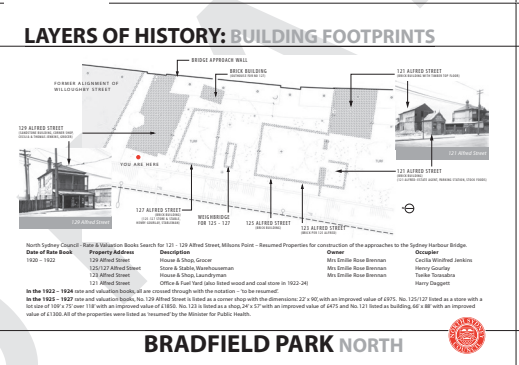


Figure 91: Interpretation sign, Bradfield Park North.
Source: North Sydney Council.

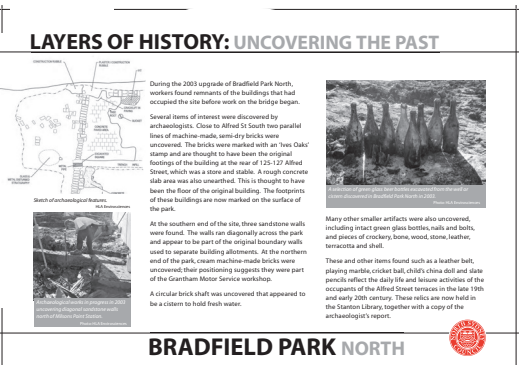


Figure 92: Interpretation sign, Bradfield Park North.
Source: North Sydney Council.

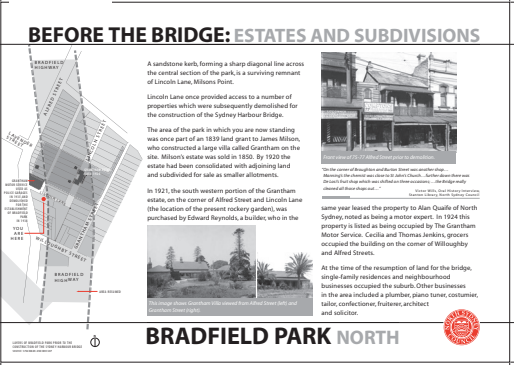


Figure 93: Interpretation sign, Bradfield Park North.
Source: North Sydney Council.

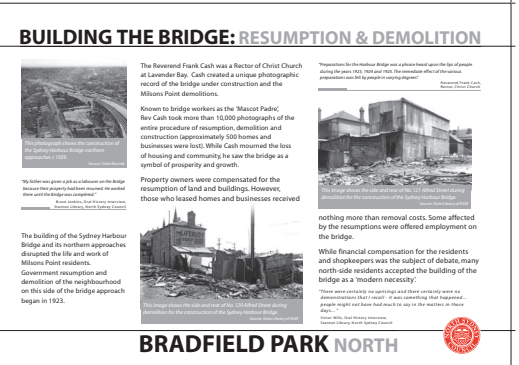


Figure 94: Interpretation sign, Bradfield Park North.
Source: North Sydney Council.

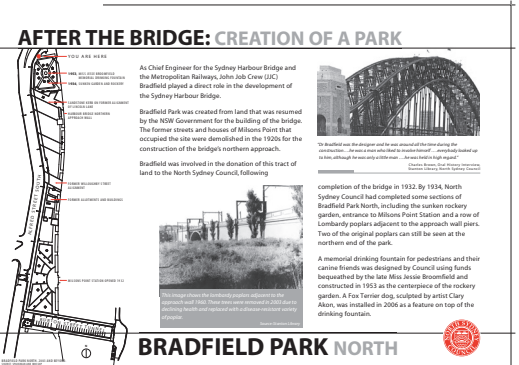


Figure 95: Interpretation sign, Bradfield Park North.
Source: North Sydney Council.



Figure 96: Sculpture, Bradfield Park north. Richard Byrnes artist.
Source: TZG Heritage 2020.



Figure 97: The former building footprints of 121 and 129 Alfred Street have been interpreted in the ground plane of Bradfield Park.
Source: TZG Heritage 2020.



Figure 98: Memorial plaque, bowling green Bradfield Park south.
Source: TZG Heritage 2020.



Figure 99: View of Milsons Point from Sydney Harbour Bridge, 1939.

Source: Image courtesy Stanton Library Historical Services. Available online.



Figure 101: Bradfield Park adjacent to Milsons Point Railway Station, photograph by Robin Cale 1937.

Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF PF274.

Opportunities relating to Heritage Interpretation

Whilst Dawes Point is the location suggested in the Interpretation Plan for stories related to indigenous occupation there is an opportunity to enhance the existing interpretation and tell place specific stories related to Aboriginal culture and the natural landscape prior to settlement within Bradfield Park.

Aboriginal Themes identified in the *Sydney Harbour Bridge Cycleway Access Program, Aboriginal Design Principles* report prepared by WSP in 2021 include:

- Rainbow Serpent narrative.
- Bridging between Earth and Sky.
- Important totems.



Figure 100: Bradfield Park, Milsons Point, looking north near Milsons Point Railway Station, c1950. Note the cycleway stairs on the right hand side and the row of Poplar trees adjacent to the approaches of the bridge in the northern section of the park.

Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF PF443.

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Figure 102: Northern end of Bradfield Park near Bradfield Highway exit to Milsons Point, c1950. Note the row of Poplar trees positioned to align with the pilasters of the bridge approach.

Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF PF444.

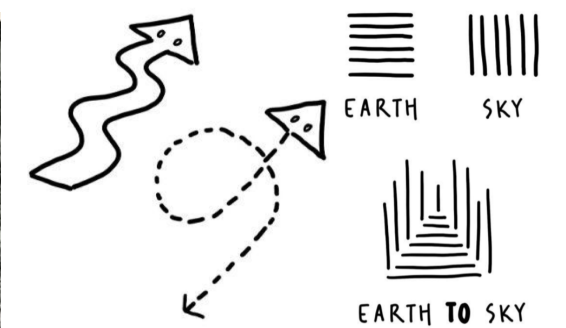


Figure 103: Rainbow Serpent narrative.

Source: WSP, Sydney Harbour Bridge Cycleway Access Program, Aboriginal Design Principles, 2021, p.15.

Figure 104: Bridging between Earth and Sky.

Source: WSP, Sydney Harbour Bridge Cycleway Access Program, Aboriginal Design Principles, 2021, p.15.



Figure 105: Important totems.

Source: WSP, Sydney Harbour Bridge Cycleway Access Program, Aboriginal Design Principles, 2021, p.15.

3.7 Design

3.7.1 Opportunities Relating to Design

Any new element associated with the Sydney Harbour Bridge Northern Cycleway should aim to minimise heritage impacts on fabric, setting and views. The following design opportunities arise in relation to the SHB Northern Cycleway project from the protection of the significant heritage values of the site:

- Bradfield Park Central is located outside the curtilage of SHB and LEP listing of Bradfield Park and hence could be a potential site for a sympathetic new built element.
- Potential to enhance views from the cycleway towards SHB and Sydney Harbour by providing a new viewing platform where one can safely stop.
- Potential to enhance key views to SHB and Milsons Point Station through landscape upgrades to Bradfield Park North.
- Potential to conserve original stairs to the cycleway insitu.
- Potential to remove intrusive built elements of ‘Little’ or ‘Intrusive’ significance to improve views to SHB.
- Potential to enhance interpretation of the history and significance of the site, including Aboriginal cultural significance.
- Potential for Aboriginal design principles to help inform future works within Bradfield Park. Refer to *Sydney Harbour Bridge Cycleway Access Program, Aboriginal Design Principles* report prepared by WSP in 2021. Also refer to *Indigenous Design Charter* prepared by Deakin University and the *Designing with Country* Guidelines prepared by the NSW Government Architects Office.

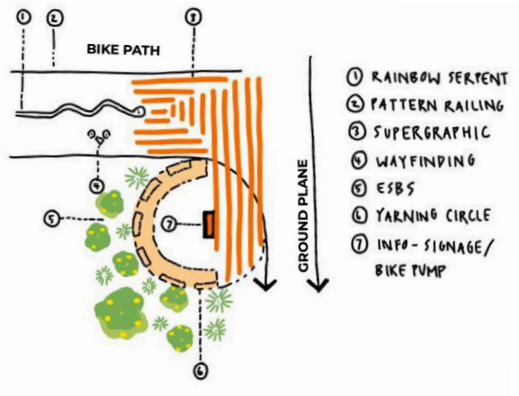


Figure 106: Aboriginal Design Principles, key strategies. Source: WSP, Sydney Harbour Bridge Cycleway Access Program, Aboriginal Design Principles, 2021, p.16.

3.7.2 Principles for design

A detailed analysis of both the site and its context should underpin any new work. This analysis should also take into account an understanding of the heritage significance of the place and the relative significance of the components of built fabric and their tolerance for change.

The Sydney Harbour Bridge Northern Cycleway Upgrade offers an opportunity to improve the infrastructure the bridge offers for cyclists, whilst also upgrading the public domain of Bradfield Park. New development in this historic context should aim to preserve the special qualities that contribute to the ‘sense of place’ in a way that respects the old while embracing the new, setting up a lively dialogue between the two. Well-designed the upgrade will achieve contemporary standards and improve customer experience, whilst also enhancing the heritage setting and the social value of the place.

The Heritage Council of NSW and the Royal Australian Institute of Architects publication *New Uses for Heritage Places* is a useful reference document that provides guidelines for the adaptation of historic buildings and sites supported by case studies.



Figure 107: Sydney Harbour Bridge pedestrian lift - bottom with salvaged wall element in landscape. Source: Old Sydney Album, facebook online.

Design in context

Design in Context (2005), prepared by the NSW Heritage Office and the Australian Institute of Architects NSW Chapter is an excellent general guide for new infill developments in heritage environments. It provides a methodology for analysis of the context and the relationship between old and new elements in terms of character, scale, form, siting, materials, colour and detailing, and aims for design excellence.

In summary, the following principles apply:

Character

The character of a place is shaped by many contributing factors including topography, distinctive landscape qualities, street and subdivision patterns, density, site coverage, views, vistas, skylines and land uses.

Built elements also shape the character of a place through their heights, position, date and style, materials and details, proportions of openings, craftsmanship, and solid to void ratios, as do local cultural traditions and the uses of a place.

Siting

New elements in a historic context should be complementary to the streetscape and the urban grain of the area, responding to the subdivision patterns and scale of other built forms to ensure the proposal results in the creation of quality urban spaces between the old and the new. The siting of new elements should retain key views, natural features of significance such as trees and landscaped elements and archaeological remains.



Figure 108: Sydney Harbour Bridge pedestrian lift - salvaged wall element in landscape. Source: Old Sydney Album, facebook online.

Scale

The relationship between new elements and their context should be considered in terms of the scale of surrounding built elements – their wall heights, modulation and façade rhythms, massing, density, proportions and relationship to the ground and street plane.

Recognising the predominant scale of the context and responding appropriately can help reduce the visual impact of new structures in an historic environment. This can be achieved by locating new structures away from heritage structures, visually separating new elements and by articulating larger structures to reduce their apparent bulk and scale.

Form

The relationship of form between new structures and existing built elements should be carefully considered in the design process. Whether a likeness or distinction is sought between the old and the new, the new forms should relate to the heritage elements in a positive way.

Materials and colour

New infill elements should recognise the characteristic materials, textures and colours of the surrounding area and respond to them. They need not be copied but rather used as a point of reference and reinterpreted in either a considered harmonious, complementary or contrasting way. Light and shadow affect how materials and colours are perceived and this should be considered in the design process.

The quality of the new materials should be commensurate with those of existing built elements in the surrounding area – as good or better - and the design should aim to set a benchmark.

Detailing

Contemporary details can reinterpret the traditional details that contribute to the heritage character of a place, to create complementary relationships between new and old elements and provide a level of visual interest. This principle can be used for both built elements and landscape elements. Analysis of existing details can help inform the language of compatible new elements, without imitation. Similarly the overall texture of the building – the amount of modulation or detail can be an important factor in ensuring a positive relationship with an adjoining heritage building.

3.7.3 Sustainable Design

TfNSW aims to incorporate sustainability into its project design and decision making. A number of sustainability principles have been developed for the project, one of which is cultural heritage. This principle promotes the protection and celebration of the heritage significance, including Aboriginal cultural values.

A desired outcome is for the project to deliver a place which includes positive and ongoing indigenous engagement whilst promoting, enhancing and minimising impacts to the physical and intrinsic heritage values of the place.



Figure 109: Northern and Eastern Suburbs Banksia Scrubland. <https://www.centennialparklands.com.au/stories/2019/why-the-eastern-suburbs-banksia-scrub-is-important> Sensitive : NSW Cabinet in Confidence

3.8 Heritage Opportunities

3.8.1 Design Opportunities

There is potential for changes or development within the Bradfield Park site that could produce a positive heritage impact on the significance and setting of the Sydney Harbour Bridge and Milsons Point Station whilst also improving the public domain.

- 1
- Bradfield Park Central is located outside the curtilage of the Sydney Harbour Bridge, Milsons Point Station and the LEP listing for Bradfield Park. Former Kirribilli Bowling Club is not listed as a heritage item. This provides a potential site for a sympathetically designed new built element.
- 2
- There is an opportunity to enhance views from the cycleway towards the Sydney Harbour Bridge and the harbour by providing a high level viewing platform.
- 3
- Views could be enhanced through sympathetic interpretive landscaping. Potential to implement Designing with Country principles - the Country was once Eastern and Northern Banksia Scrubland.
- 4
- There is an opportunity to retain and conserve the original cycleway stairs with minimal change.
- 5
- There is an opportunity to introduce a new built element, separated from the SHB, with minimal impacts to original fabric.
- 6
- There is an opportunity to reinstate the Bradfield ground plan which in turn would improve views to the approaches to the Sydney Harbour Bridge from Alfred Street and Bradfield Park by relocating the North Sydney Council building.
- 7
- There are opportunities for enhanced heritage interpretation relating to the natural environment and Aboriginal cultural themes. Any significant fabric required to be removed could be relocated and interpreted in Bradfield Park.

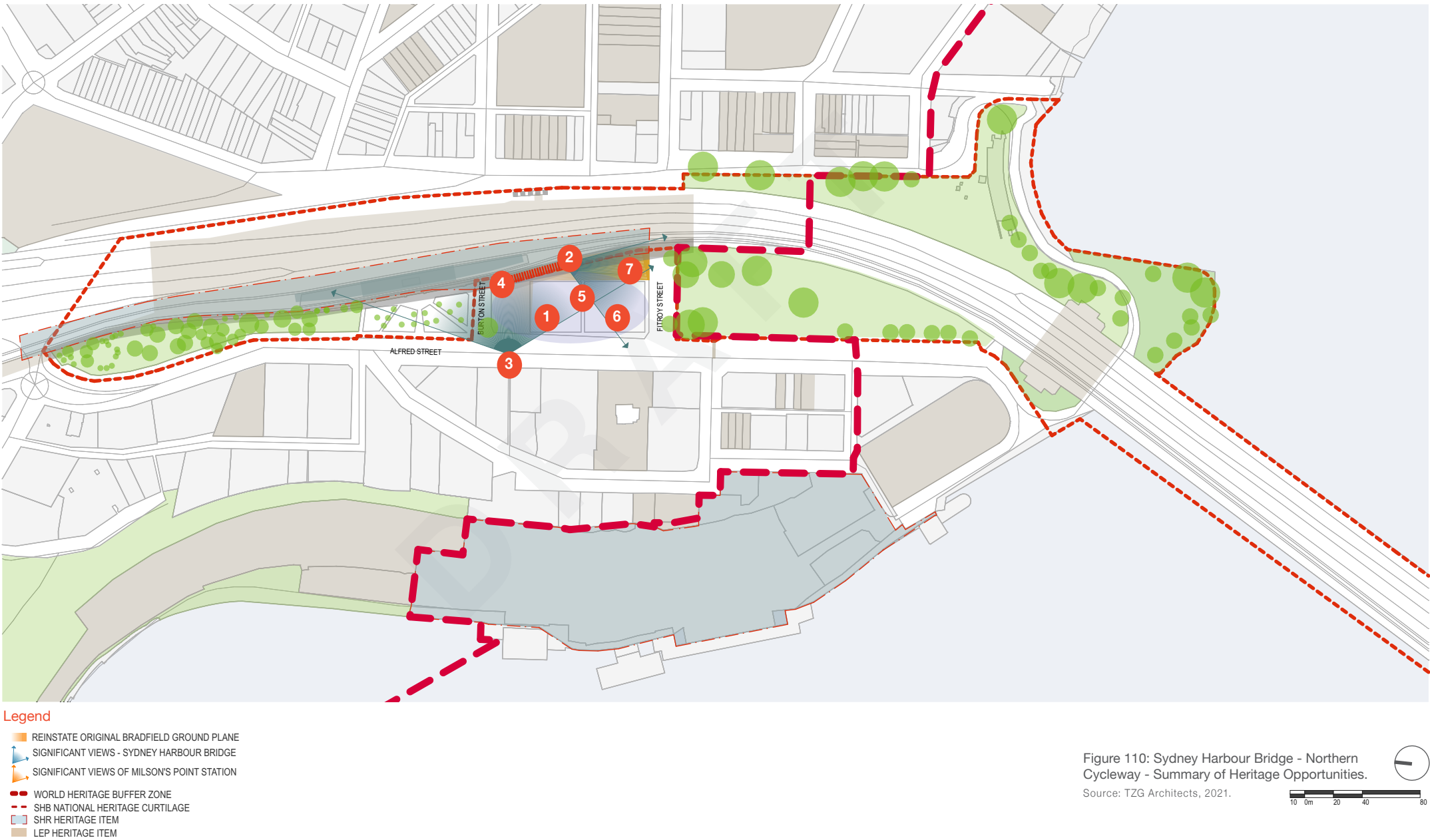


Figure 111: Bradfield Park, Milsons Point, looking north near Milsons Point Railway Station, c1950. Note the cycleway stairs on the right hand side and the row of Poplar trees adjacent to the approaches of the bridge in the northern section of the park.

Source: Image courtesy Stanton Library Historical Services. Available online, Call Number: LH REF PF443.

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4.0

Heritage Policies

4.2 Introduction

The Sydney Harbour Bridge Conservation Management Plan, Bradfield Park Plan of Management and various heritage listings include conservation policies and management recommendations which form the basis of the heritage framework for the study area. Key policies relevant to the Northern Cycleway and Bradfield Park include:

- Continue and enhance linkage within setting including Bradfield Park. (Policy 10)
- Retain key views. (Policy 12)
- Retain existing parklands adjacent to the SHB. (Policy 13)
- Retain views to original granite pylons and approach spans of the SHB. (Policy 14)
- Conserve fabric and design integrity of main components of the SHB. (Policy 14)
- Assess heritage impacts of any proposed adaptation. Ensure protection and enhancement of significant elements. (Policy 18)
- Changes to SHB due to historically significant functions given priority over secondary uses. (Policy 18)
- Assess and minimise impacts of physical alterations on the cultural heritage significance of the SHB. (Policy 18)
- Minimise adverse heritage impacts. Exercise a cautious approach. Consider options and their relative impacts. Aim for reversibility or minimal heritage impacts. Consider gradings of significance and tolerance for change. (Policy 18)
- New work should facilitate historically significant functions of the SHB. (Policy 18)
- New work should be compatible with heritage values and historic uses of SHB. (Policy 18)
- New work should have minimal heritage impact and be identifiable as new. (Policy 18)
- Consider cumulative impacts. (Policy 18)
- New lighting should be complementary. (Policy 19)
- Retain circulation paths where practical to provide interpretation opportunities. (Policy 30)
- Entry/exit access points provide focal point for interpretation. (Policy 30)
- Interpret changes in SHB circulation functions since 1932. (Policy 30)
- Interpretation is required to accompany any change to SHB. (Policy 32)

4.1 Sydney Harbour Bridge Conservation Policies CMP (Draft) 2021

POLICY 1RETENTION OF CULTURAL SIGNIFICANCE	
1.1	The SHB is a place of outstanding cultural significance in the local, State and National context which should be retained and conserved.
1.2	The SHB is a place of outstanding cultural significance in the local, State and National context which should be retained and conserved.
1.3	All current and future owners, managers and consent authorities responsible for the care and management of the SHB and/or its setting should be advised of, and be jointly responsible for, the conservation of the heritage significance of the SHB.
1.4	Conservation of the SHB should accord with the definitions and principles of The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013, and include all significant components and attributes of the place, including its setting, fabric, movable items, archaeological relics and non-tangible values.
1.5	Alternatives to actions with adverse heritage impacts to the heritage values of the SHB must be explored and assessed before such actions are undertaken.
1.6	The SHB must be protected from physical or environmental damage by appropriate security, maintenance and management procedures.
POLICY 2ADOPTION OF POLICIES	
2.1	The conservation policies set out in this document should be adopted by Transport for NSW as a guide to future conservation and development of the SHB.
2.2	The SHB CMP should be endorsed by the Heritage Council.
POLICY 3COORDINATION WITH MANAGEMENT PLANS	
3.1	The analysis and recommendations of the CMP should be checked against and coordinated with any associated management plans for the SHB to ensure consistency of aims, approach and outcomes.
POLICY 4DISTRIBUTION OF THE CMP	
4.1	Copies of the final report should be lodged with the Department of Agriculture, Water and the Environment (Canberra); the Mitchell Library, State Library of NSW (Sydney); and the library at Heritage NSW.
4.2	Copies should also be held by Transport for NSW and Sydney Trains and be referenced on their S170Registers and relevant State Heritage Register listings.
4.3	Copies may also be made available at the local libraries of the City of Sydney and North Sydney.
POLICY 5MONITORING AND REVIEW OF THE CMP	
5.1	Implementation of the CMP should be continuously monitored and the document formally reviewed every five years to ensure the effectiveness of the conservation policies, to monitor whether works planned or being carried out conform to the policies, and to take account of changed conditions.

POLICY 6PROFESSIONAL HERITAGE ADVICE	
6.1	Professional advice should be obtained from experienced heritage practitioners with relevant expertise to review, update and/or amend policies contained in this CMP, as required.
6.2	A proponent must obtain advice from a heritage practitioner (which may include Transport for NSW heritage specialists) when proposing to carry out a controlled activity under s 57(1) of the Heritage Act, except where: a) The activity is consistent with Standard Exemption 1: Maintenance and Cleaning; Standard Exemption 2: Repairs; Standard Exemption 3: Painting; and/or Standard Exemption 12: Landscape Maintenance. b) The proponent is Transport for NSW (or its agent) and the work or action is consistent with Site Specific Exemptions referred to in section 6.9.3 of this CMP.
6.3	Transport for NSW or its agent must obtain advice from an external heritage practitioner where an approval under s 60 of the Heritage Act is required.
POLICY 7CONFORMITY WITH NATIONAL AND INTERNATIONAL CONSERVATION PRINCIPLES	
7.1	The future conservation and development of the SHB should be carried out in accordance with nationally and internationally recognised heritage conservation principles, including those set out in Section 7.2.2 of this CMP. Where there is any conflict between these principles and the conservation policies set out in this section, the CMP policies will prevail.
POLICY 8EXCELLENCE IN HERITAGE MANAGEMENT	
8.1	The SHB should provide a national benchmark for excellence in the heritage conservation management of a major work of engineering in public ownership.
POLICY 9PRIORITY OF CULTURAL HERITAGE VALUE	
9.1	Decisions regarding change to the SHB should be based on a clear and balanced understanding of the impacts on its cultural heritage values - positive and negative, and measures taken to either avoid or mitigate adverse impacts including cumulative impacts.
POLICY 10MANAGEMENT OBJECTIVES	
10.1	Ongoing management of the SHB should aim to: • Retain its fundamental cultural heritage values and attributes • Conserve (including ongoing maintenance of) significant elements and values • Enhance opportunities for presentation and interpretation of the history of the SHB to the public. • Continue its function as the main road, rail, pedestrian and cycle connection across Sydney Harbour, in continuous use since 1932. • Continue and enhance its linkage with associated elements within the setting of the SHB, including Bradfield Park and Plaza, Dawes Point (Tar-Ra) Park and other foreshore areas within the view lines of the SHB (via interpretation, related activities, transport routes, etc).

POLICY 11 MANAGEMENT RESPONSIBILITIES AND DELEGATIONS	
11.1	Transport for NSW shall appoint an asset manager responsible for the development, management and implementation of the CMP policies.
11.2	The asset manager appointed by Transport for NSW is responsible for ensuring works undertaken on the SHB are done so in accordance with this CMP.
11.3	The asset manager appointed by Transport for NSW is the appropriate delegate to sign as landowner on any s57 exemption form or s60 application form for proposals affecting the fabric of the SHB.
POLICY 12 MAINTAINING KEY VIEWS OF THE SYDNEY HARBOUR BRIDGE IN ITS SETTING	
12.1	The significant physical and visual character of the SHB within its harbour setting should be conserved.
12.2	Views and vistas to and from the SHB from key points to the north, south, east and west should be maintained.
12.3	New structures or large plantings on the harbour foreshores of Dawes Point and Milsons Point should not obscure the visual form and setting of the SHB.
12.4	New structures or large plantings on the northern or southern sides of the harbour should not obscure or detract from views of Sydney Harbour and the city from the SHB.
POLICY 13 RETENTION OF EXISTING OPEN SPACE FOR PUBLIC USE/RECREATION	
13.1	The existing parklands adjacent to the SHB are of Exceptional significance and should remain as public parks to continue to provide passive recreation and facilitate unimpeded views to the SHB.
13.2	The future management of the SHB, approaches and parklands should ensure the continuation of their open character and scale, providing an unencumbered setting whilst retaining the existing open spaces and historic viewing areas.
POLICY 14 INTEGRITY OF ORIGINAL DESIGN	
14.1	The clarity of the main structural form and silhouette of the SHB and its associated elements, when viewed from key points around the harbour (as shown in Figure 5.2), should be maintained and not obscured.
14.2	Views of the original form of the granite pylons and approach span piers should be maintained, and any appropriate new uses accommodated within these elements.
14.3	The fabric and design integrity of the main components of the SHB, comprising the arch, hangers, roadway, pylons, approach spans, piers; and approaches including tunnels, tenancy spaces, the substation and switch house, and Milsons Point Railway Station, should be conserved.
14.4	Significant/original decorative and/ or functional minor elements, such as cast iron railings, steel windows, rainwater elements, pressed metal awnings, balustrades, lighting, steps and decoration, should be conserved.
14.5	The arrangement and large open volumes of internal spaces in the pylons and approach structures should be conserved.
14.6	Where feasible and reasonable, original design elements that contribute to the heritage value of the bridge should be restored or recreated, and the introduction of distracting elements minimised.
POLICY 15 MAINTENANCE AND MINOR WORKS GENERALLY	
15.1	Regular maintenance and minor works should be carried out to ensure that the functional and structural integrity of the SHB is retained. The scope of maintenance and minor works proposed for the SHB should be guided by the heritage philosophy of 'doing as much as necessary but as little as possible' to minimise the cumulative heritage impact.
15.2	A maintenance program should be prepared and regularly revised to provide the basis for the ongoing care and management of the SHB as a publicly owned asset and to conserve its cultural heritage significance.
15.3	The SHB Conservation Management Plan—Inventory Records (Volume 2 of this CMP) and the SHB Asset Register should be used to assist with the ongoing maintenance and repair of the SHB.

15.4	All machinery, equipment and other movable elements should be regularly inspected and maintained.
15.5	The schedule of maintenance and repair works which can be undertaken without approval from the Heritage Council, pursuant to the Standard or Specific Exemptions under Section 57(2) of the Heritage Act, should be reviewed on a regular basis and, if necessary, updated
POLICY 16 USE APPROPRIATE SPECIALIST PERSONNEL	
16.1	Maintenance and repair works should be undertaken by people with proven expertise in the relevant field and under adequate supervision.
16.2	A conservation specialist should be involved in developing and evaluating new conservation methods affecting significant/original fabric, including the steel structure, the granite pylons and concrete structures including the approach span piers.
16.3	Specialist advice and training on the heritage value of machinery and equipment on the SHB should be obtained from an industrial archaeologist or specialist heritage practitioner.
16.4	Significant fabric should be retained and maintained in situ and, where feasible, in its current state and form.
POLICY 17 RECORDS OF INTERVENTION AND MAINTENANCE	
17.1	All works to the SHB should be appropriately recorded, and the records catalogued and stored as part of the management of the SHB archives.
17.2	Documentation of conservation works should include the purpose of the works, the methodology used and the effectiveness of any monitoring.
POLICY 18 GENERAL MANAGEMENT OF ADAPTATION AND CHANGE	
18.1	All proposals for intervention, adaptation and change should be evaluated in terms of the nature of the proposal, its purpose, long-term context and how this relates to the identified cultural heritage values of the SHB. Protection and enhancement of the significant elements of the SHB through appropriate adaptation and change for new or additional necessary functions should be a key management goal.
18.2	Changes to the SHB due to its ongoing its historically significant function as the main road, rail, pedestrian and cycle connection across Sydney Harbour, in continuous use since 1932 should be given priority over changes determined by the needs of secondary uses such as tourism and recreation.
18.3	Assess and minimise the impact of physical alterations on the cultural heritage significance of the SHB, particularly where these changes are outside the Standard or Site Specific Exemptions under Section 57(2) of the Heritage Act.
18.4	Any adverse impacts on the heritage values of the SHB, as a whole or its particular components arising from new work, should be minimised by: <ul style="list-style-type: none"> • Exercising caution and reviewing the imperative for any new work with potentially adverse heritage impacts • Examining alternative solutions and their relative impacts to determine the option with the least adverse heritage impacts • Ensuring, where possible, that changes (to use, layout and fabric) are reversible and/or have minimal adverse impacts on the cultural heritage significance of the SHB. This should include restricting changes to areas/fabric of no/less heritage value which have higher tolerances/ thresholds for change.
18.5	New work must aim to facilitate the continuation of the historically significant function of the SHB as the main road, rail, pedestrian and cycle connection across Sydney Harbour, without obscuring or adversely affecting the integrity of the original design, significant fabric or its heritage values.
18.6	Proposals affecting the SHB should be assessed to determine whether their purpose is compatible with the fundamental heritage values and historic use of the SHB as the main road, rail, pedestrian and cycle connection across Sydney Harbour.
18.7	The introduction of new services should be designed to be as unobtrusive as possible. Redundant original or early services should be recorded prior to removal.
18.8	The attachment of services to steelwork should be minimised and located as unobtrusively as possible. Where existing services, such as electrical power and compressed air, are obtrusive, opportunities should be investigated for their relocation to reduce visual impact on significant fabric.

18.9	Services should not be fixed to the external surfaces of granite or rendered concrete elements such as the pylons or approach span piers.
18.10	New work should be designed in accordance with Burra Charter principles, particularly the requirements of Article 22.2 that it readily be identifiable as new work, but at the same time respect and have minimal impact on the cultural significance of the SHB.
18.11	Heritage practitioners must consider the cumulative impacts of proposals on the SHB, particularly where their advice would accompany a section 60 approval application or a section 57 exemption notification.
POLICY 19 LIGHTING	
19.1	All remaining original SHB lighting should be retained, conserved and used where possible.
19.2	The design and installation of new light fittings for use on the SHB should complement the design character of significant bridge elements, and be reversible.
19.3	Where possible, original lighting design elements should be restored or replicated and the introduction of distracting elements minimised to allow an appreciation of the character and excitement of the crossing.
POLICY 20 TRAFFIC, SAFETY AND DIRECTIONAL SIGNAGE	
20.1	Transport for NSW should aim to minimise the visual impacts of all signage on the SHB by developing a coordinated approach.
20.2	Historic signs inside the workshops and elsewhere on the SHB should, if possible, be retained in situ, or otherwise conserved for use as part of the interpretation of the SHB.
20.3	All new signs (including leased areas of the approaches, pedestrian, cycling, traffic, safety and directional) installed on the bridge, approaches and approach spans should form part on an integrated range of signs that complement the history and character of the SHB.
20.4	All signage is to confirm to Work Health and Safety requirements.
POLICY 21 SYDNEY NEW YEAR’S EVE WELCOME TO COUNTRY, 9PM FAMILY AND MIDNIGHT FIREWORKS DISPLAYS AND BRIDGE EFFECTS	
21.1	The SHB should continue to be used for displays, projections and fireworks associated with the Sydney New Year’s Eve Welcome to Country, 9pm Family and Midnight Fireworks Displays and Bridge Effects.
21.2	The scope of works associated with the above activity is to be undertaken in accordance with a Memorandum of Understanding agreed to by then Roads and Maritime (now Transport for NSW) and the City of Sydney.
21.3	In accordance with the above agreement, supporting sponsors’ names may only be projected onto the pylons during the event. Sponsors’ names must only be projected as static, black and white images, below the balcony level. This approach is to ensure consistency and to ensure such projections are managed in an appropriate manner.
POLICY 22 SPECIAL USES OF THE SYDNEY HARBOUR BRIDGE	
22.1	Non-operational uses of the SHB require the written permission of Transport for NSW’s SHB Asset Manager or their delegate. Transport for NSW reserves the right to refuse any such application.
22.2	Special uses of the SHB are not permitted, where the use: <ul style="list-style-type: none">• Would impact on the physical and/or visual integrity of the SHB, including key views.• Would be incompatible with the primary use of the SHB as a transport corridor or compromise the security requirements of the SHB• Does not meet the standard of a State significant event.

22.3	In accordance with Policy 24 ‘Advertising’, proposals that are considered to be advertisements or contain advertisements are not permitted on the SHB under Section 57(1)(g) of the Heritage Act 1977.
POLICY 23 USE OF APPROACHES	
23.1	The bays in the SHB approaches should continue to be available for a range of uses, including lease by appropriate businesses and organisations whose spatial and fitout requirements are compatible with the character of these spaces. The original reinforced concrete framed and steel framed glazing end walls to the bays should be retained with minimal alterations.
23.2	The design of fitouts (including the insertion of mezzanines and walls) to Middlemiss Street, Ennis Road (north side) and Cumberland Street (south side) bays should respond to these large internal spaces. Internal subdivision of internal spaces is acceptable in principle; however, the voluminous nature of the internal spaces should be maintained by restricting the extent and height of subdivision. New mezzanine floors should not be attached to the walls of the bays, and the height of any new walls should allow uninterrupted views of the concrete vaults.
23.3	The minimum standards set out in the Heritage Act for the maintenance and repair of an item listed on the State Heritage Register (refer to the Heritage Amendment Regulation 2012 included as Appendix I), which apply to Transport for NSW (as owners of the SHB), should form part of the lease agreements for the commercial tenancies of the SHB, thereby requiring tenants to maintain their tenancy to an acceptable minimal standard.
23.4	External advertising associated with the leased areas of the approaches should comply with Policy 20 and be designed to fit within the basic modules of the end walls. Transport for NSW should prepare a template for signage to ensure a consistent and appropriate approach, and to ensure the heritage values of the SHB are maintained and respected. This template should consider signage located in the interior, on windows and external projecting signage from tenancies.
POLICY 24 ADVERTISING	
24.1	The SHB, including the arch, pylons, approach spans and approaches, should not be used for commercial advertising in any form including signage, projections or other media, except as follows: <ul style="list-style-type: none">• Advertising associated with commercial tenancies as discussed in Policy 23.4• Commercial sponsorship required to support the Sydney New Year’s Eve 9pm Family and Midnight Fireworks Displays and Bridge Effects. Refer to Policy 21 and Site Specific Exemption 15 (Appendix E).
POLICY 25 MOVABLE ITEMS	
25.1	All original or early equipment or elements considered redundant or surplus to requirements and assessed to be of heritage significance should be suitably archived and recorded on the Transport for NSW’s Section 170 Heritage and Conservation Register.
25.2	Management of equipment or elements of movable heritage should be undertaken with reference to the SHB Movable Heritage Conservation Strategy 2007, the Transport for NSW Heritage Guidelines and the SHB Interpretation Plan 2007.
25.3	The history and heritage significance of machinery and equipment specifically related to the SHB should be actively interpreted to the public.
POLICY 26 COLLECTIONS MANAGEMENT	
26.1	Transport for NSW staff will refer to the Transport for NSW ‘Movable Heritage Collection Policy Statement’ and the ‘Movable Heritage Collection Management Plan’ contained in the Heritage Guidelines regarding the collection and management of movable heritage associated with the SHB.

26.2	Consideration should be given to the appointment of internal collection management staff to manage and coordinate the acquisition, curation, maintenance and conservation of the wide variety of SHB related material.
26.3	Collaborative opportunities should be investigated for curating artefacts associated with the SHB such as the exhibition curated by the Museum of Sydney with the assistance of Roads and Maritime (now Transport for NSW) to celebrate the 75th anniversary of the SHB.
26.4	Opportunities should be investigated for the management and curation of items that are acquired by, or donated to, Transport for NSW.
POLICY 27 CONTENTS OF PYLONS	
27.1	Significant/original or early fixtures within the pylons, including staircases, balustrades, mezzanines and elevators, should be retained on site and conserved.
27.2	Significant/original or early maintenance equipment and workshop machinery should be retained in their historic (if not current) location. If machinery or equipment is required to be removed, relocated or altered for functional, safety or other specific reasons, the particular item(s) should be recorded in detail prior to the change.
27.3	If significant/original or early machinery, equipment or elements are considered redundant or surplus to requirement, an assessment should be made of their heritage significance (advice from a suitably qualified heritage practitioner may be required). If considered significant, the material must be considered as movable heritage and entered onto the Transport for NSW Section 170 Heritage and Conservation Register (see Policy 25).
27.4	Where machinery and equipment is considered redundant or surplus to requirements and removed from its original location, it should be considered for use as part of the interpretation of the SHB.
27.5	The existing 'Workshop space' in the interior of the pylons and its historic association with the maintenance of the SHB should be retained. Should the use of the workshop areas be discontinued, future uses should seek to minimise physical changes to the spaces and fabric.
POLICY 28 CONTENTS OF MILSONS POINT STATION, ARGYLE STREET SUBSTATION AND SWITCH HOUSE	
28.1	Retain movable heritage items in situ and conserve as part of the ongoing asset management of the building, including safeguarding, annual inspection and periodic maintenance to ensure their conservation.
POLICY 29 ARCHAEOLOGY	
29.1	The surviving archaeological resources of the area within the curtilage of the CMP, particularly the remains of the Dawes Point Battery and associated material, should be conserved and managed in accordance with their cultural heritage values
29.2	Opportunities should be investigated and appropriate measures implemented to interpret to the public the archaeological resources of the area within the curtilage of the CMP.
29.3	Any subsurface disturbance of land that may have archaeological potential should be carried out in accordance with archaeological provisions of the Heritage Act and the Transport for NSW Heritage Guidelines.
29.4	In the event of archaeological investigations being carried out on land within the CMP curtilage, appropriate measures should be implemented to interpret the purpose, process and outcomes of the investigation to the public.
POLICY 30 ENGAGEMENT AND INTERPRETATION	
30.1	The current circulation functions of the SHB, including roads, rail tracks, cycleways, and pedestrian paths and stairs, should be utilised where practicable to provide opportunities to interpret the history and cultural significance of the SHB to the public.

30.2	Entry/exit points for access to and across the SHB (particularly for pedestrian and cyclists) should be a focus for interpretation of both its tangible and intangible heritage values, including historic or other associational links between different circulation routes and/or components.
30.3	Interpretation measures should inform public users of the SHB (particularly pedestrians and cyclists) of changes in its circulation functions since its opening in 1932, particularly the removal of the tram route and associated tunnels and other infrastructure.
30.4	Signs for visitor orientation (in The Rocks, Dawes Point and Milsons Point), visitor interpretation of the SHB and associated sites (eg where the opening ceremonies took place) should be developed with regard to the recommendations of the SHB Interpretation Plan 2007.
30.5	Opportunities for further active engagement with the public in regard to the SHB should be undertaken by Transport for NSW with reference to the SHB Interpretation Plan 2007, and with regard to the operational and security requirements of the SHB.
30.6	Regular user surveys should be undertaken to assess the effectiveness of visitor management, interpretation, and access and safety measures.
POLICY 31 SECONDARY TOURISM ACTIVITIES	
31.1	Opportunities for alternative tourism and interpretive initiatives such as BridgeClimb Sydney that complement and interpret, and do not adversely impact on the cultural and heritage values of the SHB as a whole should be investigated.
POLICY 32 INTERPRETATION REQUIREMENTS	
32.1	Measures to appropriately interpret the significance of the SHB should be considered in conjunction with all future proposals for change and development.
32.2	The SHB Interpretation Plan 2007 should be referred to for guidance on how to interpret the heritage values of the SHB.
POLICY 33 ORAL HISTORIES	
33.1	An ongoing oral history collection program for the SHB should be established in cooperation with the NSW State Library.
33.2	Publication opportunities with regard to the oral histories and social experiences of past SHB workers and operators should be explored.
POLICY 34 COORDINATION OF STATUTORY COMPLIANCE	
34.1	<p>A range of individuals and organisations have an ongoing interest in the future heritage management of the SHB. Ongoing consultation with these is integral to effective heritage management of the site.</p> <p>The following must be consulted and involved in any proposal for the SHB or its broader context that have the potential to significantly impact on its heritage values.</p> <ul style="list-style-type: none"> • Heritage agencies; for example, the Department of Agriculture, Water and the Environment (Cith); Heritage NSW and the NSW Department of Planning, Industry and Environment. • Affected landowners and managers of land within the heritage curtilage; for example, the City of Sydney Council, North Sydney Council, RailCorp and Property NSW. • Community organisations; for example, the National Trust of Australia (NSW), Engineers Australia, etc.
34.2	The policies of this CMP and associated management plans for the SHB should be coordinated with the relevant requirements and guidelines of statutory heritage instruments under which the SHB is listed. Potential areas of conflict between these documents which relate to conservation requirements/ imperatives should be subject to discussion/negotiation to ensure consistency in process and outcomes.

4.3 Bradfield Park Plan of Management, 2014

Conservation of Heritage Item Policies

The Bradfield Park Plan of Management (POM) 2014 prepared for the North Sydney Council, provides guidelines for the effective short and long-term management of the park. The POM examines the broad range of issues associated with this high profile area of public open space in a comprehensive and holistic manner.

The relevant heritage conservation policies for Bradfield Park have been extracted and included in the following table and summarised below:

- Extend heritage curtilage of LEP heritage listing to include Bradfield Park Central.
- Retain known archaeology.
- Extend Bradfield Park Heritage Walk south.
- Install additional interpretation signage.
- SHB and approaches to remain a central element of the Park in any new design.

CONSERVATION OF HERITAGE ITEMS - BRADFIELD PARK PLAN						
ISSUE	OBJECTIVE	ACTION	COMMENTS	PRIORITY	PERFORMANCE INDICATORS	REFERENCES
Conservation of Heritage Items	To protect and conserve all identified heritage items.	Consult with the National Trust, the Heritage Council and other appropriate organisations on the management of heritage items and fulfill the requirements of the Heritage Act, 1977.	Bradfield Park (with the exception of the area of the park between Burton Street and Fitzroy Street) is listed in Council's LEP 2013 as a heritage item – landscape. Individual items of heritage significance in the Park include: 1. Cast-iron railing 2. Bow of HMAS Sydney 3. The Sydney Harbour Bridge (RMS ownership and control). Bradfield Park is also included on the State Heritage Register.	O	Coordinated and effective management of heritage items.	North Sydney Council LEP 2013. Heritage Act, 1997. Heritage Study Review 1993.
		Carry out work required to ensure that the central part of Bradfield Park (between Burton Street and Fitzroy Street) is listed in Council's LEP as a heritage item - landscape.	Work to be undertaken by Council's Conservation Planner. The remainder of the Park is already listed.	ST-MT		North Sydney Council LEP 2013.
		Ensure all known archaeological items are retained.		O		Heritage Act 1997.
		Carry out required work to ensure central section of Bradfield Park is heritage listed in Council's LEP 2013.	All other sections of the Park are listed. Council's Conservation Planner to undertake this work.	ST-MT	Work carried out to heritage list the central section of the Park.	
		Carry out any work necessary to maintain heritage items in good condition.	The bicentennial fence along the foreshore of Bradfield Park is scheduled for restoration – refer Issue 'Park Improvements'.	ST	All heritage items maintained in good condition.	North Sydney Council LEP 2013.
Recognition of Park Heritage	To recognise, conserve and interpret the cultural and natural heritage of the Park.	Provide interpretative information at strategic locations in the Park.	The Bradfield Park Heritage Walk that opened in Bradfield Park North in 2007 will gradually be extended southwards as other sections of the Park are upgraded.	C-O	Installation of interpretative material in the Park	BP&KF Master Plan 1998.
		Install interpretive signage in Bradfield Park Plaza.	Signage is designed to be informative and low-key.	MT	Work undertaken on time and to budget.	
		Install additional interpretive signage in the Park as further parts of the Park are upgraded.		O	Work undertaken on time and to budget.	BP&KF Master Plan 1998.
	To recognise and integrate the Harbour Bridge and its approaches as a central element in the Park.	Take this objective into account when carrying out any new work in the Park.	This is consistent with the Sydney Harbour Bridge Conservation Management Plan, and with the objectives set out in the BP&KF Master Plan.	O	Harbour Bridge and approaches remain a central element of the Park in any new design.	Sydney Harbour Bridge Conservation Management Plan 2007. BP&KF Master Plan 1998.
KEY: ST - Short term (Action to be completed within 2 years) MT - Medium Term (Action to be completed within 2-4 years) LT - Long Term (Action commenced after 4 years) O - Ongoing (Action carried out on a regular basis) C - Commenced (Action has commenced) CP - Completed (Action has been completed)						

4.4 References

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Sydney Harbour Bridge, <https://www.rms.nsw.gov.au/documents/about/environment/protecting-heritage/harbour-bridge-history.pdf>

Online Image Sources

Art Gallery of NSW

City of Sydney Archives

National Library of Australia,Trove

North Sydney Council, Stanton Library

RMS Archive online

State Library of NSW, Mitchell Library



Figure 112: 'Kids', photographer Peter Brennan. Three children centrally placed on grassy area beside Milsons Point railway station. On left is a station wall and entrance and on right tall buildings and footpath.

Source: Image courtesy Stanton Library Historical Services. Available online, Call number: LPF0920.



Figure 113: 'Our life from this point', Debra Phillips, 2001.

Source: Image courtesy Stanton Library Historical Services. Available online, Call number: LPF1142.



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