

STATEMENT OF HERITAGE IMPACT ACTON WATERFONT PARK

Prepared by

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For

Aspect Studio



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ATTACHMENT 1 CHL CITATION

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1. INTRODUCTION

The proposed development of the Acton Waterfront is located in West Basin of Lake Burley Griffin as per the site plan below (refer Figure 1). The work involves landscaping the area. This report has been prepared by Eric Martin of Eric Martin & Associates.

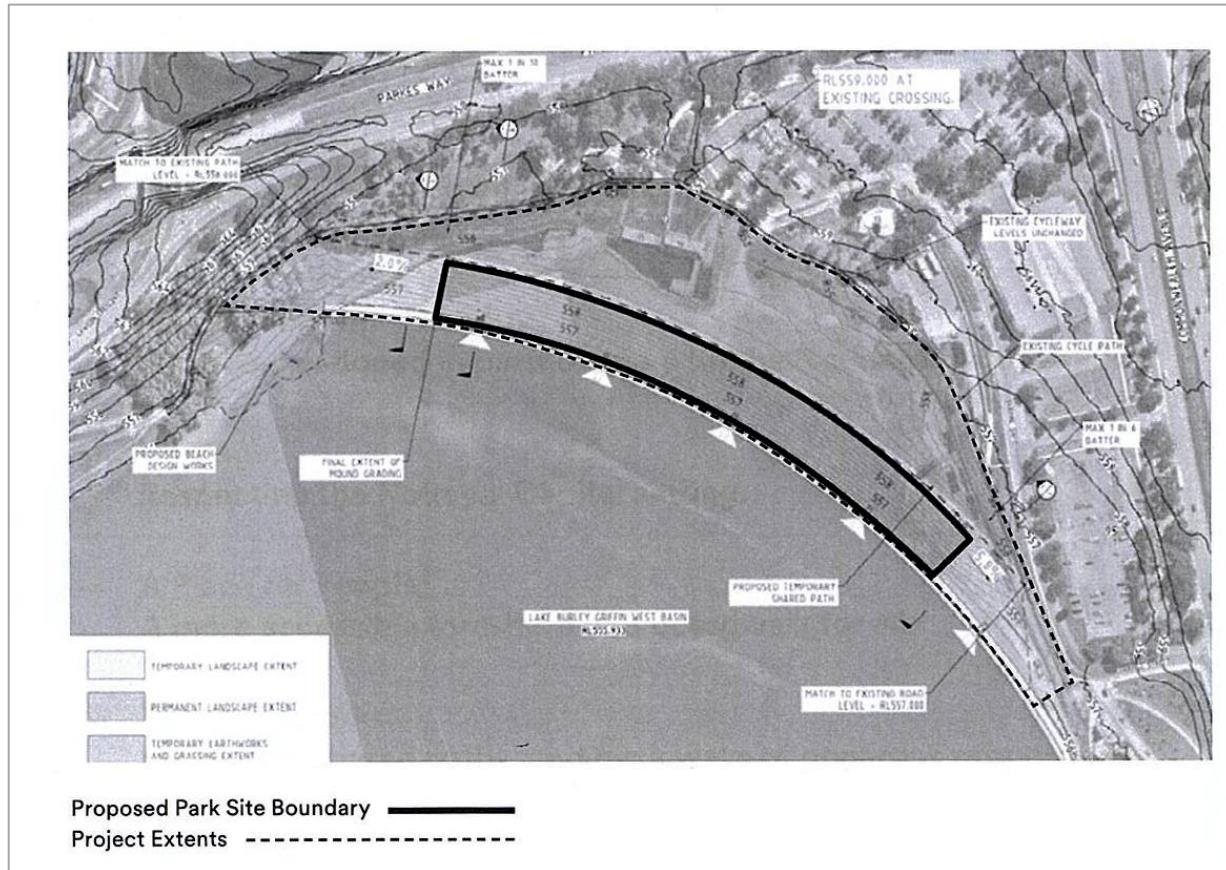


Figure 1: Site Plan

Source: ACT LDA

2. CURRENT HERITAGE STATUS

Lake Burley Griffin is included in the Commonwealth Heritage List (CHL) with the citation included in Attachment 1.

The EPBC Act applies to the Acton Waterfront and no action should be taken that adversely affects the heritage values of the place.

2.1 Commonwealth Heritage List

The citation lists the following features which express the official heritage values¹:

Criterion A – Processes

Features which express the significant historic values of the place include, but are not limited to: the lake as a whole including its edge treatments, the Captain Cook Water Jet, the Commonwealth and Kings Avenue bridges, Scrivener Dam, lake islands, the Lake's contribution to the geometry of Griffin's plan for Canberra; the remnant historic plantings of Cupressus sempervirens trees located on part of the hill known as Roman Cypress Hill; the remnant historic

¹ Lake Burley Griffin and Adjacent Lands, Lady Denman Dr, Yarralumla ACT Australia, Place Id 105230, 8 April 2022, https://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=state%3DACT%3Blist_code%3DCHL%3Blegal_status%3D35%3Bkeyword_PD%3D0%3Bkeyword_SS%3D0%3Bkeyword_PH%3D0;place_id=105230



plantings within the Lindsay Pryor Arboretum; the site and remnant structures of the former Westlake settlement; the No 1 sewer vent in Stirling Park and the layered historic landscape of Stirling Park representing the Indigenous, pastoral and early capital city periods of Canberra.

Criterion B – Rarity

City Beautiful and Garden City exemplar

The features which express these rarity values include but are not limited to the lake as a whole including its edge treatments, the Captain Cook Memorial Jet, the lake's two bridges, Scrivener Dam, lake islands, the lake's contribution to the realisation of the water axis, the Roman Cypress Hill planting, the use allocation of Stirling Park and Yarramundi reach as parkland, the long uninterrupted lake vistas and views (from the Lake) of the Brindabella Mountains and the many long water vistas afforded from the foreshore and for those using the lake for boating.

Engineering techniques

The 'fish-belly' flap gates of Scrivener Dam enable the lake's water levels to be controlled to a precise degree. The technology identified and built at Scrivener Dam (fish-belly-flap gates) is rare in Australia and represents the development of standards in hydrology and dam engineering in its time.

Natural areas

The features which express the natural rarity values include but are not limited to the whole area of designated grassland on Yarramundi Reach; the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland community on the slopes of Stirling Ridge; the lake habitat of the Murray Cod comprising the waterbody, aquatic vegetation and lake bed; the grassland habitat of the Striped Legless Lizard, Perunga Grasshopper and Golden Sun Moth, which includes the whole area of designated grassland on Yarramundi Reach and the western section of Stirling Park; the habitat of the Button Wrinklewort which includes the upper slopes of the central and western parts of Stirling Park; the wetland bird habitats along the foreshores and shallows of the two inlets along Yarramundi Reach and the one inlet to the east of Government House; the Acacia Inlet wetland at the northern end of Yarramundi Reach, extending south along the reach and including the majority of reed beds along the Reach foreshores, and the limestone formations occurring both above and below the surface of the lake.

Criterion C – Research

Design and planning studies

Lake Burley Griffin and its many 'design layers' is a source of information about key theories, practices and histories associated with urban planning, architecture and landscape architecture. Evidence of the work of key practitioners including Walter Burley Griffin, Marion Mahoney, John Sulman, Charles Weston, Lindsay Pryor, Sir William Holford, Dame Sylvia Crowe, Richard Clough, Peter Harrison, Trevor Gibson, and John Overall are also evident and are a valuable historic resource for further study and examination. The fish belly flap gates of Scrivener Dam and the two major bridges also provide the opportunity for further research and teaching potential associated with engineering practice and design technologies.

The features which express these significant historic research values include but are not limited to Lake Burley Griffin and its designed and planned features associated with the design practitioners mentioned above.

Natural Science

The features which express these significant natural heritage research values include the whole area of designated grassland on Yarramundi Reach, the upper slopes of the central and western parts of Stirling Park and the lake waters, including the small wetland pockets near and around Yarramundi Reach.

Indigenous history

Indigenous sites within the place have the potential to reveal evidence of traditional lifeways and the economy of Indigenous people in the Canberra region prior to European settlement. The



features which express these significant Indigenous research values include the Indigenous sites (12) at Yarramundi Reach and Stirling Park.

Criterion D – Characteristic values

City Beautiful Design exemplar

The design and final form of Lake Burley Griffin demonstrate key aspects of important design philosophies and styles from the early twentieth century, including the City Beautiful Movement and the Garden City Movement. The influence of International Modernism from the mid-twentieth century is also evident. Lake Burley Griffin is representative of a small group of designed urban environments in Australia containing areas of water used primarily for ornamental purposes and is one of the largest and best-known examples.

Natural areas

The features which express these significant representative values include but are not limited to Lake Burley Griffin surrounds and the natural features described above.

Criterion E – Aesthetic characteristics

The features which express these aesthetic values include but are not limited to the large size and varied shape of the lake; the lake's quiet and peaceful areas (particularly the secluded areas in the lower reaches); the water body and surface of the lake (including the maintenance of its water level); and the reflective qualities of the water.

Criterion F – Technical achievement

The features which express these values include but are not limited to the lake as a whole, Scrivener Dam, Commonwealth and Kings Avenue bridges, the islands within the lake and the lake's function as part of the water axis.

Criterion G – Social value

The features which express these social values include but are not limited to, the whole of Lake Burley Griffin.

Criterion H – Significant people

The features which express these values include but are not limited to: the lake as a whole, including all its designed and engineered elements; the Roman Cypress Hill stand of Cupressus sempervirens and Pryor's surviving trial plantings covering the southern portions of Yarramundi Reach.

2.2 Heritage Management Plan

There is a *Lake Burley Griffin and Adjacent Lands Heritage Management Plan* by Godden Mackay Logan² dated October 2009 which includes the following information of West Basin. Full details are attached.

- | | |
|-------------------|--|
| <i>Policy 1.1</i> | <i>Conserve the identified heritage values of the Lake Burley Griffin Study area in compliance with the requirements of the EPBC Act, the Australian Capital Territory (Planning and Land Management).</i> |
| <i>Policy 1.2</i> | <i>Conserve the identified heritage values of the Lake Burley Griffin study Area in line with the Heritage Management Plan.</i> |
| <i>Policy 1.3</i> | <i>Implement the policies and actions set out in this HMP, in line with the identified priority and timing guidelines.</i> |
| <i>Policy 1.4</i> | <i>All planning or strategic documents or proposals with the potential to affect the Study Area should refer to this HMP for primary guidance on the management of its heritage values.</i> |

² Godden Mackay Logan Pty Ltd, Lake Burley and Adjacent Lands, Volume 1 -Lake Burley Griffin, Oct 2009 for the National Capital Authority.



- Policy 1.6 Conserve and manage the integrity of the formal design elements of the study area that derive from the Griffin plan and the later design and construction of the lank and its foreshores influenced by Holford and the NCDC.*
- Policy 1.8 Conserve and manage the creative and technical heritage values of the Study Area.*
- Policy 3.1 Provide the public with free and open access to the lake and foreshores.*
- Policy 3.2 Ensure the lake is available and accessible for a range of uses.*

The HMP identifies the following attributes:

Component 1: The lake as a designed landscape

Attributes

The lake as a whole including all its design features: the shape and form of the lake; its foreshore plantings; foreshore parklands and important developments; its reflective qualities; lake-based activities and uses; and the relationship to views and vistas surrounding land, particularly Mount Ainslie, black Mountain and the Parliament House vista (land axis).

Policies

- C1-1 Conserve and manage the integrity of the formal design elements of the Study Area deriving from the griffin plan and the later design and construction of the lake and its foreshores.*
- C1-2 Recognise Lake burley Griffin as a layered cultural landscape, the heritage values of which reflect the griffin plan; subsequent phases of design and construction; and the remnant natural environment.*
- C1-3 Conserve and manage the aesthetic values of the lake which are particularly valued by the community.*
- C1-7 Provide the public with free and open access to the lake's waters.*
- C1-8 Ensure the lake is available and accessible for a range of uses at all times.*

Component 2: Waterbody of the lake as an ecosystem and aquatic habitat

Attributes

The lake habitat comprising the waterbody, aquatic vegetation and lake bed.

Policies

- C2-1 Manage the lake as an aquatic habitat for a range of native species including the Murray cod.*

Component 6: West Basin

Attributes

The general shape and form of West basin including its combination of soft and hard-edge treatments, views and vistas, surrounding parklands and relationship with the Museum of Australia.

Policies

- C6-1 Conserve and manage the integrity of the formal design elements of the West Basin deriving from the griffin plan as well as the later design and construction of the lake and its surrounds.*

3. ADJACENT HERITAGE SITES

Although not directly affected by the proposed development it is important to recognise them and consider them in a wider setting of the Acton waterfront which includes number of heritage sites as listed below and shown in Figure 2.



Lennox House	CHL (ID 105307); RNE (ID 19455)
Liversidge Street	CHL (ID 105340)
Former Canberra Hospital	CHL (ID 105340)
Acton Peninsula buildings 1,2 and 15 Lawson Crescent and Acton Conservation Area	CHL (ID 105341) (ID 105344) (ID 105343) (ID 105340) (ID 105342)
Old Canberra House	CHL (ID 105340)
Acton Peninsula Limestone Outcrops	CHL (ID 105344)
Hotel Acton	ACT Heritage Register; RNE (ID 100943)
Shine Dome	NHL (ID 105741); RSTCA R27
Ian Potter House	ACT Heritage Register (22091)
Parliament House Vista (from Commonwealth Avenue)	CHL (ID 105466)



Figure 2: Heritage Places on Acton Waterfront

Source: *Heritage Impact Statement, Lovel Chen, September 2015*



Further background information is available in Lovell Chen, *West Basin Stage 1A Heritage Impact Statement*, 2015.

4. PROPOSAL

The proposal is a landscape design within the current formed area of the recently constructed new lake edge to West Basin. The overall plan is below (refer Figure 3), and further drawings are included in Attachment 2.

OPTION D

INCLUSIONS

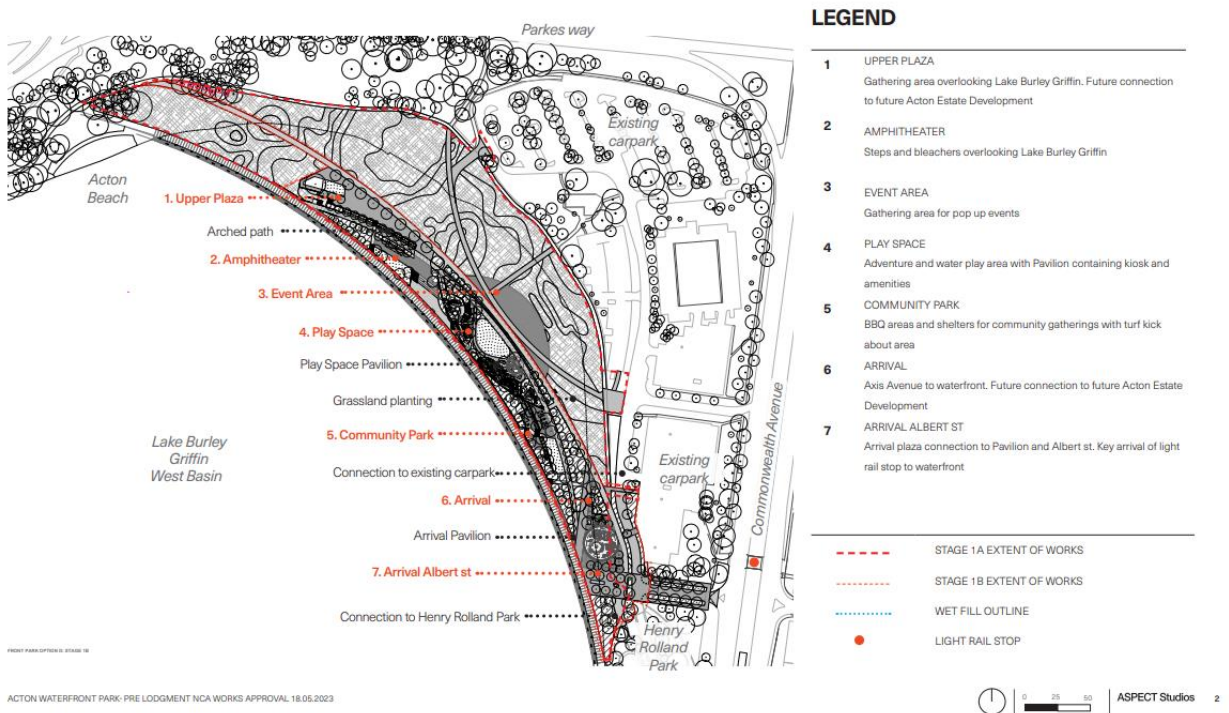


Figure 3: Landscape Plan

Source: Pre NCA Works Approval Acton Waterfront Park 18.05.2023 Meeting

5. COMMENT

The significant features that represent the official values that have some relevance to the design proposal are edge treatments (Criteria B), Griffin Plan (Criteria C), Garden City principles (Criteria D), the shape of the lake (Criteria E) and the lake as a whole (Criteria A, B, F and G) but none are directly affected by the proposal as the basic form of West Basin is now established.

The proposed development is broadly consistent with the policies in the 2009 HMP except as noted below.

The noted attributes of West Basin components are the “combination of soft and hard edge treatment views and vistas” without a strongly designed character. This proposal substantially works within the currently established and built lake edge with only some small jetties being added.

It is also critical that this development, or future adjacent development, does not affect the views/vistas from the broader area or to/from the lake.

Policy 6.1.5 refers to maintaining an open park-like setting which is what the design is intended to achieve but this will be affected to a minor degree by a more structured design and the proposed landscape than an informal open park.



The adjacent identified heritage places are not adversely affected by the proposal, and this will remain unaffected while no further development occurs between the places and the lake edge.

6. CONCLUSION

As the basic shape and detail of the waterfront has already been established, the proposed waterfront development will have an impact on the area but the impact on the heritage values is minor as it is only a more structured landscape and not an open park like setting.

Any development beyond the waterfront landscape proposed could have an adverse impact.



ATTACHMENT 1 CHL CITATION



Place Details

[Send Feedback](#)

Lake Burley Griffin and Adjacent Lands, Lady Denman Dr, Yarralumla, ACT, Australia

Photographs	None
List	Commonwealth Heritage List
Class	Historic
Legal Status	Listed place (08/04/2022)
Place ID	105230
Place File No	8/01/000/0520

Summary Statement of Significance

Lake Burley Griffin and Adjacent Lands has significant historic, natural and Indigenous heritage value of importance to Australia and the local community.

The Lake Burley Griffin and Adjacent Lands place has significant historic heritage value. From the early days of Canberra's establishment as Australia's national capital, the gradual formation of Lake Burley Griffin marked major milestones in the capital city's creation. As a substantial national project, the construction and completion of Lake Burley Griffin demonstrates the push for national development during the years immediately after Federation and before the First World War, and again after the Second World War, under the Menzies government.

Lake Burley Griffin is associated with the original city competition brief for the design of Canberra. The Lake's design reflects the influence of three major urban design movements including the City Beautiful movement, the Garden City movement and International Modernism. The central area of Lake Burley Griffin provides an aesthetic and symbolic backdrop for many military and civil memorials along its foreshore.

Stirling Park has a layered collection of Indigenous, pastoral and early capital city features including Aboriginal stone artefacts and arrangements, a scarred tree, old routes and tracks, exotic plantings, remnant mining sites, campsite and homestead sites and the remaining remnant structures of the former Westlake workers settlement. Roman Cypress Hill is a significant historic planting area and the Lindsay Pryor Arboretum is associated with the history of urban landscaping and city horticulture in Canberra.

Lake Burley Griffin and Adjacent Lands expresses rare design, technical and natural values. The lake is an exemplar design site which can demonstrate design and planning devices characteristic of the two most important town planning movements of the twentieth century, the City Beautiful and Garden City movements. The technology identified and built at Scrivener Dam (fish-belly-flap gates) is also rare in Australia and represents the development of standards in hydrology and dam engineering in its time.

Rare natural heritage values include remnant ecological communities and associated threatened species at Yarramundi Reach and Stirling Park, wetland areas that also provide habitat for a number of threatened species, and limestone formations occurring both above and below the surface of the lake.

The Lake Burley Griffin and Adjacent Lands place has significant research value because of the place's potential to yield information that will contribute to an understanding of Australia's history and practice of urban planning, architecture and landscape architecture. Indigenous research values include the Indigenous sites (12) at Yarramundi Reach and Stirling Park. The natural features of the place, including the grasslands at Yarramundi Reach, the upper slopes of the central and western parts of Stirling Park and the lake waters, including the small wetland pockets near and around Yarramundi Reach, have the potential to yield information on threatened species and ecological communities of the local area.

The Lake Burley Griffin and Adjacent Lands place demonstrates principal characteristics of a class of place. The design and final form of Lake Burley Griffin demonstrate key aspects of important design philosophies and styles from the early twentieth century. Additionally, the place possesses remnant vegetation which represents the characteristics of the pre-1820s natural environment.

The Lake Burley and Adjacent Lands place has important aesthetic characteristics valued by the Canberra community and Australians generally. These include the large size and varied shape of the lake; the lake's quiet and peaceful areas (particularly the secluded areas in the lower reaches); the water body and surface of the lake (including the maintenance of its water level); and the reflective qualities of the water.

The lake's design, development and final completion is considered by experts to be an achievement of creative genius and demonstrates a high level of technical engineering and urban design achievement. Features which express these values include the lake as a whole, Scrivener Dam, Commonwealth and Kings Avenue bridges, the islands within the lake and the lake's function as part of the water axis.

Lake Burley Griffin is important to various communities (including the Canberra community) as a landmark and as a signature element of Canberra. It also acts as an important reference point in the construction of Canberra's place identity. The use of the lake has also created strong associations with recreation users like rowers, small watercraft users and walkers. Special associations with the Australian community are also present.

Important people involved with the creative and technical aspects of the design and construction of Lake Burley Griffin include Walter Burley Griffin, Marion Mahony Griffin, Charles Scrivener, Sir William Holford, Dame Sylvia Crowe, Richard Clough and the National Capital Development Commission (NCDC). Lake Burley Griffin also has strong associations with Sir Robert Menzies who played pivotal role in the implementation of the lake's construction. His support is associated with the final push towards the lake's completion.

Official Values

Criterion A Processes

The Lake Burley Griffin and Adjacent Lands place has significant historic heritage value. Characteristics of the place with significant historic value include the following.

From the early days of Canberra's establishment as the national capital, the gradual formation of Lake Burley Griffin marked major milestones in the capital city's creation. As a substantial national project, the construction and completion of Lake Burley Griffin demonstrates the push for national development during the years immediately after Federation and before the First World War, and again after the Second World War, under the Menzies government.

Lake Burley Griffin is associated with the original city competition brief for the design of Canberra. Its final form at completion is consistent with the original guiding intentions set out in the competition brief. This link with the original brief connects us to the aspirations and vision Australians had for Federation and its capital city at the beginning of the twentieth century.

The Lake's design and form reflect the story of its development including the tensions between designers, administrators and politicians in the development of the capital.

The Lake's design reflects the influence of three major urban design movements including the City Beautiful movement, the Garden City movement and International Modernism. The use of City Beautiful and Garden City theories and ideas is reflected in the use and design of the lake to fulfill aesthetic, open space and outdoor recreation functions. The lake also forms part of the water axis and has been designed in parts to include symbolic, ceremonial, formal and informal and active and passive recreation space. The design influences of International Modernism can be seen in the engineering works within the place including the fish belly flap gates of Scrivener Dam, Commonwealth Avenue Bridge and Kings Avenue Bridge.

The central area of Lake Burley Griffin provides an aesthetic and symbolic backdrop for many military and civil memorials along its foreshore. National events and ceremonies have and continue to be staged around, near and over the lake because of its beauty and function within the central national area.

Stirling Park has a layered collection of Indigenous, pastoral and early capital city features including Aboriginal stone artefacts and arrangements, a scarred tree, old routes and tracks, exotic plantings, remnant mining sites, campsite and homestead sites and the remaining remnant structures of the former Westlake workers settlement. Westlake provided accommodation for early Canberra builders and tradesmen working on the construction of buildings like Old Parliament House, East Block, West Block and Hotel Canberra. The remnant layout of the Westlake settlement is still legible in the landscape demonstrating the living conditions of those early workers and their families who came to Canberra as builders and tradesmen. Over time this settlement became a strong community remembered today by former residents and their families.

Roman Cypress Hill is a significant historic planting area. The remnant historic planting of *Cupressus sempervirens* was planted in 1919--1921 when the first planning and layout for Griffin's Canberra was being undertaken. Charles Weston's work to establish the landscape of the city is also partly demonstrated here. Today it is a remnant of Griffin's plan for the treatment of the western horizon. Only part of the hill planting remains in its original setting, the remaining planting area is located across the highway to the west.

The Lindsay Pryor Arboretum is associated with the history of urban landscaping and city horticulture in Canberra. The historic planting in the arboretum area demonstrates some of Pryor's experimental work on the growth of a variety of tree species for potential use in the city's parks and streets. The planting and surrounding water areas also form part of the attractive parkland and water views from Government House.

Features which express the significant historic values of the place include, but are not limited to: the lake as a whole including its edge treatments, the Captain Cook Water Jet, the Commonwealth and Kings Avenue bridges, Scrivener Dam, lake islands, the Lake's contribution to the geometry of Griffin's plan for Canberra; the remnant historic plantings of *Cupressus sempervirens* trees located on part of the hill known as Roman Cypress Hill; the remnant historic plantings within the Lindsay Pryor Arboretum; the site and remnant structures of the former Westlake settlement; the No 1 sewer vent in Stirling Park and the layered historic landscape of Stirling Park representing the Indigenous, pastoral and early capital city periods of Canberra.

Criterion B Rarity

The Lake Burley Griffin and Adjacent Lands place has significant rarity value because of the place's possession of uncommon, rare and endangered aspects of Australia's natural and cultural history. These rare aspects of the place are described below.

City Beautiful and Garden City exemplar

Lake Burley Griffin is an important exemplar design site which can demonstrate design and planning devices characteristic of the two most important town planning movements of the twentieth century; the City Beautiful and Garden City movements. Canberra is one of the few planned twentieth century cities in Australia and in the world. The city's national capital function provided planners and designers, like Griffin, with an opportunity to use their best and most innovative planning ideas drawing from the town planning practices of their time.

In particular, the lake forms part of the water axis which Griffin used to arrange city elements and connect surrounding natural features. The grand scale of lake vistas along the water axis and in other areas gifts the National Triangle and city a sense of grandeur and beauty. The lake overall, also provides long water vistas which feature the surrounding, sometimes snow covered, Brindabella Mountains. Viewed from high vantage points like Black Mountain, Mt Ainslie and Red Hill, the lake is a distinctive character element providing a lake setting for its urban, residential and national capital activities and spaces. The lake also integrates the northern and southern sides of the central city. The formal areas of the lake also provide a water setting for national institutions which are showcased on its foreshore.

The use of visual follies like the lake's islands, the National Carillon and the Captain Cook Memorial [water] Jet are examples of visual devices informed by the City Beautiful movement.

From a Garden City perspective, the lake provides a variety of recreation spaces and is itself a huge open space in the middle of the central city area of Canberra. The lake area is almost twice the size of Central Park in New York. Stirling Park and Yarrumundi Reach are part of an extensive and generous system of parks and open space along the lake's foreshore. The treatment of Roman Cypress Hill also demonstrates the careful management of visual experiences which were planned deliberately in a dynamic way to enhance the visual experience of the city and National Triangle.

The features which express these rarity values include but are not limited to the lake as a whole including its edge treatments, the Captain Cook Memorial Jet, the lake's two bridges, Scrivener Dam, lake islands, the lake's contribution to the realisation of the water axis, the Roman Cypress Hill planting, the use allocation of Stirling Park and Yarramundi reach as parkland, the long uninterrupted lake vistas and views (from the Lake) of the Brindabella Mountains and the many long water vistas afforded from the foreshore and for those using the lake for boating.

Engineering techniques

The 'fish-belly' flap gates of Scrivener Dam enable the lake's water levels to be controlled to a precise degree. The technology identified and built at Scrivener Dam (fish-belly-flap gates) is rare in Australia and represents the development of standards in hydrology and dam engineering in its time.

Natural areas

The large surviving grassy woodland area, now modified to grassland, at Yarramundi Reach displays important characteristics of the remnant Natural Temperate Grassland ecological community. This ecological community is recognised at a territory and national level as a threatened ecological community. The grassland at Yarramundi Reach provides habitat for the Striped Legless Lizard which is recognised at a territory and national level as a threatened species and the Perunga Grasshopper, also recognised as a threatened species.

The White Box-Yellow Box-Blakely's Red Gum Grassy Woodland ecological community of Stirling Park is a recognised threatened ecological community. This community provides habitat for another threatened species, the Button Wrinklewort, and may provide suitable habitat for the vulnerable Gang-gang Cockatoo and Superb Parrot.

Both the remnant Natural Temperate Grassland of Yarramundi Reach and the derived native grassland in the western section of Stirling Park may also provide important habitat for the critically endangered Golden Sun Moth.

Wetland environments at Yarramundi Inlet, Acacia Inlet and Warrina Inlet, comprising reed beds, fringing terrestrial vegetation and open water, provide habitat for a diverse population of waterfowl and land birds. Latham's Snipe, the Common Greenshank, the Red-necked Stint and the Sharp-tailed Sandpiper, listed migratory wetland species, are recorded from these wetlands. Other locally rare species recorded here include the Greater Crested Grebe, the Little Bittern, the Little Grassbird and the Musk Duck.

The wider aquatic ecosystem of the lake provides habitat for the threatened Murray Cod.

Below the waters and along the shoreline of the lake are occurrences of limestone, including a limestone cave; rare examples of a feature from which the original post-contact settlement name for the Canberra locality, the

'Limestone Plains,' is derived. Early descriptions of the area often refer to limestone, but most examples have since been either built on or submerged under the lake.

The features which express the natural rarity values include but are not limited to the whole area of designated grassland on Yarramundi Reach; the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland community on the slopes of Stirling Ridge; the lake habitat of the Murray Cod comprising the waterbody, aquatic vegetation and lake bed; the grassland habitat of the Striped Legless Lizard, Perunga Grasshopper and Golden Sun Moth, which includes the whole area of designated grassland on Yarramundi Reach and the western section of Stirling Park; the habitat of the Button Wrinklewort which includes the upper slopes of the central and western parts of Stirling Park; the wetland bird habitats along the foreshores and shallows of the two inlets along Yarramundi Reach and the one inlet to the east of Government House; the Acacia Inlet wetland at the northern end of Yarramundi Reach, extending south along the reach and including the majority of reed beds along the Reach foreshores, and the limestone formations occurring both above and below the surface of the lake.

Criterion C Research

The Lake Burley Griffin and Adjacent Lands place has significant research value because of the place's potential to yield information that will contribute to an understanding of Australia's history and practice of urban planning, architecture and landscape architecture. Indigenous sites and natural sites are also able to yield important information. Specific areas or characteristics able to yield information are described below.

Design and planning studies

Lake Burley Griffin and its many 'design layers' is a source of information about key theories, practices and histories associated with urban planning, architecture and landscape architecture. Evidence of the work of key practitioners including Walter Burley Griffin, Marion Mahoney, John Sulman, Charles Weston, Lindsay Pryor, Sir William Holford, Dame Sylvia Crowe, Richard Clough, Peter Harrison, Trevor Gibson, and John Overall are also evident and are a valuable historic resource for further study and examination. The fish belly flap gates of Scrivener Dam and the two major bridges also provide the opportunity for further research and teaching potential associated with engineering practice and design technologies.

The features which express these significant historic research values include but are not limited to Lake Burley Griffin and its designed and planned features associated with the design practitioners mentioned above.

Natural Science

The occurrence of threatened species in the Yarramundi grasslands (particularly the Striped Legless Lizard and Perunga Grasshopper) and at Stirling Park (Button Wrinklewort), and the ecological communities themselves (Natural Temperate Grassland and White Box-Yellow Box-Blakely's Red Gum Grassy Woodland) provide opportunities for ecological research on habitat and population relationships. The lake's wetlands offer similar opportunities for the study of resident and migratory birds. The freshwater ecosystems of the wider lake also provide research opportunities for the study of aquatic ecosystems. This research would be particularly focused within the context of artificially impounded water bodies in urban environments.

The features which express these significant natural heritage research values include the whole area of designated grassland on Yarramundi Reach, the upper slopes of the central and western parts of Stirling Park and the lake waters, including the small wetland pockets near and around Yarramundi Reach.

Indigenous history

Indigenous sites within the place have the potential to reveal evidence of traditional lifeways and the economy of Indigenous people in the Canberra region prior to European settlement. The features which express these significant Indigenous research values include the Indigenous sites (12) at Yarramundi Reach and Stirling Park.

Criterion D Characteristic values

The Lake Burley Griffin and Adjacent Lands place has important representative values. The aspects or characteristics of the place which have representative value are as follows.

City Beautiful Design exemplar

The design and final form of Lake Burley Griffin demonstrate key aspects of important design philosophies and styles from the early twentieth century, including the City Beautiful Movement and the Garden City Movement. The influence of International Modernism from the mid- twentieth century is also evident. Lake Burley Griffin is representative of a small group of designed urban environments in Australia containing areas of water used primarily for ornamental purposes and is one of the largest and best-known examples.

Natural areas

Some areas within the place possess remnant vegetation. Collectively these areas represent the characteristics of the pre-1820s natural environment. These areas include:

- adjacent to Yarramundi Inlet there is a surviving individual *Eucalyptus viminalis* representing the original Molonglo River riparian forest. This tree is the sole indicator of the past riparian forest in the study area;
- small remnants of the Natural Temperate Grassland community which exist in patches between Alexandria Drive and the lake foreshore from Blue Gum Point to Attunga Point. These areas represent remnant examples of the pre-1820s vegetation;
- a large grassy woodland area, now modified to grassland, located at Yarramundi Reach. This area displays the significant characteristics of the Natural Temperate Grassland community;
- a large remnant of the original White Box-Yellow Box-Blakely's Red Gum Grassy Woodland on the slopes of Stirling Ridge in Stirling Park;
- a remnant eucalypt dry open forest, characteristic of north and west facing slopes in the ACT, located on the eastern ridge of Stirling Park; and
- a re-growth Snow Gum stand at the northern end of Yarramundi Reach. This stand is characteristic of the natural woodland/forest transition in the southern tablelands.

The features which express these significant representative values include but are not limited to Lake Burley Griffin surrounds and the natural features described above.

Criterion E Aesthetic characteristics

Lake Burley Griffin and Adjacent Lands place has important aesthetic characteristics valued by:

For Australians

Lake Burley Griffin is recognised as a beautiful feature of Canberra. In particular the Lake provides an attractive water setting for national institutions, lakeside parklands and lakeside memorials. Lake Burley Griffin is also featured in many promotions of Canberra to the extent that it has become a landmark and signature element of the city and its presentation as the capital of Australia.

For the Canberra Community

Lake Burley Griffin is appreciated by Canberrans as a beautiful part of their city. Its visual appeal during the day and night is appreciated as an essential part of their city and as a 'signature' element of Canberra as a place. Some particular characteristics appreciated by Canberrans include the presence of large areas of water, the reflections and seasonal variations on the water surface, the formal water basins near the national institutions and Parliament buildings and the more natural, quieter areas of the lake like Yarramundi Reach. Views to the water are also valued because of the 'calm presence' it provides in an individual's experience of the nearby city area.

The features which express these aesthetic values include but are not limited to the large size and varied shape of the lake; the lake's quiet and peaceful areas (particularly the secluded areas in the lower reaches); the water body and surface of the lake (including the maintenance of its water level); and the reflective qualities of the water.

Criterion F Technical achievement

The lake's design, development and final completion is considered by experts to be an achievement of creative genius and demonstrates a high level of technical engineering and urban design achievement. This high level of achievement is demonstrated by the following aspects or characteristics of the place.

Lake Burley Griffin is an essential element of the Griffin plan for the capital city of Canberra. Its design has been purposefully developed to reflect Canberra's function and status as the nation's capital. The lake is used as a unifying design element and incorporates key aesthetic and functional roles within the overall plan for the city.

The design of Lake Burley Griffin strongly reflects two key periods of creative and technical accomplishment. In the early period of the lake's development the lake's design is associated with the City Beautiful and Garden City town planning movements. Work undertaken from the 1950s is associated with International Modernism. The overall form of the lake is most strongly associated with its original conception set out in the city design competition brief. The lake's edge treatments and details, such as islands, are more reflective of later periods of construction.

The lake's form also reflects the way the designers made use of the city site and the Molonglo River's features. West Lake, in particular, is evidence of the original 'river' form of the city site. The basins are evidence of the former river flood plain as well as evidence of the ancient Molonglo Lake.

The final form of the lake closely resembles Griffin's 1918 plan with the exception of the deletion of East Lake. This similarity provides evidence of the essential integrity of the plan for the lake as conceptually developed by Griffin while he was in Canberra. The design of the lake includes formal and informal parts and reflects some of Griffin's geometric devices. The lake's integration of government and civic functions (on its opposite banks) has also been retained, although the intensity of the planned relationship has been weakened in implementation.

The design of Lake Burley Griffin and Associated Lands provides evidence of tensions over time between Griffin's primarily City Beautiful plan and the interplay of Garden City ideas and the influence of Holford and the National Capital Development Commission.

Lake Burley Griffin demonstrates a number of urban design approaches and styles. These occur within a designed and richly symbolic environment which is absent in many other more contemporary urban places. This richness demonstrates a sophisticated design approach to the urban design of the lake and its surroundings. Some key features of this include: the link between the axes and landscape features; the inclusion of formal and informal lake areas; the purposeful links with both close and distant topography; the relationship between vertical and horizontal elements (like the National Carillon and the Captain Cook Memorial Jet); the mirroring of foreshore and surrounding natural features, the lake's provision of water frontage for national institutions; the relationship between areas of distinctive character planting (around the lake) which makes use of seasonal colour and texture and the lake's contribution to the presentation of the city area as a city in a natural landscape.

Lake Burley Griffin also demonstrates a high degree of technical achievement in engineering. The construction of the two bridges and Scrivener Dam were projects which demonstrated high levels of achievement in their time.

The features which express these values include but are not limited to the lake as a whole, Scrivener Dam, Commonwealth and Kings Avenue bridges, the islands within the lake and the lake's function as part of the water axis.

Criterion G Social value

Lake Burley Griffin and Adjacent Lands place is important to various communities as a landmark and as a signature element of Canberra. It also acts as an important reference point in the construction of Canberra's place identity. The use of the lake has also created strong associations with recreation users like rowers, small watercraft users and walkers. Special associations with the Australian community are also present.

For Australians

Lake Burley Griffin plays an important role in representing the image of Canberra to the nation and potentially internationally. Its landmark value as part of the national capital's landscape is well recognised and widely valued. For Australians, especially those who have visited Canberra, Lake Burley Griffin is a well-recognised symbol of Canberra, forming the central focus of the national capital designed landscape. The lake is also valued as a place which provides an attractive setting for visitors walking or driving through the city and around key national institutions.

For the Canberra Community

Lake Burley Griffin is highly valued by the Canberra community as an important and essential part of Canberra. The lake contributes significantly to Canberra's place identity and provides a range of recreation opportunities for all Canberrans. The lake also connects Canberrans to Canberra's function and purpose as the nation's capital as the lake is a central design element in the construction of the national capital. Canberrans are proud of the lake as a significant construction achievement. The unification of two parts of the city at completion of the lake is remembered.

Lake Burley Griffin is highly valued by the Canberra community as an important community gathering place which is also used as a setting for large public events. The lake remains a place which has been experienced and enjoyed by Canberrans for over 35 years for leisure and as a visual delight.

Lake Burley Griffin is highly valued by the Canberra community as a place that represents the realisation of the Griffin design for Canberra. The lake also creates a setting for community celebration and engagement. Lake Burley Griffin is also highly valued by the Canberra community as a place of personal memory and experience.

The Canberra community has a strong attachment to the lake as a whole, as well as to a range of individual places on and around the lake. These values are shared across the community, irrespective of the nature, length and frequency of association.

The features which express these social values include but are not limited to, the whole of Lake Burley Griffin.

Criterion H Significant people

Lake Burley Griffin and Adjacent Lands place has significant associations with people of importance in Canberra's history of development. These associations include the following.

Important people involved with the creative and technical aspects of the design and construction of Lake Burley Griffin include Walter Burley Griffin, Marion Mahony Griffin, Charles Scrivener, Sir William Holford, Dame Sylvia Crowe, Richard Clough and the National Capital Development Commission (NCDC). Lake Burley Griffin also has strong associations with Sir Robert Menzies who played pivotal role in the implementation of the lake's construction. His support is associated with the final push towards the lake's completion.

Walter Burley Griffin is an important figure in Australia's cultural history because of his contribution to the design of Canberra as Australia's capital city. In recognition of his contribution Lake Burley Griffin has been named in appreciation of his work.

Marion Mahony Griffin worked with Walter Burley Griffin on the design for Canberra. Her perspective drawings were a brilliant representation of the ideas presented in the competition drawings for Canberra. In recognition of her contribution the Marion Mahony Griffin view at Mt Ainslie has been named in appreciation of her work.

Charles Scrivener surveyed and recommended the Canberra site for Australia's capital city. He also made recommendations regarding the suitability of this site for ornamental waters which pointed to the eventual creation of Lake Burley Griffin.

British planner, William Holford, was engaged by the Menzies Government to recommend a way forward for the construction of Lake Burley Griffin. Holford did extensive work on the design of Lake Burley Griffin and its two bridges.

Sylvia Crowe and Richard Clough were prominent landscape architects involved with the landscape development and planting works around the lake, and, in particular, of Commonwealth Park.

The experimental planting plots within the Lindsay Pryor Arboretum are strongly associated with the pioneering and extensive work planned and carried out by Lindsay Pryor and his team in the landscaping of the city scape of Canberra.

Many professions have been involved in planning, design and construction of Lake Burley Griffin including town planners, architects, landscape architects, engineers and surveyors. In the case of landscape architects and town planners in Australia, the growth of these professions in Australia has a strong association with Lake Burley Griffin and some of the adjacent lands within the place.

The features which express these values include but are not limited to: the lake as a whole, including all its designed and engineered elements; the Roman Cypress Hill stand of *Cupressus sempervirens* and Pryor's surviving trial plantings covering the southern portions of Yarramundi Reach.

Description

Lake Burley Griffin is a large artificial lake located in central Canberra. The lake is approximately 9km long, varies in width from 0.3 to 1.2km and has an average depth of 4 metres. Lake Burley Griffin covers an area of more than 664 hectares and has more than 40 kilometres of shoreline which is predominantly soft edged with extensive reed beds dominated by Cumbungi (*Typha orientalis* and *Typha domingensis*) and Common Reed (*Phragmites australis*). Lake Burley Griffin is surrounded by approximately 314 hectares of parklands (GML 2009 p.11, 148).

Built Environment

A large number of built features are located within the nominated boundary of Lake Burley Griffin, both in the waters of the lake and in the surrounding parkland. The following is a description of the major built elements.

Scrivener Dam is a large concrete gravity dam that is 33 metres high and 235 metres long. The dam is located at the western end of Lake Burley Griffin and was completed in 1963 (GML 2009 p.15, 156). Scrivener Dam was named after Robert Charles Scrivener, a Commonwealth Government surveyor who recommended Canberra as the site for Australia's national capital. (GML 2009 p.15). The dam features five German designed 'fish-belly-flap gates' that allow water flows into the lake to be controlled precisely. Sophisticated post-tensioning techniques were used in the construction of the dam to overcome issues with the underlying bedrock. It is one of the largest of its type in Australia and is considered to be rare (GML 2009 p.156).

Commonwealth Avenue Bridge and Kings Avenue Bridge were key design elements in the Griffin plan. The bridges

create a physical and visual link, and symmetry between the land and water axes as well as serving a practical function of connecting the settlements either side of Lake Burley Griffin. Prior to their installation, a series of temporary bridges were used to traverse the Molonglo River (GML 2009 p.157). The bridges are dominant architectural features of Lake Burley Griffin and offer sweeping views of the landscape and waterscape (GML 2009 p.18).

The Kings Avenue Bridge was completed in 1962 and was built on an alignment with Capital Hill and the Russell precinct. The bridge consists of two separated roadways that provide dual lane access to traffic in both directions (GML 2009 p.157). Precast pre-stressed concrete was used for the construction of Kings Avenue Bridge and the supporting piers were specially designed to limit the views to East Basin which were considered to be less visually interesting (GML 2009 p.157). The Kings Avenue Bridge won an Engineering Society Meritorious Award for its slimline design and use of inconspicuous lighting (GML 2009 p.157).

The Commonwealth Avenue Bridge was completed in 1963 and built on an alignment between the apex of Capital Hill and City Hill (GML 2009 p.157). The bridge has a total length of 320 metres and used a box girder method of construction. Commonwealth Avenue Bridge is comprised of multi-webbed box sections in five continuous spans and slim octagonal piers that facilitate clear views to and from West Basin (GML 2009 p.158). Commonwealth Avenue Bridge includes several high-quality architectural features including Gosford granite and black Mudgee exposed-aggregate panels which were used on abutments and viewing platforms (GML 2009 p.158). Of note are two granite stones from the 1817 Waterloo Bridge that crossed the Thames in London. A plaque on the bridge reads: 'Stones such as these from the bridge were presented to Australia and other parts of the British world to further historic links in the British Commonwealth of Nations' (GML 2009 p.158).

The Captain Cook Memorial was constructed by the Commonwealth Government to celebrate the Bicentenary of Captain James Cook's first sighting of Australia's east coast. The memorial is comprised of a Water Jet and Globe. The Water Jet is located in the Central Basin and is a prominent feature that can shoot water to a maximum height of approximately 150 metres. The Globe is located on land at Regatta Point and shows Cook's voyages. The Captain Cook Memorial Jet was inaugurated by Queen Elizabeth II on 25 April 1970 (GML 2000 p.18-19).

The Parliament House Vista extends from Parliament House on the southern side of Lake Burley Griffin through to the Australian War Memorial and Mount Ainslie (GML 2009 p.23). The Parliament House Vista, bounded by the Commonwealth and Kings Avenue bridges, encapsulates land and water scapes and monumental national buildings to create a symbolic vista that captures Griffin's grand land and water axes design. The Parliament House Vista was included on the Commonwealth Heritage List in 2004 (Place ID 105466). The Central Basin within the boundary of Lake Burley Griffin forms part of the Parliament House Vista (GML 2009 p.23).

Prior to the construction of Lake Burley Griffin, part of a temporary suburb known as 'Westlake' was located on the western side of Stirling Park. Westlake was established in 1922 to house workers employed in various capital works projects and their families. A number of other temporary workers camps were located on the eastern side of Stirling Park including Howie's Hostel and the No.1 Labourers' Camp. These areas have generally been cleared and there is limited potential for archaeological material to remain in-situ. However, some fabric relating to the Westlake settlement still can be found including concrete slabs, garden edging, shrub surrounds, and exotic plantings (GML 2009 p.152). In 1914 construction began on a sewer system for Canberra comprised of a series of underground tunnels and vents. One of the main outfall sewer vents, Sewer No.1, is located in Stirling Park and was constructed between 1915 and 1924 and is an indicative place in the Commonwealth Heritage List. The vent is approximately 6 metres high with a cast concrete top and four side openings and is an example of an early public works in Canberra (GML 2009 p.16-17, 152).

Natural Environment

Despite much of Lake Burley Griffin being man-made, many of its features have natural characteristics and qualities. The following is a description of the lake's major natural elements.

West Basin is the western most basin of the lake's three formal central basins that are key features of Canberra's designed landscape. West Basin is located to the west of the Commonwealth Avenue Bridge and is roughly circular in shape (GML 2009 p.15). The foreshores surrounding West Basin are comprised of beaches and mixed tree parklands as well as limestone outcrops at Acton Peninsula (GML 2009 p.15). The West Basin is visually dominated by the National Museum of Australia and the Commonwealth Avenue Bridge (GML 2009 p.15).

The Central Basin is the most formal area of Lake Burley Griffin, evidenced through both its landscaping, lake edges and built areas at Gallipoli Reach on the northern side of the basin and the Parliamentary Foreshore on the southern side (GML 2009 p.18). The Rond Terraces are located on the northern side of the Central Basin between Commonwealth and Kings Park and cover an area of approximately 3 hectares. The Rond Terraces are two grassed terraces with flights of steps that lead downwards towards Gallipoli Reach, an area of compressed red granite. Griffin's

land and water axes meet at the Central Basin and its formality is reinforced by the physical lines created by the Commonwealth Avenue and Kings Avenue bridges.

Aspen Island is located on the eastern edge of the Central Basin and is connected to Kings Park by a footbridge. Vegetation on the island includes willows, poplars and alders. The dominant feature of Aspen Island is the National Carillon. The Carillon has been built in a 20th century Brutalist architectural style similar to the nearby High Court and National Gallery and was included in the Commonwealth Heritage List in 2004 (Place ID 105346) (GML 2009 p.28). However, the Carillon is not included in the boundary of the Lake Burley Griffin and Adjacent Lands place.

East Basin has a predominantly formal concrete shoreline with the exception of the Jerrabomberra Wetlands which is located on the eastern side of East basin. With the exception of Kings Avenue Bridge, the dominant built element in East Basin is the commercially developed area built up along the Kingston Foreshore (GML 2009 p.19).

West Lake is located to the west of Acton Peninsula adjacent to the West Basin. The shorelines along West Lake have informal natural edges. Springbank and Spinnaker islands are located within West Lake and include some beach areas (GML 2009 p.16). Springbank Island was created from lake spoil during the construction of the lake and contains a mix of exotic and native plants. The island takes its name from the dairy property that was located in the area until 1962 (GML 2009 p.148). Spinnaker Island is a remnant landform from the pre-lake Stirling Ridge landscape and has a similar mix of vegetation species as Springbank Island (GML 2009 p.16, 149).

Stirling Park is located on the southern shore of West Lake near the suburb of Yarralumla. Stirling Park supports a eucalypt dry open forest community dominated by Scribbly Gum (*Eucalyptus rossii*) and Brittle Gum (*E. mannifera*) with extensive stands of Yellow Box (*E. melliodora*), Blakely's Red Gum (*E. blakelyi*) and Apple Box (*E. bridgesiana*). Patches of remnant vegetation from the pre-settlement Canberra landscape can be found in Stirling Park (GML 2009 p.16, 35-37). Stirling Park provides important habitat for a number of threatened and vulnerable species. Located on the western side of the park are Button Wrinkleworts (*Rutidosia leptorrhynchoides*) which are protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the ACT Nature Conservation Act 1980 (NC Act) (GML 2009 p.146). A 2015 sighting of the critically endangered Golden Sun Moth (*Synemon plana*), also on the western side of Stirling Park, is recorded in Canberra Nature Map (G. Robertson pers. comm. 13/07/2021) and there has been a recent sighting of the vulnerable Superb Parrot (*Polytelis swainsonii*) on Stirling Ridge (FoG 2021). Also within Stirling Park is a tree with a nesting hollow used by Gang-gang Cockatoos (M. Mulvaney pers. comm. 2021). The Gang-gang Cockatoo (*Callocephalon fimbriatum*) is considered vulnerable under NSW legislation and in 2021 was under assessment by the Threatened Species Scientific Committee to be eligible for listing under the EPBC Act.

Yarramundi Reach is a narrow stretch of water located to the west of West Lake. Its meandering character and informal natural shoreline create the impression that it is a natural water body. Yarramundi Reach is used as a rowing course and is surrounded predominantly by parklands with an absence of built features (GML 2009 p.17). Yarramundi Reach also refers to a peninsula on the western end of Lake Burley Griffin opposite Weston Park.

Located within Yarramundi Reach is the Lindsay Pryor Arboretum that commemorates Professor Lindsay Pryor who was the superintendent of Parks and Gardens in Canberra between 1944 and 1958 (GML 2009 p.17). The arboretum is 26 hectares and is situated on the site that was designated under the Griffin Plan as a place for a continental arboretum (GML 2009 p.150). Significant plantings were undertaken between 1954 and 1957 for the purpose of testing the growth of a range of exotic and native species including eucalypts, poplars and conifers (GML 2009 p.150). Some species of trees which are not grown in Canberra parks and streetscapes survive here, including White Oak (*Quercus alba*) and Cork Oak (*Quercus suber*) (GML 2009 p.150).

Also located at Yarramundi Reach is an EPBC Act protected rare temperate grassland that supports a relict stand of Snow Gums as well as the endangered Striped Legless Lizard (*Delma impar*) and the Perunga Grasshopper (*Perunga ochracea*) (GML 2009 p.17, 142). Although now considered marginal, the site may also provide habitat for the Golden Sun Moth (*Synemon plana*), listed as critically endangered under the EPBC Act and endangered under the NC Act (ACT Govt 2017 p.89). Golden Sun Moths were recorded here in the 1990s (NCA, 2021). Their loss in the last 20 years is thought to be associated with over a decade of sustained high herbage mass and weed invasion due to a lack of grazing or mowing (ACT Govt 2017 p.193).

Roman Cypress Hill, a hilltop planting of *Cupressus sempervirens*, is located on the north-western part of Yarramundi Reach and is an example of a formative phase of historic public planting in Canberra. Roman Cypress Hill is reflective of the relationship between the natural topography of Canberra and axial views under the Griffin Plan (GML 2009 p.149). Roman Cypress Hill is illustrative of the innovative work carried out by Chief Afforestation Officer, Thomas Charles Weston. Many of the original specimens planted by Weston between 1919 and 1921 were lost in the 2001 and 2003 Canberra bushfires (GML 2009 p.17, 149). In 2006 the National Capital Authority began replanting the area with

seeds collected from the original trees (GML 2009 p.150).

Lake Burley Griffin is surrounded by large areas of landscaped parklands managed by the National Capital Authority (GML 2009 p.19). Lake edge plantings began in 1913 under the direction of the Superintendent of Parks, Gardens and Afforestation along the proposed edge of the future lake and continued under Professor Lindsay Pryor and David Shoobridge (GML 2009 p.24). Tree species planted included acacias, poplars, oaks, redwood, ash trees and eucalypts (GML 2009 p.24). The pre-European vegetation of the Lake Burley Griffin area was comprised principally of eucalyptus dry open forest, grassy woodlands and riparian forests along waterways of the Molonglo River (GML 2009 p.33). Remnant pockets of pre-European vegetation with altered structural and floristic characteristics are scattered across lake parklands as well as vegetation from the early Canberra pastoral era including *Eucalyptus blakelyi*, *Eucalyptus melliodora* (Governor General's Residence), *Eucalyptus bridgesiana* (Acton Peninsula), *Pinus radiata* (Yarralumla) and *Salix babylonica* (Blundell's Cottage and at Molonglo Reach) (GML 2009 p.23).

Wetland habitats at Yarramundi Inlet, Acacia Inlet and Warrina Inlet, comprising reed beds, fringing terrestrial vegetation and open water, provide habitat for a diverse population of waterfowl and land birds. Notable amongst the waterbirds to use the area are Latham's Snipe (*Gallinago hardwickii*), the Common Greenshank (*Tringa nebularia*), the Red-necked Stint (*Calidris ruficollis*) and the Sharp-tailed Sandpiper (*Calidris acuminata*), all of which are protected under the Japan Australia Migratory Bird Agreement and the China Australia Migratory Bird Agreement. Other locally rare species recorded here include the Greater Crested Grebe (*Podiceps cristatus*), the Little Bittern (*Ixobrychus dubius*), the Little Grassbird (*Poodytes graminus*) and the Musk Duck (*Biziura lobata*) (LBBG 2021).

Below the waters of the lake are occurrences of limestone, including a limestone cave, from which the original post-contact settlement name for the Canberra locality, the 'Limestone Plains,' is derived. Early descriptions of the area often refer to limestone, but most examples of this have since been either built on or submerged under the lake. Some of the few remaining visible occurrences emerge above the lake and extend outside the boundary of the place as low outcrops of dark grey recrystallised limestone, some bearing fossils, on the north-eastern shore of Acton Peninsula (Butz 1987; NCDC 1988 p.156).

History

The Canberra region is part of the traditional lands of people identifying as Ngunnawal, Ngarigu (Ngarigo), Ngambri and Ngambri -- Guumaal. Their care and associations with the land continue today. They are freshwater people whose country is enriched by significant waterways, the most significant being the Murrumbidgee River, but also Weereewaa or Lake George, which they share with a number of clans and provided an abundant diet. The rivers were the winter campgrounds demonstrated by archaeological evidence. Summer brought the annual Bogon moth season, and the annual journey every October up to the Snowy Mountains to feast on moths through the summer months. The rich harvest provided a sustained food supply to enable major annual gathering of clans. There were several dialects spoken across the region, closely associated with Gundungurra and Wiradjuri and in recent times focussed work has been undertaken to revitalise the local languages. Stone arrangements in the Namadji National Park are evidence of religious practice as well as rock art scattered through the region. Aboriginal people's continuing presence has been reaffirmed in recent times through the culmination of years of activism, notably the Aboriginal Tent Embassy, and the establishment of many Aboriginal organisations. Local Aboriginal groups are now recognised in major ceremonial roles in the proceedings of the nation's Capital and are central to its evolving identity.

Lake Burley Griffin was established as a lake feature in the twentieth century as part of the design of the new capital city. The Lake was formed along the course of the Molonglo River and was deliberately integrated into the overall design of a small city originally designed for 150,000 people.

Today the lake functions as a city recreation area and as a display feature that showcases the national capital and many of its national institutions. Some parts are also used for national ceremonial purposes and national memorialisation. Gifting in the form of plantings, sculpture and other ornamental works has also been received from other nations and these gifts of friendship have been given recognition by their placement within the 'national' area, often along the parkland areas forming the foreshore of Lake Burley Griffin.

Early colonial period

In 1820 and 1821 Charles Throsby led expedition parties to the Canberra region and explored the Molonglo River and Limestone Plains (GML 2009 p.59-60). Diaries record that the local Aboriginal population had been affected by smallpox and Throsby himself is thought to have brought influenza to the region with tragic results. Settlement followed soon after with the arrival of Joshua John Moore who established the *Canberry Station* near the current site of the National Museum of Australia in 1824. It is well documented that, 'This was the English phonetic rendition of the place on which the station was located and also the name of the group who took their name from the place that was the core of their traditional country.' (Jackson-Nakano 2001 p.39) In 1825 James Ainslie, on behalf of Robert Campbell settled

400 acres at Pialligo on the Molonglo flood plain (GML 2009 p.60). The positive reports of the region encouraged more settlers and squatters to follow soon after (GML 2009 p.60). Settlement of the country resulted in frontier conflict, initially over the capture of Aboriginal girls. Large gatherings of armed warriors at Weereewaa /Lake George were 'quietly dispersed' by two regiments of soldiers sent by the Governor in 1826.

In the late 1820s, the first resident landlord, John Macpherson settled on land on the northern side of the Molonglo River and named the property 'Springbank' (GML 2009 p.60). Yarralumla was settled in the mid-1830s and it is believed that one of the people involved in its operation was responsible for planting of willow trees along the banks of the Molonglo River, a key landscape feature that remains to this day (GML 2009 p.60-61). The early settlers engaged primarily in wool production and tended large flocks of sheep on the Limestone Plains (GML 2009 p.61). By 1841 the Canberra region had a population of 451, with settlement concentrated in the Acton and Reid areas due to the proximity of the main river fords that were used until Lake Burley Griffin was constructed (GML 2009 p.61). Tracks, cottages and farms were built all over the Limestone Plains, however cyclical periods of droughts and flooding presented a challenge for the early settlers (GML 2009 p.61). High grain prices in the 1860s brought prosperity to the region however, an eight-year drought which began in 1895 along with grasshopper plagues brought economic depression to the region (GML 2009 p.61-63).

The establishment of Canberra

The Commonwealth of Australia was created in 1901 and the first parliament was opened in Melbourne in the same year. An important part of the federation process was the need to establish a national capital. In 1909 the Commonwealth Government surveyor Charles Robert Scrivener undertook preliminary field work in the Molonglo River area in the Canberra region and its hinterland. Scrivener recommended to Parliament that this area be confirmed as the site for the new Federal Capital. One of Parliament's key requirements for the new national capital was that it should be picturesque and have an adequate water supply to allow the creation of artificial lakes and gardens. Scrivener suggested that 'ornamental waters' could be created by building a dam on the western side of the Molonglo River (GML 2009 p.64). In 1911 the Commonwealth Government launched an international design competition for the Federal Capital with specific requirements for 'ornamental waters', parks and gardens as the centrepiece of the new city (GML 2009 p.64). From the 137 submissions received, Chicago architect Walter Burley Griffin was selected as the winner. Burley Griffin's wife, Marion Mahony Griffin, also an architect, collaborated with him on the design competition entry, and is known to have prepared the design drawings that accompanied the Burley Griffin entry (National Archives of Australia 2015).

Griffin's design included a man-made lake that would cover the whole of the Molonglo River flood plain and incorporated a central trinity of formal basins with informal lakes either side (GML 2009 p.64). Griffin's triple basin concept, comprised of the East Basin, West Basin and Central Basin was envisaged as the heart of the city where nearby monumental public buildings would be reflected in the lake waters while the two informal lakes would be places for recreation with associated botanical gardens, arboreta and forest reserves (GML 2009 p.64-65). Griffin designed the layout of the city to complement the natural topography of the Canberra landscape. The key elements in Griffin's design were the land and water axes; the land axis runs between Mount Ainslie through Capitol Hill and on to Mount Bimberi. Intersecting the land axis was the water axis that ran from Black Mountain across the flood plain of the Molonglo. The East, West and Central Basins were located along the water axis and defined by circular and straight shorelines designed for drives and promenades (GML 2009 p.89). The Griffin Plan also included traffic bridges that would connect settlements either side of the Molonglo River and visually separate the three basins (GML 2009 p.89).

In 1913 the city was officially named Canberra and Walter Burley Griffin arrived to take up a position as the Federal Capital Director of Design and Construction (GML 2009 p.65). Between Griffin's entry being selected as the winning design and his arrival, a number of issues with the Griffin Plan emerged including its cost, scope and the ability of the Commonwealth Government to secure water rights to the Molonglo and Queanbeyan catchments needed to service the lake (GML 2009 p.65). The outbreak of the First World War slowed the progress of capital works in Canberra, however under the direction of Chief Afforestation Officer, Thomas Weston, a program of ornamental planting around the perimeter of the proposed lake was implemented. Griffin resigned from his position in 1920 and the development of Canberra became the responsibility of the Federal Capital Advisory Committee (FCAC) who embarked on a renewed building program which included the construction of monumental buildings and the 'ornamental waters' (GML 2009 p.66). To feed the increasing local population, the FCAC decided to lease out the Molonglo floodplain (the future site of Lake Burley Griffin) for intense cultivation. This gave rise to the perception that the Commonwealth's Provisional Parliament was situated near a sheep paddock rather than a capital city. The floodplain was also leased out for a golf course, tennis courts and racecourse (GML 2009 p.66).

A large number of construction workers were employed to undertake the capital works program needed to establish the national capital. Among the public works was a major sewer construction project which required a temporary workers' camp known as Westlake to be established in Stirling Park on the southern shore of West Lake (GML 2009 p.67). The Westlake settlement included a hotel, timber family cottages, communal huts and a hall and was the most developed of

several temporary camps that sprang up around capital works sites (GML 2009 p.67). Westlake continued to grow and at its height was home to more than 700 construction workers or one fifth of Canberra's population. Most of the camp sites were dismantled in the mid-1920s and little extant fabric from these settlements remains (GML 2009 p.67).

In 1925 a major flood event divided the northern and southern settlements either side of the Molonglo River, temporarily revealing what the 'ornamental waters would look like when completed' (GML 2009 p.67). In the same year a plan for the 'ornamental waters' that showed three formal lakes flanked by two naturalistic lakes was gazetted and discussions about the aesthetics and recreational utility of the future lake became increasingly important. Economic depression in the 1930s and the outbreak of the Second World War slowed the development of the lake; after the conclusion of the war, the idea of shaping Canberra as a grand national symbol lost momentum (GML 2009 p.67-68, 95).

Plans for the lake in the 1950s

By 1950 Canberra still had a strong rural appearance and character. In the early 1950s the latest government body responsible for the development of Canberra, the National Capital Development and Planning Commission, deleted the East Lake basin and West Lake from the 'ornamental waters' plan and replaced it with a much smaller 'ribbon of water' concept that would free up more land for city development and ensure that the racetrack and golf course near Acton, which had become popular destinations, could be retained. In 1955 a Senate Inquiry reversed the decision to eliminate West Lake from the 'ornamental waters' plan and recommended a program of planting around the lake edges as well as a lakeside drive (GML 2009 p.68).

In 1949 Robert Menzies was elected as Prime Minister and championed the development of Canberra, personally intervening in the stalled planning process. Menzies invited prominent British town planner Sir William Holford to consult on the development of Canberra. Among Holford's first recommendations was to establish a single planning body for Canberra, the National Capital Development Commission (NCDC) (GML 2009 p.69). John Overall was appointed commissioner of the NCDC and planning for the 'ornamental waters' entered its final stages. Holford supported the formal basins concept of Griffin's plan but recommended reducing the size of East Basin and West Lake (GML 2009 p.69). Up until this point, Canberra had developed as two distinct settlements either side of the Molonglo River and Holford saw the lake scheme as a vehicle for unification and advocated a permanent Parliament House to be built on the southern shore of the Central Basin. With the support of Holford and Menzies, the NCDC was able to progress the development of the ornamental waters.

Construction begins

The final plan developed by the NCDC for the construction of the lake was comprised of three stages. Stage 1 activities included entering contracts for the construction of the dam and bridges which would provide Canberra with a much-needed modern road system. Hydraulic modelling, geological studies, soil conservation and water catchment programs were all undertaken (GML 2009 p.69). The results of these studies informed the final planning processes in Stage 2 and active support by Menzies silenced opposition to the massive capital works program that would be needed for the Stage 3 construction works. Lake earthworks, the dam and bridges were the first Stage 3 projects to be commenced and changed the Molonglo River flood plains into a 'scarified wasteland' (GML 2009 p.70).

Scrivener Dam was designed by the Commonwealth Department of Works and incorporated a traffic bridge. Five state-of-the-art German 'fish-belly-flap' gates were installed in the dam which would precisely regulate the water level of the future lake. The Kings Avenue Bridge was officially opened on 10 March 1962 by Prime Minister Menzies. The bridge was the first permanent high-level crossing over the Molonglo River and consisted of two separate but aligned simple bridge structures each with two carriageways (GML 2009 p.70). Commonwealth Avenue Bridge was officially opened in October 1964 and consisted of a dual structure that had six traffic lanes and included gift stones from the old Waterloo Bridge in London (GML 2009 p.70). Both bridges were built using the latest prestressing construction techniques and at the time of their construction were of a high engineering and architectural design standard. Existing structures in the Molonglo flood plain such as the racetrack were demolished in preparation for the filling of the lake, and islands were built using lake floor spoil (GML 2009 p.70). Landscaping of the lakeshore continued throughout this period with extensive planting of native and exotic trees under the direction of Richard Clough (GML 2009 p.70).

Lake Burley Griffin

Water began to be impounded on 20 September 1963 when the gates of Scrivener Dam were closed. Limited rainfall in the next six months meant that the lake began its life as a series of muddy pools, reviving old fears about the adequacy of water supply (GML 2009 p.72). On 29 April 1964, just days before a national rowing regatta was scheduled to be held on the lake, the lake finally reached its planned water level at the 556m contour and the regatta proceeded without incident (GML 2009 p.72). The 'ornamental waters' were a major component of the Griffin plan and the lake was named in his honour. Lake Burley Griffin became the largest artificially made ornamental water feature in Australia and has evolved into a prominent Canberra landmark. The lake was inaugurated by Robert Menzies at Regatta Point on 17 October 1964 to considerable fanfare including a lakeshore fireworks display (GML 2009 p.72). The completion of

the lake was widely reported in domestic and international media circles and was an important moment in the history of Canberra and Australia (GML 2009 p.101).

Landscaping around the lake continued with large-scale planting of evergreen and deciduous trees. Areas around the Central Basin were planted with exotic trees to create stunning year-round colour displays which became an iconic landscaping feature of Lake Burley Griffin (GML 2009 p.72). The central basins area was reserved as a waterscape setting for monumental national buildings and memorials, the first of which to be built was the National Library of Australia in 1968. Its location near the lake edge made it a key visual landmark in the cityscape and its reflection on the surface of the lake endowed it with strong aesthetic qualities (GML 2009 p.101). The National Library of Australia was followed by the High Court in 1980 and the National Gallery in 1981.

In 1969 a water jet capable of shooting water 147 metres into the air was installed on the lake as a memorial to Captain James Cook, as well as an accompanying sculptured globe showing his voyages which was placed on the northern foreshore of the lake. A bell tower located on Aspen Island, known as the Carillon, was gifted from the British Government and built to celebrate the 50th Jubilee of the founding of Canberra (GML 2009 p.73). In 1986 a Peace Park was built between the National Library of Australia and Lake Burley Griffin and later Questacon was constructed with monies provided by the Japanese Government to celebrate the Bicentennial. A triangular sailing course and an Olympic rowing course were installed at West Lake, a boat harbour was built at Kingston and yacht anchorage was offered at Yarralumla Bay and Lotus Bay (GML 2009 p.72). A Water Police Headquarters was built at Yarralumla Bay in 1965 and a tourist ferry began operating in West Basin near Acton. Other than the ferry, motorboats were discouraged due to concerns over pollution and noise. Open spaces around the lake were set aside for picnic spots and playgrounds. Four designated swimming areas were set aside at Yarralumla, Weston Park east and west and Black Mountain Peninsula. The lake was also stocked with rainbow and brown trout to cater for local fishing enthusiasts (GML 2009 p.73). Since 1964 Lake Burley Griffin and its foreshores have hosted numerous local and national events and celebrations such as Australia Day and Floriade. Various sailing and boating events, including the world's first hovercraft race, have been held on the lake as have several large firework events including for the Bicentennial and the twinning of Canberra and Versailles-Les Yvelines in France. The inaugural *Skyfire*, a local fireworks event was held in 1988 and has become an annual event for the Canberra community (GML 2009 p.76).

Maturing of the Lake Burley Griffin landscape

In 1988 the Australian Capital Territory (ACT) became self-governing and planning and management responsibility passed from the Commonwealth Government to the new ACT Government. The Commonwealth Government retained control of the Central Capital Area which included Lake Burley Griffin. This area was managed by the National Capital Planning Authority and later the National Capital Authority (NCA) who promoted a diverse use of the lake, improved accessibility and placed an emphasis on water quality monitoring and safety protection (GML 2009 p.75). In 1994 the Commonwealth and ACT Government exchanged ownership of two areas of land next to the lake. Acton Peninsula returned to Commonwealth ownership with an area of Kingston foreshore coming under ACT Government control. This area has subsequently been subject to significant commercial and residential development as per one of the elements in the Griffin plan which involved nodes of development around the lake foreshores (GML 2009 p.75, 106). In 1997 the Canberra Hospital was demolished and the site was cleared for the new National Museum of Australia which was opened in 2001 for the Centenary of Federation (GML 2009 p.75). Following a national design competition, Commonwealth Place and Reconciliation Place were opened in 2002 on the southern shore of the lake as places of symbolic reconciliation (GML 2009 p.105). The promenade created by Commonwealth Place and Reconciliation Place was an adaptation of Griffin's waterfront terrace concept while the Commonwealth Place Forecourt was a contemporary version of Griffin's Water Gate (GML 2009 p.105-106). In 2004 Prime Minister John Howard dedicated a National Emergency Services memorial in Kings Park and two years later the R G Menzies Walk was opened at Kings Park (GML 2009 p.76).

Lake Burley Griffin environmental management

Environmental issues have been a central concern for the various administrative bodies that have been responsible for the management of Lake Burley Griffin. The waters of Lake Burley Griffin were not declared as safe for swimming by the Department of Health until 1969. During the 1970s water quality was of concern as was controlling water flows which was finally resolved in 1978 when Googong Dam was built.

The 2001 and 2003 Canberra bushfires damaged Yarramundi Reach as well as the National Arboretum planted by Lindsay Pryor and Roman Cypress Hill (GML 2009 p.77). During both fires, water from the lake was used by fire-fighting crews.

The area originally designated by Griffin as East Lake was removed from the final design of Lake Burley Griffin and has become a freely draining floodplain which over time has developed into wetlands and was officially named the Jerrabomberra Wetlands Nature Reserve in 1990 (GML 2009 p.77).

Within a short space of time, Lake Burley Griffin became an important part of the Canberra landscape. Developments that had the potential to threaten the Lake or its surrounding areas were met with strong public debate and sometimes opposition (GML 2009 p.105).

Lake Burley Griffin as a Designed Landscape

Lake Burley Griffin is a central part of the Canberra landscape and a key element in the conceptual design of the city first conceived by Walter Burley Griffin and Marion Mahony Griffin. The end of the 19th century and the late 1950s were two key periods in the planning and development of Lake Burley Griffin that were influenced by two world-wide creative development trends: The City Beautiful and Garden City movements and the post-Second World War Modernism movement. Developments in the fields of town planning, landscape architecture and architecture as well as changing attitudes in Australian society also shaped Lake Burley Griffin (GML 2009 p.81).

At the end of the 19th century and early 20th century two dominant town planning models had emerged in Britain and America both of which had an important technical and creative influence on the design of Canberra and Lake Burley Griffin. The Garden City movement (Britain) was based on social, economic and landscape aesthetic philosophies and a central tenet of the movement was that people should have access to the beauty of country and that landscapes had intrinsic romantic aspects (GML 2009 p.82). The City Beautiful movement (America) was focused on appearance and neatness and attempted to convey the impression of commercial success, stability, political order, civic pride and cultural development. The movement was concerned with visual order and the beauty of the city (GML 2009 p.82). Despite their differences, the two movements shared several physical planning ideas including circular avenues and radiating boulevards both of which are evident in the layout of Canberra. In the design of Lake Burley Griffin, water was imbued with aesthetic values as well as social values associated with opportunities for contact with nature in an urban environment. Walter Burley Griffin's design of Canberra and Lake Burley Griffin was also shaped by the Chicago Exposition and Prairie School style of architecture (GML 2009 p.82).

A growing sense of confidence in Australian society was associated with the Federation process and created a receptive attitude towards the Garden City and City Beautiful movements. The integration of the landscape and the built environment was seen as a way to beautify the city and was also related closely to ideas of social and individual reform espoused by the Garden City concept and 'ornamental waters' as evidence of a society's sophistication, development and culture (GML 2009 p.84).

The active interest that Prime Minister Menzies took in the development of Canberra and Lake Burley Griffin coincided with the rise of international Modernism that created the professional and technical environment needed to implement the Griffin plan (GML 2009 p.97). The Menzies Government engaged the celebrated town planner William Holford as a consultant to spearhead the design and construction of the national capital. Holford had gained prominence in the field of town planning through the roles he played in the redevelopment of post-war London and as a committee member for the design competition of Brasilia (GML 2009 p.98). Holford's vision for Canberra included elements of the Griffin Plan as well as being responsive to the rise of the motor car and modern-day traffic requirements. Through his *Advisory Report on the Canberra Lake Scheme* to the NCDC, Holford recommended creating a park-like setting around the lake and suggested several changes to the design of the lake. These changes included making the character of much of the northern bank of the lake informal except for the central section, creating islands to restore visual balance and using the Kings Avenue Bridge to screen the East Basin and the Commonwealth Avenue Bridge as a visual frame for the West Basin (GML 2009 p.98-99).

In the 1950s the NCDC invited a prominent landscape designer, Dame Sylvia Crowe to advise on the landscaping around the lake and the assist in the design of Commonwealth Park. Dame Crowe was accompanied by Richard Clough who was placed in charge of the NCDC's landscaping program. A significant program of tree planting around Canberra and the lake ensued. The Clough planting program was a significant milestone in the field of Australian landscape architecture (GML 2009 p.101). An important feature of the landscaping program was its use of 'ecologically-based conservation-oriented approach to working with native vegetation and regional identity' (GML 2009 p.101).

Condition and Integrity

Condition

The Lake is generally in a good condition and has a high degree of integrity as a designed landscape (GML HML Vol. 1 Lake Burley Griffin 2009 p.30).

The Central Basin is generally in a good condition (GML HML Vol. 1 Lake Burley Griffin 2009 p.36).

The Captain Cook Memorial Jet is in a good condition (GML HML Vol. 1 Lake Burley Griffin 2009 p.41).

Westlake's aesthetic values are in a good condition, apart from weed management problems. Protection and management are also needed for habitat values provided by the lake water body (GML HML Vol. 1 Lake Burley Griffin

2009 p.44).

Springbank and Spinnaker Islands require active management for the lake edge properties and lake edge planting (exotic and native) as well as protection and management of the habitat values provided by the lake waterbody draw-down zone (foreshore areas) (GML HML Vol. 1 Lake Burley Griffin 2009 p.47,49).

The dam is in a reasonable condition, is well maintained and has not been significantly structurally modified during its lifetime, with the exception of modernising its hydraulic and electric control systems. It was originally built to impound a recreation lake, and this has not changed (Australian Heritage Database, Lake Burley Griffin Conservation Area, Indicative place). Scrivener Dam had major engineering remediation works undertaken in 2014 and is in a sound condition (Australian Heritage Database, Lake Burley Griffin and Lakeshore Landscape, Nominated place). The NCA is currently undertaking design work for a major project to strengthen the downstream structure of the dam.

The sewer vent is weathered but generally in a sound condition. The condition of the sewer below the vent is unknown (GML HMP Vol. 2 Stirling Ridge and Attunga Point 2009 p.30).

Only vestigial remnants of the former Westlake settlement survive, following demolition of the houses and 'clean up' of the site in the 1960s. Other archaeological remains of earlier European settlement and work may also exist in the site (GML HMP Vol. 2 Stirling Ridge and Attunga Point 2009 p.33).

The surviving portion of *Cupressus sempervirens* trees on Roman Cypress Hill covers an area of approximately 100 m² at the edge of the cutting for the Tuggeranong Parkway. The remainder of the site was replanted with the same species in 2006. Remnants of the original plantings (12-13 individuals) need protection and attention to their continued health. The more recently planted trees need to be maintained to protect the health of individuals and the structural form of the plantation. Weeds have established strongly on the hillsides and disturbed ground throughout the plantation. There is a need to protect the site from wildfire (from the west) (GML HMP Vol. 3 Yarramundi Peninsula 2009 p.36).

Metal reflectors on Kings Avenue Bridge are corroded, pitted and dull, and have suffered from some vandalism (GML HMP Vol. 4 Dams and bridges 2009 p.28). Commonwealth Avenue Bridge appears well maintained. This bridge provides some of the most important views of Lake Burley Griffin, including surrounding near and distant topography, to both pedestrians and motorists. Enhanced pedestrian access, interpretation and viewing areas could take better advantage of these qualities (GML HMP Vol. 4 Dams and bridges 2009 p.31). The NCA is planning works to the bridge. The works will include strengthening the bridge structure and improving safety for all users of the bridge.

The natural values of Lake Burley Griffin and Adjacent Lands are generally considered to be in good condition and the place is well-managed by the National Capital Authority (NCA), guided by management plans and ACT Government policy. The ACT Government has in place a comprehensive environmental management system that includes conservation strategies and associated action plans for native grassland and native woodland. These ecological communities and the threatened species for which they provide important habitat are under constant threat from invasive species and must be actively managed for conservation purposes. Under an Environmental Care Agreement with the NCA, volunteer non-profit association Friends of Grasslands conducts regular restoration work and weed control at Yarramundi Reach, Stirling Park and Attunga Point (FoG, 2021).

The native vegetation on the upper part of Stirling Ridge, where the main populations of *Rutidosia* (Button Wrinklewort) are to be found, has suffered some historical disturbance (GML, 2009: 145) but is now regenerating well. Some invasive weeds have become established, especially around the margins of the upper slopes and in the gullies, but these could be eventually controlled and eliminated.

Water quality in Lake Burley Griffin can be variable and at times the lake is closed due to raised levels of Blue Green Algae, bacteria or other environmental incidents. The NCA manages a water quality monitoring program to assess the environmental status of Lake Burley Griffin and to advise users about changes in water quality conditions. The program includes water sampling and analysis of microbiological and algal levels from mid-October to mid-April and visual algae inspections throughout the year. Monitoring and analysis is conducted in accordance with the ACT Guidelines for Recreational Water Quality (2014).

Introduced fish species such as Redfin and Carp are a threat to native fish species in the lake. Fish numbers are monitored and management actions to protect the vulnerable Murray Cod are outlined in the Murray Cod (*Maccullochella peelii*) Native Species Conservation Plan.

Integrity

The Central Basin has a high degree of integrity as a designed landscape. Conservation of the aesthetic, creative and

technical values of the designed landscape is the key challenge for the Central Basin including the need to maintain views to and from the water that encompass distant topography and unites all as the setting for central Canberra; the visual qualities of the lake as the setting for the major institutions; and the balance of the horizontal and vertical elements including the bridges, and Captain Cook Memorial Jet. (GML HML Vol. 1 Lake Burley Griffin 2009 p.36).

The Captain Cook Memorial Jet is an integral part of the Lake Burley Griffin designed landscape (GML HML Vol. 1 Lake Burley Griffin 2009 p.41).

Westlake provides a distinctive contrast to the more formal parts of the lake and therefore has high integrity in terms of its designed role in the landscape of Lake Burley Griffin (GML HML Vol. 1 Lake Burley Griffin 2009 p.44).

Currently there is no interpretation about Scrivener Dam and its history at either of the two off-road lookouts close to the dam (GML HMP Vol. 4 Dams and bridges 2009 p.33).

Installation of plaques and signs, as well as publications on the history of the place at the former Westlake settlement, show that the association of ex-residents and their dependents with the place remains strong. (GML HMP Vol. 2 Stirling Ridge and Attunga Point 2009 p.33).

It has been noted (LBGG 2021) that recent foreshore works in West Basin involving lake infill for a building estate have damaged the balanced three basin composition envisaged in the Griffins' plan and destroyed the naturalistic landscape edge.

Location

About 6640ha, Canberra, comprising the following:

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

Bibliography

- ACT Government, 2019. *ACT native woodland conservation strategy and action plans*. Canberra.
- Butz, M. 1987. *The lost karst of Canberra*. Paper presented to 22nd Conference Institute of Australian Geographers, Canberra, August 1987.
- Canberra Nature Map (CNM). Accessed on 13 July 2021 at <https://canberra.naturemapr.org/>.
- Friends of Grasslands (FoG), 2021. *Submission to Lake Burley Griffin and Adjacent Lands Commonwealth Heritage assessment*.
- Godden Mackay Logan, 2009. *Lake Burley Griffin. Heritage Assessment. Final Report*. Report prepared for the National Capital Authority.
- Godden Mackay Logan, 2009. *Lake Burley Griffin and Adjacent Lands. Heritage Management Plan. Volume 1 -- Lake Burley Griffin*. Report prepared for the National Capital Authority.
- Godden Mackay Logan, 2009. *Lake Burley Griffin and Adjacent Lands. Heritage Management Plan. Volume 2 -- Stirling Ridge and Attunga Point*. Report prepared for the National Capital Authority.
- Godden Mackay Logan, 2009. *Lake Burley Griffin and Adjacent Lands. Heritage Management Plan. Volume 3 -- Yarramundi Peninsula*. Report prepared for the National Capital Authority.
- Godden Mackay Logan, 2009. *Lake Burley Griffin and Adjacent Lands. Heritage Management Plan. Volume 4 -- Dam and Bridges*. Report prepared for the National Capital Authority.
- Jackson-Nakano, A. 2001. *The Kamberri: a history from the records of aboriginal families in the Canberra-Queanbeyan district and surrounds 1820-1927 and historical overview 1928-2001*. Aboriginal History, Canberra.
- Lake Burley Griffin Guardians (LBGG), 2021. *Submission to Lake Burley Griffin and Adjacent Lands Commonwealth Heritage assessment*.
- National Archives of Australia, 2015. *Walter Burley Griffin and the design of Canberra -- Fact sheet 95*, accessed on 30 July 2015 via <http://www.naa.gov.au/collection/fact-sheets/fs95.aspx>.
- National Capital Authority, 2021. *Water Quality*. Accessed on 19 August 2021 at <https://www.nca.gov.au/national-land/lake-burley-griffin/water-quality>.
- National Capital Authority, 2021. *Yarramundi Grasslands*. Accessed on 2 September 2021 at <https://www.nca.gov.au/attractions-and-memorials/yarramundi-grasslands>.
- National Capital Development Commission, 1988. *Sites of Significance in the ACT. Volume Two. Inner Canberra*. Technical Paper 56, National Capital Development Commission, Canberra, ACT.

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ATTACHMENT 2 DRAWINGS



OPTION D ●

STAGING ●

CONSTRUCTION PROGRAM ●

NCA WORKS APPROVAL DELIVERABLES ●

PRE NCA WORKS APPROVAL

ACTON WATERFRONT PARK

18.05.2023 MEETING

OPTION D

INCLUSIONS



LEGEND

- 1** UPPER PLAZA
Gathering area overlooking Lake Burley Griffin. Future connection to future Acton Estate Development
- 2** AMPHITHEATER
Steps and bleachers overlooking Lake Burley Griffin
- 3** EVENT AREA
Gathering area for pop up events
- 4** PLAY SPACE
Adventure and water play area with Pavilion containing kiosk and amenities
- 5** COMMUNITY PARK
BBQ areas and shelters for community gatherings with turf kick about area
- 6** ARRIVAL
Axis Avenue to waterfront. Future connection to future Acton Estate Development
- 7** ARRIVAL ALBERT ST
Arrival plaza connection to Pavilion and Albert st. Key arrival of light rail stop to waterfront

- - - - STAGE 1A EXTENT OF WORKS
- . - . - . STAGE 1B EXTENT OF WORKS
- WET FILL OUTLINE
- LIGHT RAIL STOP

FRONT PARK OPTION D: STAGE 1B

STAGE 1A WORKS

INCLUSIONS



OPTION D Temporary Works is to allow for a settlement period of earthworks of 12-18 months, connection to existing carpark and Henry Rolland Park and allow for temporary event space

LEGEND

- 1** New earthworks to connect existing carpark levels and future Acton waterfront park design. Grassland hydro seed planting
- 2** Existing trees to be retained and protected
- 3** Existing Burley Griffin Walk to be retained
- 4** New arched pedestrian path 3.5m wide
- 5** Vehicular emergency and event access 3.5 wide
- 6** Removable bollards and entry vehicular access
- 7** Pedestrian access to existing facilities
- 8** Event area. Compacted decomposed stabilised granite for Pop up events and temporary activation
- 9** Temporary stage 1a retaining wall with temporary balustrade
- 10** 750mm H retaining wall - Insitu concrete Wall
- 11** Turf kick about area
- 12** Pedestrian connecting path to existing carpark
- 13** Temporary pedestrian connection aligned with existing Albert st footpath to access boardwalk

--- STAGE 1A EXTENT OF WORKS

..... WET FILL OUTLINE

● LIGHT RAIL STOP

STAGE 1A WORKS

CIRCULATION + MOVEMENT



LEGEND

- Vehicular Access
- Vehicular Emergency and Event Access Only
- Cycle route
- Pedestrian Connection
- Amenities

- STAGE 1A EXTENT OF WORKS
- STAGE 1B EXTENT OF WORKS
- LIGHT RAIL STOP

FRONT PARK OPTION D: STAGE 1A

STAGE 1B WORKS

INCLUSIONS



OPTION D is to connect Acton Waterfront Park to existing carpark and Henry Rolland Park. Allowing for vehicular connection from Albert Street

LEGEND

- 1** Shared path 4m wide for pedestrian and cyclists connection to existing network
- 2** UPPER PLAZA Gathering area overlooking Lake Burley Griffin.
- 3** Future connection to future Acton Estate Development
- 4** Seating element added to stage 1A retaining wall
- 5** Access DDA stairs
- 6** Lower plaza. Gathering areas with shelter and seating
- 7** Amphitheater and stair access
- 8** PLAY SPACE - Adventure and water play area with Pavilion containing kiosk and amenities
- 9** Play space retaining wall with boulders - insitu concrete layered wall added to stage 1A temporary retaining wall
- 10** Play Space pavilion with amenities and kiosk
- 11** COMMUNITY PARK -BBQ areas and shelters for community gatherings with turf kick about area
- 12** ARRIVAL- Axis Avenue to waterfront. Future connection to future Acton Estate Development
- 13** Arrival Pavilion- Welcome to country. Ceremonial space with amenities and cafe
- 14** Barrine Drive connection to existing carpark from Albert st and Henry Rolland Park
- 15** ARRIVAL ALBERT ST- Arrival plaza connection to Pavilion and Albert st. Key arrival of light rail stop to waterfront

--- STAGE 1B EXTENT OF WORKS

..... WET FILL OUTLINE






● LIGHT RAIL STOP




STAGE 1B WORKS

CIRCULATION + MOVEMENT



LEGEND

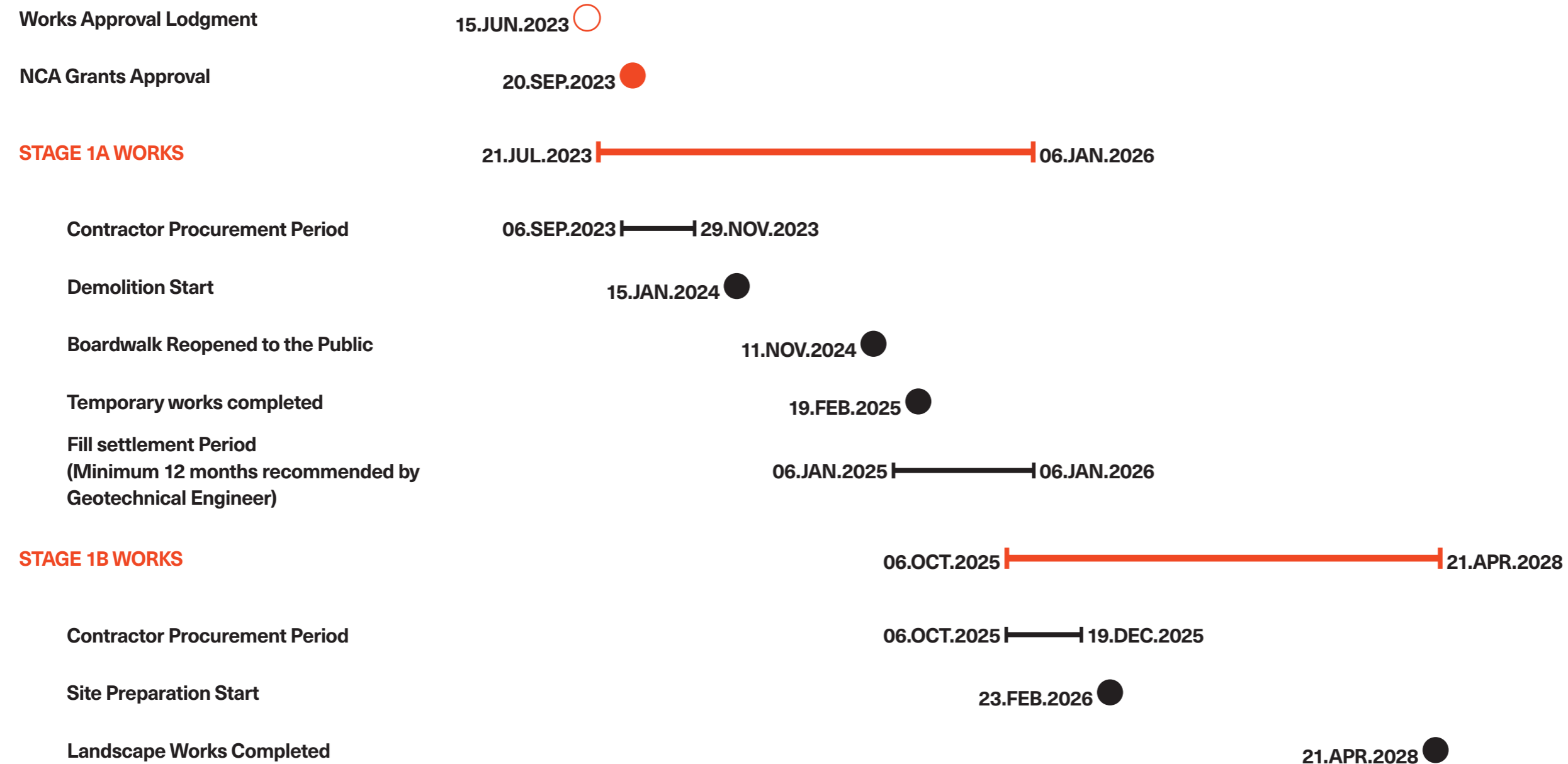
-  Vehicular Access
-  Vehicular Emergency and Event Access Only
-  Cycle route
-  Pedestrian Connection
-  Amenities

-  STAGE 1A EXTENT OF WORKS
-  STAGE 1B EXTENT OF WORKS
-  LIGHT RAIL STOP

FRONT PARK OPTION D: STAGE 1B

CONSTRUCTION PROGRAM

OPTION D



DELIVERABLES

NCA APPROVAL WORKS - OPTION D

LEGEND

- 1 **Planning Report**
- 2 **Schedule of proposed works**
- 3 **Detailed Site Plan (preferably 1:200 or 1:500)**
- 4 **Architectural Drawings (1:100 or 1:200)**
- 5 **Landscape Plans (1:200 or 1:500)**
- 6 **Civil & Excavation Plans**
- 7 **Drawing Schedule**
- 8 **3D Design Model**
- 9 **Traffic and Parking Assessment Report**
- 10 **ACT Government Agency Clearances**
- 11 **Consultation Report**
- 12 **Site Establishment and Construction (or Demolition) Management Plan**