Prepared for
Major Projects Canberra
ABN: 66 676 633 401

AECOM

Raising London Circuit

Landscape Character and Visual Impact Assessment

6 October 2021

Landscape and Visual Impact Assessment

Client: Major Projects Canberra

ABN: 66 676 633 401

Prepared by

AECOM Australia Pty Ltd
Level 21, 420 George Street, Sydney NSW 2000, PO Box Q410, QVB Post Office NSW 1230, Australia
T +61 2 8934 0000 F +61 2 8934 0001 www.aecom.com
ABN 20 093 846 925

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Executive summary

Introduction

Major Projects Canberra (MPC) proposes to raise London Circuit between Edinburgh Avenue and Constitution Avenue to provide a new at-grade, signalised intersection with Commonwealth Avenue (the Project). The Project is needed as part of coordinated and holistic delivery of a series of major projects in Canberra City and surrounds, to realise the strategic planning and development for the city presented in the National Capital Plan (NCP).

This landscape and visual impact assessment (LVIA) has been prepared to assesses the effect of the Project with regard to potential landscape character and visual impacts during construction and at operation and will be used to inform the Environmental Assessment (EA) for the Project.

LVIA is a tool used to identify and assess the impact and significance of change due to a project on both:

- the landscape as an environmental resource in its own right
- people's views and visual amenity.

This report has been undertaken in accordance with Transport for NSW (TfNSW) *Environmental Impacts Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment EIA-N04* (2020), with more detailed guidance taken from *Guidelines for Landscape and Visual Impact Assessment, Third Edition* (2013), developed by the Landscape Institute and Institute for Environmental Management (UK), which is widely recognised as comprising an example of 'best practice' in this field.

In accordance with these guidelines, key steps in the development of the LVIA include:

1. **Environmental and planning baseline** - An analysis of the regional and local context of the Project. This includes a thorough review of background documents, including policy and planning instruments, as well as an analysis of the environment within which the Project lies (refer to **Chapter 3.0** and **Chapter 5.0**).
2. **Design review** - A summary of design outcomes (refer to **Chapter 2.1**):
   - urban and landscape design
   - sustainability
3. **Impact assessment**:
   - **Landscape character impact assessment** - An assessment of the anticipated impact of the Project on landscape character as a result of the final design outcome (refer to **Section 4.3.1**)
   - **Visual Impact Assessment** - An evaluation of the impact of the Project on existing views and visual amenity within the study area (refer to **Section 4.3.2**)
4. **Mitigation** – Design outcomes and mitigation measures to avoid, reduce or mitigate adverse impacts that the Project may impose within the study area (refer to **Section 7.3**)

Summary of impacts

Impact on landscape character

Of the five LCZs identified within the study area, only two returned a magnitude of impact, due to the Project, greater than Negligible (refer to **Table i**). These were LCZ 2: Major Avenues and Axes, and LCZ 4: London Circuit. These were the two LCZs within which the Project lies. This result is due to the low visual prominence of the Project at completion, with landscaping (particularly street trees) the most visually prominent elements. While the raising of the London Circuit road corridor is the largest structural change, it is supported within the strategic planning documents and Griffin Plan, and any change in character would be considered acceptable within that context.

No LCZs returned a High or High to Moderate overall impact assessment rating, therefore no assessment of residual risk is required.

Table i: Summary of impact of the Project on landscape character within LCZs

Landscape Character Zone	Sensitivity	Unmitigated impact		Mitigated (residual) impact		Qualitative rating
		Magnitude	Overall rating	Magnitude	Overall rating	
LCZ 1: Parliamentary Zone and Cultural Triangle	Moderate	Negligible	Negligible	N/A	N/A	Neutral
LCZ 2: Major Avenues and Axes	Moderate	Low	Moderate to Low	N/A	N/A	Beneficial
LCZ 3: Lake Burley Griffin and Foreshores	Moderate	Negligible	Negligible	N/A	N/A	Neutral
LCZ 4: London Circuit	Moderate	Moderate	Moderate	N/A	N/A	Beneficial
LCZ 5: Parkes Way	Low	Negligible	Negligible	N/A	N/A	Neutral

Impact on views

The visual impact on views from surrounding viewpoints range from Negligible to High (refer to **Table ii**), with the highest ratings experienced from viewpoints close to the Project with direct views to the changes.

During construction, three viewpoints returned a High or High to Moderate impact rating. These viewpoints were all either positioned close to the changes and / or had high sensitivities due to heritage or cultural aspects of the viewpoints. Construction activity resulted in adverse affect on the quality of the views from the viewpoints, however, construction activity is a temporary change within the landscape.

At operation, the Project resulted in a High to Moderate impact rating from two viewpoints and a Moderate or Moderate to Low rating from four viewpoints. Most of these viewpoints would receive an increase in visual amenity due to the Project, returning a beneficial qualitative rating. One viewpoint returned an adverse qualitative rating (Viewpoint 5: London Circuit South West), which was due to the close proximity of the viewpoint to a proposed retaining wall.

The mitigated (residual) impact ratings shown in are a reassessment of those viewpoints that returned a High or High to Moderate rating, assuming mitigation measures outlined in **Table iii** are adopted.

Table ii: Summary of impact of the Project on views from viewpoints during construction

Viewpoint	Sensitivity	Unmitigated impact		Mitigated (residual) impact		Qualitative rating
		Magnitude	Overall rating	Magnitude	Overall rating	
Viewpoint 1: City Hill West	High	Low	Moderate	N/A	N/A	Adverse
Viewpoint 2: City Hill South	High	High	High	Moderate	High to Moderate	Adverse
Viewpoint 3: 7 London Circuit	Moderate	Low	Moderate to Low	N/A	N/A	Adverse
Viewpoint 4: 1 London Circuit	Moderate	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 5: London Circuit South West	Low	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 6: London Circuit South East	Low	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 7: Commonwealth Avenue	Moderate	High	High to Moderate	High	High to Moderate	Adverse

Table ii continued

Viewpoint	Sensitivity	Unmitigated impact		Mitigated (residual) impact		Qualitative rating
		Magnitude	Overall rating	Magnitude	Overall rating	
Viewpoint 8: Parkes Way Overpass	Negligible	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 9: Archbishops Residence	Low	Low	Low	N/A	N/A	Neutral
Viewpoint 10: Lake Burley Griffin / Land Axis	Negligible	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 11: Black Mountain	High	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 12: Mount Ainslie	High	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 13: Parliament House	High	Moderate	High to Moderate	Moderate	High to Moderate	Adverse

Mitigation of impact

The following mitigation measures attempt to address visual impact due to the Project at viewpoints that have returned a High or High to Moderate overall impact rating. One construction recommendation and two operational recommendation have been made (refer to **Table iii**).

Table iii: Mitigation measures

Ref	Issue / observation	Recommendation
C1	Hoarding around works is recommended, particularly where views are important (e.g. from city hill park looking south).	Hoarding should be used to reduce the visual prominence of the works seen from important locations (e.g. from City Hill Park looking south along Commonwealth Avenue). The design of the hoarding should consider visually recessive, natural colours and images rather than advertising material (including logos and brightly coloured text). Potential ideas include the use artwork or natural pattern that screen portions of the construction, while the height of the hoarding still allows views over the top to key features such as City Hill.
O1	The materiality of the retaining walls is important to visual amenity	Materiality of retaining walls is recommended to include a texture or pattern to reduce the visual solidity of the surface of the wall, or provision of planting between the retaining wall and the adjacent paving to reduce the visual prominence of the walls from the surrounding area. Of the options being considered, walls clad in *Wee Jasper Stone* are preferable over in-situ concrete. Provision of planting at the base of retaining walls could also help reduce the visual prominence of retaining walls.
O2	Views are an important element within the heritage values of some of the LCZs and from viewpoints. Visual clutter that threatens to impact significant views (e.g. along main avenues such as Commonwealth Avenue) should be kept to a minimum, including infrastructure elements that 'lean' into the corridors. These include traffic lights, street lighting and electricity poles and wires.	Ensure the palette of taller infrastructure items are as visually unobtrusive as possible, particularly along Commonwealth Avenue.

Conclusion

While many LCZs have a heightened sensitivity due to cultural or heritage importance, particularly related to the location within the Nation's capital, the susceptibility of these areas to the Project is relatively low, effectively lowering the overall sensitivity of these LCZs to the Project. The magnitude of change was assessed at operation and was typically found to be low, predominantly due to the Project being in keeping with the character of the LCZs within which it lies. Overall, the highest impact rating returned for landscape character was Moderate Beneficial, which occurred within LCZ 4: London Circuit.

Overall, the Project is considered to have a Moderate to Low impact on local landscape character (i.e. the character of the landscape directly surrounding the Project). There would be no impact on the greater landscape character of the area due to the Project. The Project, while comprising a series of changes within the existing landscape, fits within the surrounding existing and proposed landscape character as described by strategic planning documents.

The visual impact of the Project was considered during construction and at operation.

During construction, the Project typically impacted views close to the construction activity, including views seen on Commonwealth Avenue and within City Hill Park. One more distant viewpoint was found to be impacted during construction: Viewpoint 13: Parliament House. The High to Moderate rating returned from this viewpoint was more dependent on the high sensitivity of visual receptors at that location rather than the magnitude of change seen, as construction activity would be viewed from a considerable distance.

During construction, changes to views from surrounding areas due to the Project is considered acceptable due to the temporary nature of the changes and the anticipated ongoing development of the surrounding area as described by strategic planning documents.

At operation, changes due to the Project would only impact views close to the Project. Distant viewpoints would not be impacted either due to the distance of viewing, screening by landform, vegetation and built form, or the low visual prominence of the operational changes.

The Project is considered to have a positive influence on visual amenity. The proposed street trees and planted median strips are considered a beneficial addition to views from surrounding areas. The raising of London Circuit, while seen as a considerable change from the existing situation, is considered visually acceptable within the context of the overall development of the area as outlined in strategic planning documents.

Overall, the Project is considered to have a Moderate beneficial effect on views from close to the Project, and a Negligible impact on more distant views.

Changes to landscape character and views due to the Project are considered acceptable within the context described in this report.

Abbreviations

Abbreviation	Meaning
ACT	Australian Capital Territory
AHD	Australian Height Datum
CBD	Central Business District
CHL	Commonwealth Heritage List
DA	Development approval
EA	Environmental Assessment
FoV	Field of View
GIS	Geographic Information System
GSM	Golden Sun Moth
HIA	Heritage Impact Assessment
IS	Infrastructure Sustainability
ISC	Infrastructure Sustainability Council
km	Kilometres
LVIA	Landscape and visual impact assessment
LCZs	Landscape Character Zones
m	Metres
MPC	Major Projects Canberra
NCA	National Capital Authority
NCP	National Capital Plan
NHL	National Heritage List
NSW	New South Wales
PALM ACT	Australian Capital Territory (Planning and Land Management) Act 1988
RLC	Raising London Circuit
WSUD	Water Sensitive Urban Design
ZTV	Zone of Theoretical Visibility

Definitions

Term	Meaning
Central National Area	Precincts within Designated Areas numbered 1-15 and Canberra Airport form the Central National Area, as defined by the National Capital Plan.
Cloverleaf / Cloverleaves	The loop roads connecting Commonwealth Avenue with London Circuit and Parkes Way.
Detailed study area	A smaller study area within the broader contextual study area used to detail or analyse features or effects on a more detailed scale (refer to **Figure 1**).
Magnitude	A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or not, and whether the change is short or long term in duration (Landscape Institute and Institute for Environmental Management and Assessment, 2013).
Land Axis and Water Axis	The structure of the Griffins' plan for Canberra was based on two axes - the Water Axis running south east from Black Mountain along the line of the formal central lake, and the Land Axis, connecting Mount Ainslie to Capital Hill, intersecting the Water Axis at a right angle.
Main Avenues	Canberra's Main Avenues and Approach Routes as listed in the NCP, which have symbolic and functional significance of the National Capital. These include Commonwealth Avenue, Edinburgh Avenue, Constitution Avenue, Northbourne Avenue, Kings Avenue and University Avenue.
National Triangle	A triangle bounded by three Main Avenues (Commonwealth, Constitution and Kings Avenues) which make up the heart of the Griffin Plan, with Capital Hill at its apex.
Receptors	(or 'visual receptors'). Individuals and/or defined groups of people who have the potential to be affected by a Proposal (Landscape Institute and Institute for Environmental Management and Assessment, 2013).
Sensitive receptors	Land uses which are sensitive to potential noise, air and visual impacts, such as residential dwellings, schools and hospitals.
Sensitivity	A term applied to specific receivers, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor (Landscape Institute and Institute for Environmental Management and Assessment, 2013).
'Sentinel' tree	A feature tree with columnar form.
Study area	The area within which the impact of the Project on landscape character, views and visual amenity is assessed in this report (refer to **Figure 1**).
The Project	The construction and operation of RLC.
The Territory	The Australian Capital Territory.
Viewpoint	The location from which an assessment is made of the impact the Project has on the view.
Visual amenity	The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area (Landscape Institute and Institute for Environmental Management and Assessment, 2013).
Visual simulation	A computer simulation illustrating the predicted appearance of a development overlaid on a photo of the existing view.
Zone of Theoretical Visibility	A map showing the likely visibility of the Project, once operational, from surrounding areas.

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1.0 Introduction

Major Projects Canberra (MPC) proposes to raise London Circuit between Edinburgh Avenue and Constitution Avenue to provide a new at-grade, signalised intersection with Commonwealth Avenue (the Project). The Project is needed as part of coordinated and holistic delivery of a series of major projects in Canberra City and surrounds, to realise the strategic planning and development for the city presented in the National Capital Plan (NCP).

This landscape and visual impact assessment (LVIA) has been prepared to assesses the effect of the Project with regard to potential landscape character and visual impacts during construction and at operation and will be used to inform the Environmental Assessment (EA) for the Project.

1.1 Background

The NCP is the strategy and blueprint giving effect to the Commonwealth Government's interests and intentions for planning, designing and developing Canberra and the Australian Capital Territory. Several major projects in and around Canberra City are currently in various stages of planning and delivery to give effect to the strategic planning and development vision presented in the NCP. Some of the key major projects include:

- Extension of the Canberra Light Rail network from its current terminus on Northbourne Avenue at Alinga Street, via London Circuit and Commonwealth Avenue and southward to Woden
- Development of Section 63 (bounded by Edinburgh Avenue, London Circuit, Commonwealth Avenue and Vernon Circle) for land uses permitted under the NCP
- Development of the Acton Waterfront as part of the West Basin precinct, including the potential future West Road connection between London Circuit and the new development.

Planning and delivery of these and other projects is being coordinated in a holistic way to ensure the timely, orderly and economic development of land consistent with the strategic planning and development vision presented in the NCP.

Raising London Circuit (RLC, the Project) is proposed as an important transport project within the mix of major projects being progressed to give effect to strategic outcomes spelled out in the NCP. As part of a coordinated and holistic approach to planning and development of Canberra City and surrounds, the Project would:

- Directly facilitate other major projects (such as the extension of the Canberra Light Rail network and development of Section 63), and indirectly facilitate others through improved transport network capacity and efficiency
- Contribute to future proofing the transport network of Canberra City by providing infrastructure that responds to current needs and also provides strategic capacity for future growth development continues
- Be well-timed and coordinated with the delivery of other major projects, to allow orderly, economic and efficient development of land in Canberra City
- Provide for improved urban design and amenity outcomes, supporting the NCP vision for Canberra City.

1.2 Study area

Two study areas have been identified for this report: a wider, contextual study area (hereafter the study area) and a detailed study area.

The study area has been defined as the area shown as the map extents of **Figure 1**. This range stretches approximately 3 km to the north, east and west of the Project, and 4.5 km to the south of the Project. This study area has been selected to show landscape characteristics and elements within the broader city-wide setting.

The detailed study area (refer to inner dotted line in **Figure 1**) extends approximately 1.5 km to the north, east and west of the Project and 3 km to the south of the Project. This detailed study area has been selected to show more detailed elements and patterns within the Project setting.

The Project area refers to the area required for the construction and operation of the Project.

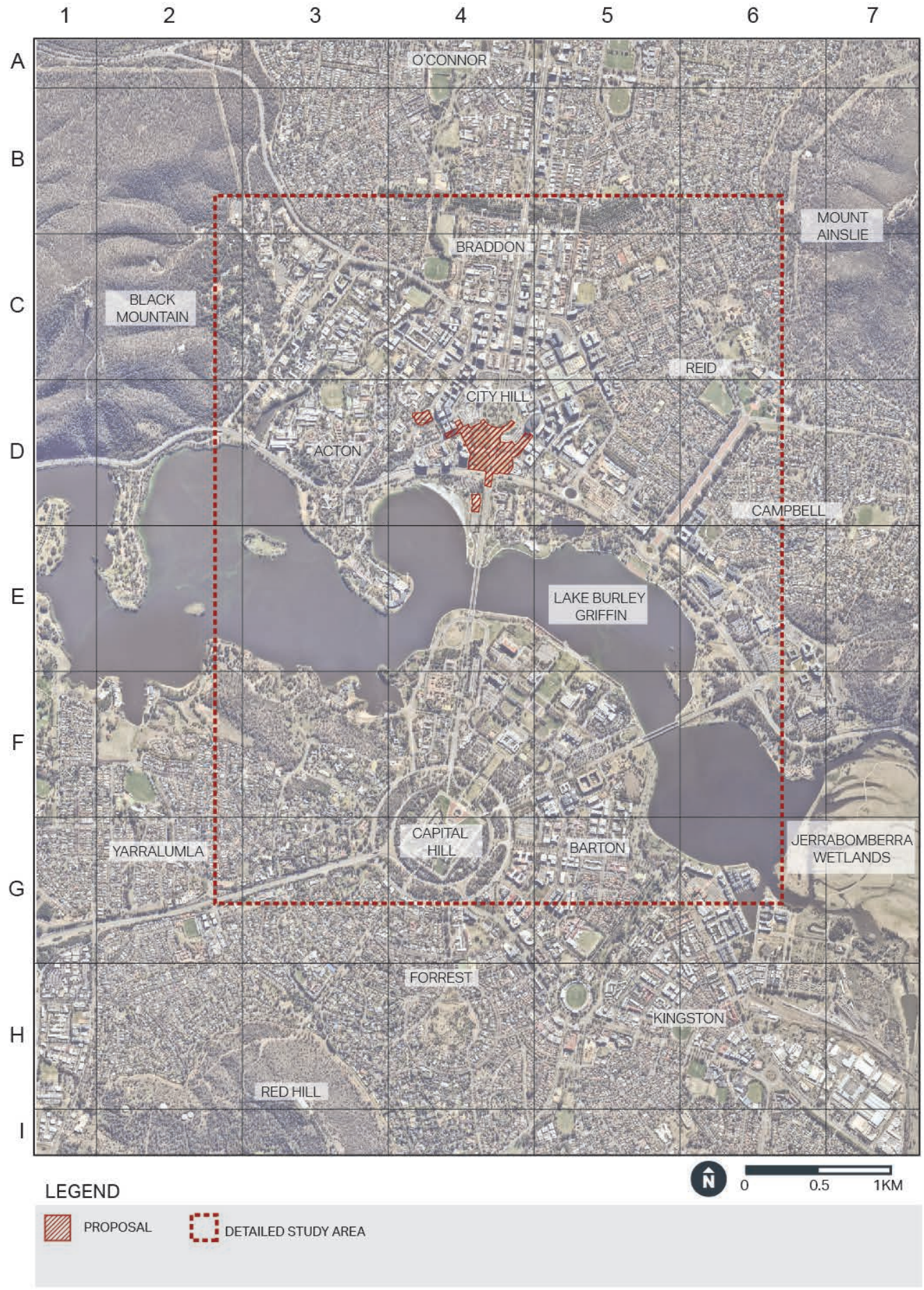

Figure 1 Site context map (study area) with Project area and detailed study area

2.0 Project description

The Project would involve raising London Circuit between Edinburgh Avenue and Constitution Avenue on a gradual filled embankment to meet the current height of Commonwealth Avenue, and provision of a new signalised intersection between London Circuit and Commonwealth Avenue.

Four packages of work are particularly relevant to this assessment:

- Key Project (engineering) elements
  - during construction
  - at operation
- Urban design
- Landscape design.

Sustainability requirements and outcomes relevant to this report have been summarised (refer to **Appendix A**).

2.1 Key Project elements

2.1.1 Construction

Subject to securing and complying with the conditions of environmental and planning approvals, construction of the Project would commence around April 2022 and would take approximately two years to complete. Construction of the Project would be preceded by a series of early works required to allow construction works to commence around April 2022. These early works are subject to separate assessment and approvals, and would include:

- Relocation of utilities currently located within the Project construction footprint
- Translocation of Golden Sun Moth (*Synemon plana*) larvae from areas affected by utility relocations
- Traffic management works at the London Circuit-Edinburgh Avenue intersection to allow closure of London Circuit during construction of the Project
- Traffic management works at the Commonwealth Avenue-Vernon Circle intersection, including signalisation, and at the London Circuit-Constitution Avenue intersection to allow closure of London Circuit and traffic management along Commonwealth Avenue during construction of the Project.

Key construction activities for the Project are summarised in **Table 1**. Further details of the construction of the Project are provided in Chapter 4.0 of the Environmental Assessment.

Table 1: Key construction activity

Key element	Description
Site establishment and preparation	Site establishment and preparatory works would involve: • Mobilisation and establishment of construction compound sites (refer to **Figure 2**). Construction compounds approved for use as part of the utility relocation early works would continue to be used for construction of the Project • Translocation of Golden Sun Moth (*Synemon plana*) larvae from within the Project construction footprint • Implementation of temporary surface water and drainage management infrastructure, including temporary grass swales, along around areas of London Circuit to be filled and raised with bulk earthworks • Decommissioning and removal of utilities from within the Project construction footprint. Some decommissioning and removal works may also be carried out as part of construction works along London Circuit and around the new London Circuit-Commonwealth Avenue intersection • Implementation of traffic management measures, including reliance on early works carried out at the London Circuit-Edinburgh Avenue, Commonwealth Avenue-Vernon Circle and London Circuit-Constitution Avenue intersections, and closure of London Circuit to traffic between Edinburgh Avenue and Constitution Avenue.

Figure 2 The Project boundary and construction compounds

Table 1 continued

Key element	Description
Closure and raising of London Circuit	Closure and raising of London Circuit would involve: • Removal of existing street furniture, road pavement and vegetation (refer to **Figure 3**) along London Circuit and within the Project construction footprint • Removal of existing street furniture and road pavement along the north west and south west cloverleaf ramp connections between Commonwealth Avenue, London Circuit and Parkes Way, and stabilisation and rehabilitation of land in those areas • Removal of existing street furniture and road pavement for the connection between London Circuit East and the south east cloverleaf ramp connection between London Circuit, Commonwealth Avenue and Parkes Way. Only the connection with London Circuit would be affected, with the remainder of the ramp connection retained with potential minor modification to accommodate the embankment batter for London Circuit East. Land affected by removal of the London Circuit connection would be stabilised and rehabilitated • Construction of retaining walls and batters, and staged filling of the London Circuit road corridor between Edinburgh Avenue and Constitution Avenue. The infilling along London Avenue would continue concurrently and in coordination with demolition and infilling beneath the Commonwealth Avenue northbound and southbound bridges (refer to below)
Demolition and infilling of Commonwealth Avenue bridges	Demolition and infilling of the Commonwealth Avenue bridges would be carried out in stages to allow continued passage of traffic during the works. Indicative staging would be as follows: • A temporary sidetrack would be constructed to the east of the existing Commonwealth Avenue southbound bridge and associated temporary pavement of the existing Commonwealth Avenue median to allow traffic diversion around the Commonwealth Avenue bridges during demolition works. • Implementation of traffic management measures, including reliance on early works carried out at the Commonwealth Avenue-Vernon Circle intersection, to divert traffic on Commonwealth Avenue so that: - Southbound traffic travels via the temporary sidetrack - Northbound traffic crosses onto the existing southbound carriageway - The Commonwealth Avenue northbound bridge is free of traffic • Demolition of the Commonwealth Avenue northbound bridge • Infilling and stabilisation of the area beneath the demolished Commonwealth Avenue northbound bridge as part of the staged program to infill along London Circuit • Construction of the western part of the new London Circuit-Commonwealth Avenue intersection, including a new northbound carriageway • Implementation of traffic management measures following completion of the demolition and infilling of the Commonwealth Avenue northbound bridge so that: - Southbound traffic continues to travel via the temporary sidetrack - Northbound traffic travels via the new northbound traffic lanes and western part of the London Circuit-Commonwealth Avenue intersection - The Commonwealth Avenue southbound bridge is free of traffic • Demolition of the Commonwealth Avenue southbound bridge • Infilling and stabilisation of the area beneath the demolished Commonwealth Avenue southbound bridge as part of the staged program to infill along London Circuit • Construction of the eastern part of the new London Circuit-Commonwealth Avenue intersection, including a new southbound carriageway • Implementation of traffic management measures to return southbound traffic on Commonwealth Avenue to the new southbound traffic lanes and eastern part of the London Circuit-Commonwealth Avenue intersection • Demolition of the temporary sidetrack and infilling the area beneath it as part of the staged program to infill along London Circuit.
Permanent road works	Permanent road pavement, median works and kerb and guttering would be constructed in coordination with the completion of infilling London Circuit to provide the permanent reconstructed London Circuit. Road works would include intersection works at Edinburgh Avenue and Commonwealth Avenue, and tie-in works at Constitution Avenue and around the modified and new intersections with Edinburgh and Commonwealth Avenues.

Table 1 continued

Key element	Description
Ancillary infrastructure and finishing works	Ancillary infrastructure and finishing works would be completed prior to commissioning and opening London Circuit to traffic, including: • Construction of active transport infrastructure, permanent drainage and utilities works • Installation of lighting and street furniture, and road line marking • Landscaping • Demobilisation, and stabilisation and rehabilitation of disturbed areas, including construction compound sites.

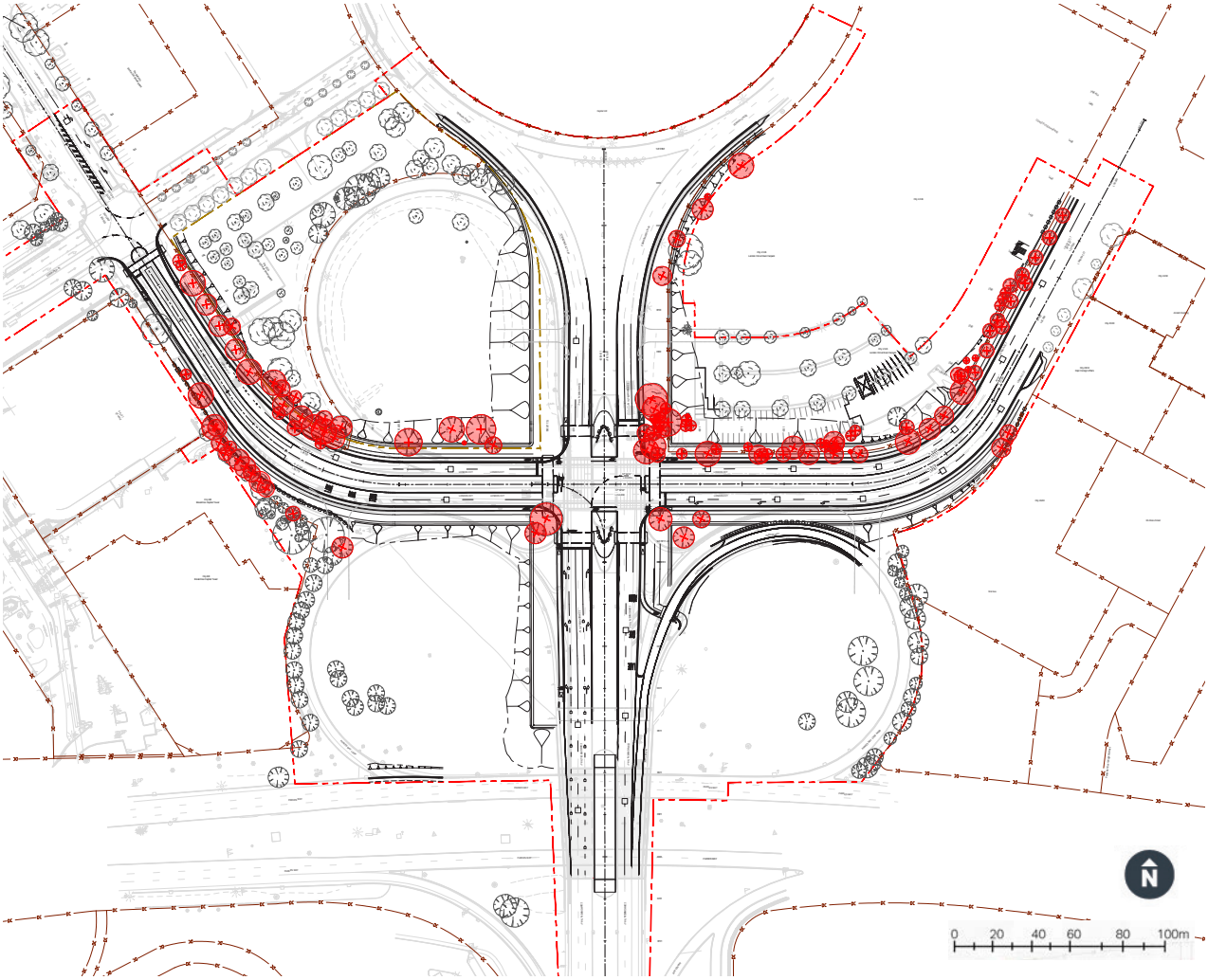

Figure 3 Existing trees to be removed

2.1.2 Operation

Key elements of the Project at operation are listed in **Table 2**.

Table 2: Key Project elements

Key element	Description
Main embankment	A main embankment with associated retaining walls and batters between Edinburgh Avenue in the west and Constitution Avenue in the east, rising in the centre to around the current height of Commonwealth Avenue. The main embankment would have a slope of up to 3.5 per cent, tapering off to around 2.0 per cent towards the new London Circuit-Commonwealth Avenue intersection
London Circuit West	A modified and reconstructed London Circuit West between Edinburgh Avenue and Commonwealth Avenue: • London Circuit West would be generally one travel lane in each direction, widening to two lanes between the potential future intersection with the proposed West Road and the new Commonwealth Avenue intersection.
London Circuit East	A modified and reconstructed London Circuit East between Commonwealth Avenue and Constitution Avenue: • London Circuit East would be two travel lanes in each direction
New and modified intersections	New and modified intersections would be delivered at Edinburgh Avenue (modified) and Commonwealth Avenue (new), as well as making provision for a future potential intersection to tie into the potential future West Road (which would run south from London Circuit West to the future New Acton Waterfront Precinct, but which does not form part of this project). **Modified London Circuit-Edinburgh Avenue intersection** The modified London Circuit-Edinburgh Avenue intersection would include tie-in works with London Circuit to the west of the intersection. No changes to Edinburgh Avenue outside the intersection are proposed. The intersection would retain three travel lanes in each direction on Edinburgh Avenue and one travel lane in each direction on London Circuit. **New London Circuit-Commonwealth Avenue intersection** The new London Circuit-Commonwealth Avenue intersection would be signalised and would include tie-in works on Commonwealth Avenue to the north and south of the intersection. The intersection would be designed to integrate into the local landscape and to minimise intrusion into the significant vista along the Commonwealth Avenue corridor between City Hill and Capital Hill. On Commonwealth Avenue, the southern approach would provide one left turn lane, two through lanes and a right turn lane into London Circuit East. On London Circuit there would be two travel lanes in each direction on both the eastern and western approaches. This intersection configuration would be integrated through tie-in works to the existing configuration of Commonwealth Avenue north and south of this intersection. The new intersection would allow full vehicle movements in all directions between London Circuit and Commonwealth Avenue, except for: • No right turn from London Circuit westbound into Commonwealth Avenue northbound • No right turn from Commonwealth Avenue southbound into London Circuit westbound. • No right turn from London Circuit eastbound into Commonwealth Avenue southbound
Modification and removal of existing cloverleaf ramps	Modification and removal of existing cloverleaf ramp connections between Commonwealth Avenue, London Circuit and Parkes Way: • The cloverleaf ramp connections to the north west and to the south west of the existing London Circuit-Commonwealth Avenue interchange would be removed, with affected land stabilised and rehabilitated. • The cloverleaf ramp connection to the south east of the existing London-Circuit-Commonwealth Avenue interchange would be modified. This would remove the connection from London Circuit (westbound) on to Commonwealth Avenue (southbound), but would retain the connection between Parkes Way (eastbound) and Commonwealth Avenue (southbound).
Bicycle infrastructure	Provision of bicycle facilities: • Dedicated, separated off-road bicycle paths would be provided on the verge on both sides of London Circuit West and London Circuit East, which would operate as one-way pairs in each direction. • Dedicated, separated off-road bicycle paths bicycle paths would be provided along both sides of the tie-in works on Commonwealth Avenue to the north and to the south of the new London Circuit- Commonwealth Avenue intersection.

Table 2 continued

Key element	Description
Pedestrian infrastructure	Provision of pedestrian facilities: • Dedicated, separated pedestrian paths would be provided on both sides of London Circuit West and London Circuit East, and along both sides of the tie-in works on Commonwealth Avenue around the new London Circuit-Commonwealth Avenue intersection.

Urban design

RLC aims to enhance and preserve Canberra's symbolic and unique design and role as the National Capital by identifying, protecting, conserving and presenting natural, indigenous and historic heritage places. Urban design objectives for the Project will address the requirements outlined in the *Light Rail Stage 2 Urban Design Framework and Guidelines* (AECOM, 2021).

The urban design objectives relevant to RLC include (refer to **Figure 4**):

- Reinforce green avenue connections and vistas as a way of celebrating the importance of the Main Avenues
- Strengthen London Circuit as the main transport circuit for Canberra Central, prioritising pedestrian, cycle and light rail access

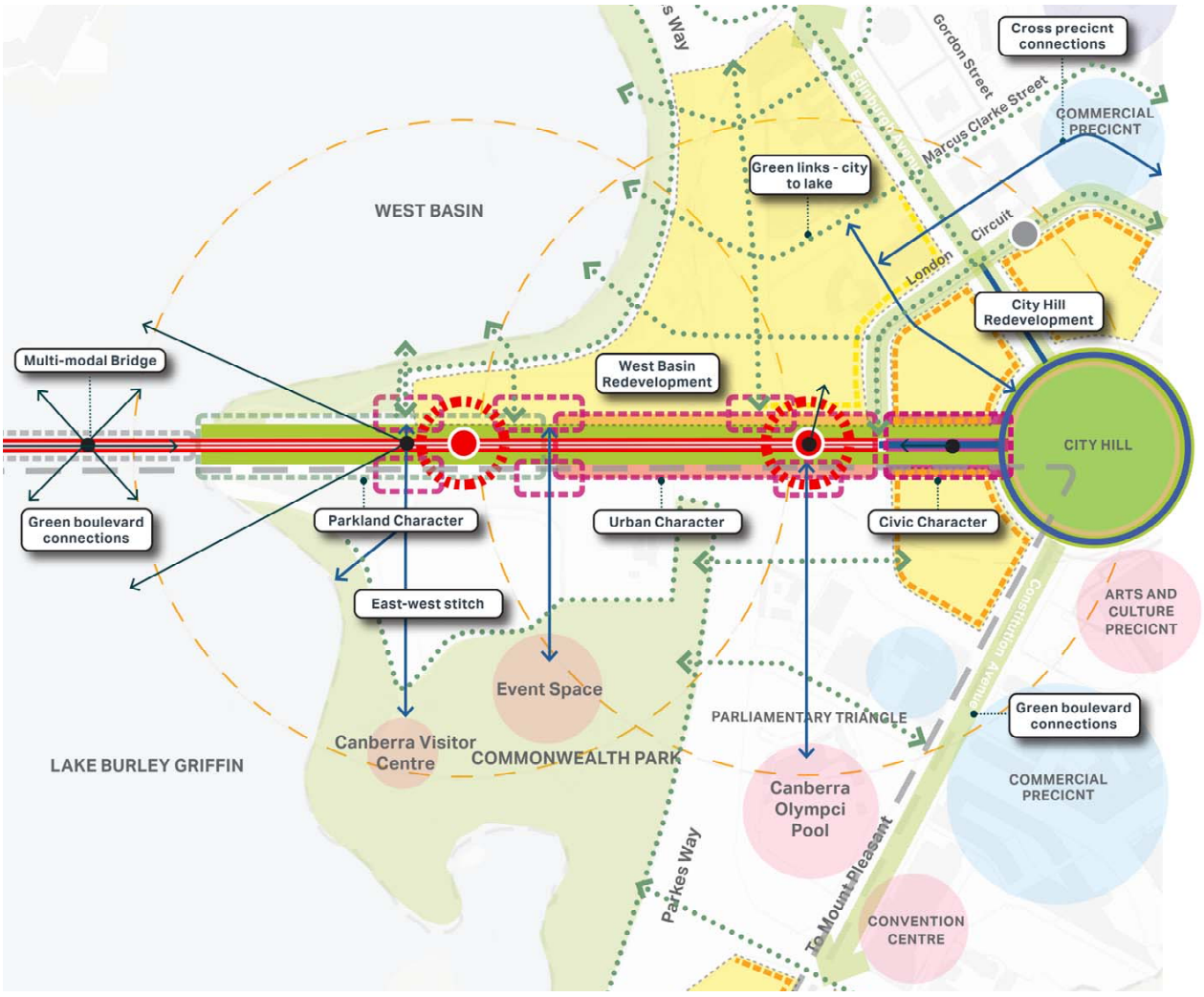

Figure 4 Urban design response for the RLC area (AECOM, 2021)

- London Circuit to act as a transition between the boulevard character of the avenues and the urban scale of the inner City Hill Precinct
- Support and enhance the role of City Hill as the pre-eminent heart of the city
- Strengthen cross precinct pedestrian connections and active fine grain street frontages to support a vibrant and energised precinct.

The Project has been designed to:

- Contribute positively to the overall composition, symbolism and dignity of the National Capital
- Integrate and achieve harmony with the local landscape to give continuing effect to the City Beautiful and Garden City characters of the city
- Reinforce and complement the geometric lines and design language of the Main Avenues, including Edinburgh Avenue, Constitution Avenue and Commonwealth Avenue
- Taller elements such as traffic signals, lighting and landscaping (tree placement) have been designed to be of comparable height and to integrate with the urban design and form of the Commonwealth Avenue corridor
- Consider community vitality and safety, crime prevention through environmental design and recognises the needs of people with disabilities
- Facilitate pedestrian connectivity and bicycle movements.

Landscape Design

The landscape design for the Project (refer to **Figure 5**) aims to fulfill the requirements of the *Light Rail Stage 2 Urban Design Framework and Guidelines* (AECOM, 2021) and integrate the Project into the design approach for the Commonwealth Avenue corridor, considering views and vistas among the heritage considerations. The Project aims to provide a seamless interface with future developments within the four quadrants of the intersections, currently the cloverleaves with at grade car parking.

The landscape design for London Circuit seeks to maximise opportunities to increase the public realm, to fill existing gaps in the street tree structure on both verges and to maximise the quantum of tree canopy cover in line with Territory policy. The Street Tree Master plan offers continuous trench growing zones and soil volumes that align with Territory requirements. The current design it is expected to exceed the urban forest target of 30% canopy shade cover. Paving finishes, street lighting and street furniture are all designed in accordance with the requirements of the Central Canberra Design Manual.

The landscape design considers the recommendations in the *Commonwealth Avenue Landscape Structure Plan* (Jane Irwin Landscape Architecture with GML Heritage, 2021, hereafter referred to as the CALSP), including the key goals:

- Celebrate, interpret and conserve the heritage significance of the avenue
- Ensure landscape planing supports the heritage significance of the avenue
- Protect and strengthen key views
- Strengthen access to the Parliamentary Zone.

With regards to tree planting on Commonwealth Avenue, the CALSP recommends to:

- Reinstate ‘Sentinel’ trees to define connections to Parliamentary Zone (relevant to treatment of intersection with London Circuit and Commonwealth Avenue)
- Reinstate the outer rows on the boundary of the Parliamentary Zone.

Materials and tree selection have been informed by the CALSP as well as the relevant design manuals and policies for Designated Areas. A technical note has been developed which outlines a materials palette for the Project. The proposed materials are in accordance with the *Canberra Central Design Manual* (ACT Government, 2007) and aligned with the recommendations of the *Kings and Commonwealth Avenue Draft Design Strategy* (NCA, 2017).

The materials selected for RLC (refer **Figure 6**) includes a mix of natural stone (Granite paving in 'Austral Black', 'Austral Juparana', 'Grandee' and 'Harcourt'), in-situ concrete, and cobblestone paver in 'WeeJasper Stone'. Retaining walls will either be in-situ concrete or clad in 'Wee Jasper Stone'.

Figure 5 Landscape plan for the Project

Legend
1. Granite paving *Austral Black*
2. Granite paving *Austral Juparana*
3. Granite paving *Grandee*
4. Retaining wall *Wee Jasper Stone*
5. Granite paving *Harcourt*
6. Permeable paver *Charcoal*
7. In-situ concrete retaining wall
8. Cobblestone *Wee Jasper Stone*

Figure 6 Materials palette

3.0 Legislation and strategic context

The following policy, planning and review documents were used to determine assessment criteria and requirements particular to this project:

- Australian Capital Territory (Planning and Land Management) Act 1988
- Heritage Act 2004
- National Capital Plan (2016)
- Griffin Plan
- Griffin Legacy (2004)
- Canberra's Living Infrastructure Plan: Cooling the City
- ACT Climate Change Strategy 2019-25
- ACT Transport Strategy 2020
- ACT Planning Strategy
- The City Plan
- Canberra Central Design Manual
- Heritage Principles and Historic Research Outline for Commonwealth Avenue Master Plan.

Information from these documents relating to this assessment has been summarised below.

3.1 Australian Capital Territory (Planning and Land Management) Act 1988

The *Australian Capital Territory (Planning and Land Management) Act 1988* (PALM Act) establishes the statutory planning context for the ACT (the Territory) including the National Capital Authority (NCA), NCP and the Territory Plan, which is administered through the *Planning and Development Act 2007*. The PALM Act assigns responsibility for land management between the Territory and NCA.

LVIA may be used as part of statutory planning applications both in the Works Approval process through the NCA and the Development Application process through the Territory to demonstrate (through the respective objectives of these instruments) that a proposal is consistent with, and does not detract from, the landscape character of the ACT.

3.2 National Capital Plan

The NCP protects the Commonwealth's interests and intentions for planning, designing and developing Canberra and the Territory without having to involve the Commonwealth in matters that should be the prerogative of the Canberra community. The NCP has a single statutory object:

…to ensure that Canberra and the Territory are planned and developed in accordance with their national significance.

The NCP acknowledges and captures the intent of the Griffin Plan and Legacy, therefore these documents have been reviewed as part of this document rather than on their own.

Key objectives of the NCP are to:

1. Recognise the pre-eminence of the role of Canberra and the Territory as Australia's National Capital
2. Further develop and enhance a Central National Area which includes the National Triangle and its setting, Lake Burley Griffin and its foreshores and the diplomatic sites and national institutions, as the heart of the National Capital
3. Emphasise the national significance of the Main Avenues and Approach Routes
4. Respect the geometry and intent of the Griffins' formally adopted plan for Canberra

5. Maintain and enhance the landscape character of Canberra and the Territory as the setting for the National Capital
6. Protect the undeveloped hill tops and the open spaces which divide and give form to Canberra's urban areas
7. Provide a plan offering flexibility and choice to enable the Territory Government properly to fulfil its functions
8. Support and promote environmentally responsible urban development practices.

General Planning Principles

The NCP has determined broad planning principles for areas within the Territory, divided into:

- National Capital Open Space System (NCOSS)
  - Lake Burley Griffin and foreshores
  - hills, ridges and buffer spaces
  - river corridors
  - mountains and bushland.
- Urban areas, featuring a hierarchy of centres
- Employment locations
- Broadacre areas
- Rural areas.

Within the NCP, general planning principles that relate to landscape character and visual impact include:

- The hills, ridges and major open space which form the separation between towns will be kept largely free of urban development
- Minimise the visual impact of electricity and telecommunication facility, particularly along major vistas, corridors and open space
- Development in all forms, including landscaping in urban and non-urban areas, compliments and enriches its surroundings
- Within Canberra Central, roads, bridges, waterways and public landscaping projects should reinforce and complement the geometric lines of the Main Avenues
- Vistas to major landscape features must be protected from and enhanced by development

Designated Areas

The NCP defines Designated Areas (land that has been identified as having the special characteristics of the National Capital under the PALM Act) and development which requires Works Approval from the NCA, and uses the NCP to assess Works Approval applications. The special characteristics used to define Designated Areas include the following factors: national functions that occur in Canberra as the capital; the Griffins' strong symbolic design; and Canberra's landscape setting and layout within the Territory that contribute to the garden city image.

Designated Areas comprise (refer to **Figure 7**):

- Lake Burley Griffin and its foreshores
- the National Triangle and adjacent sites
- the balance of the Central National Area adjoining the Lake and the Triangle, and extending from the foot of Black Mountain to the airport
- sites set aside solely for diplomatic use
- the Inner Hills which form the setting of the Central National Area
- the Main Avenues and Approach Routes between the ACT border and the Central National Area.

Within the Central National Area, Designated Areas have been split into a series of precincts (refer to **Figure 7**), each subject to a set of general and targeted codes on planning, design and development (the Project lies within or on the boundary of those precincts highlighted in **bold**):

1. Parliamentary Zone
2. Barton
3. Deakin/Forrest Residential Area
4. **City Hill**
5. **West Basin**
6. **Constitution Avenue and ANZAC Parade**
7. Australian Defence Force Academy, Royal Military College Duntroon, and Campbell Park Precinct
8. Australian National Botanic Gardens
9. Jerrabomberra Wetlands
10. Lake Burley Griffin and foreshores
11. Acton Peninsula
12. Diplomatic Precinct (Yarralumla, Deakin, O'Malley and Curtin)
13. Australian Institute of Sport
14. Australian National University
15. CSIRO Black Mountain
16. Canberra Airport (within the Central National Area however not within Designated Areas).

Main Avenues and Approach Routes are subject to a Precinct Code as they are within Designated Areas, but are not part of the Central National Area.

Planning Principles for the Central National Area and associated precincts

General policies for the Central National Area applicable to this project and assessment include:

1. Protect the Griffins' vision by:
   a. fostering recognition of the 1918 Griffin Plan as a work of national and international cultural significance, and conserve those elements that contribute to this significance in a sustainable manner whilst allowing for the evolution of the city in contemporary terms
2. Building on the Griffins' vision by:
   e. continuing to reinforce and, where possible, express the integrity of the Griffins' visual structure by strengthening the geometry and form of Main Avenues, vistas and public spaces
   h. strengthening the landscape framework from the natural setting of the hills, water courses and parks to the character of its streets as generously scaled corridors for formal plantings of broad canopy trees
   i. maintaining the metropolitan structure principles of Canberra's planning legacy of environmentally balanced urban extensions: design with nature; undeveloped hills and valleys; landscape containment and greenbelts; low traffic congestion; long-term public transport reservations; provision for walking and cycling; and protection of the Central National Area
   j. maintaining a mix of tree species which enriches the landscape by providing beauty, shade, shelter and wildlife habitats and enhances the built environment.
3. Revitalise the vision with growth in the Central National Area by:
   e. managing change, particularly in terms of traffic and development, to preserve the historic landscapes, and City Beautiful values (refer to Section **5.1**), and the dignity of the Central National Area.

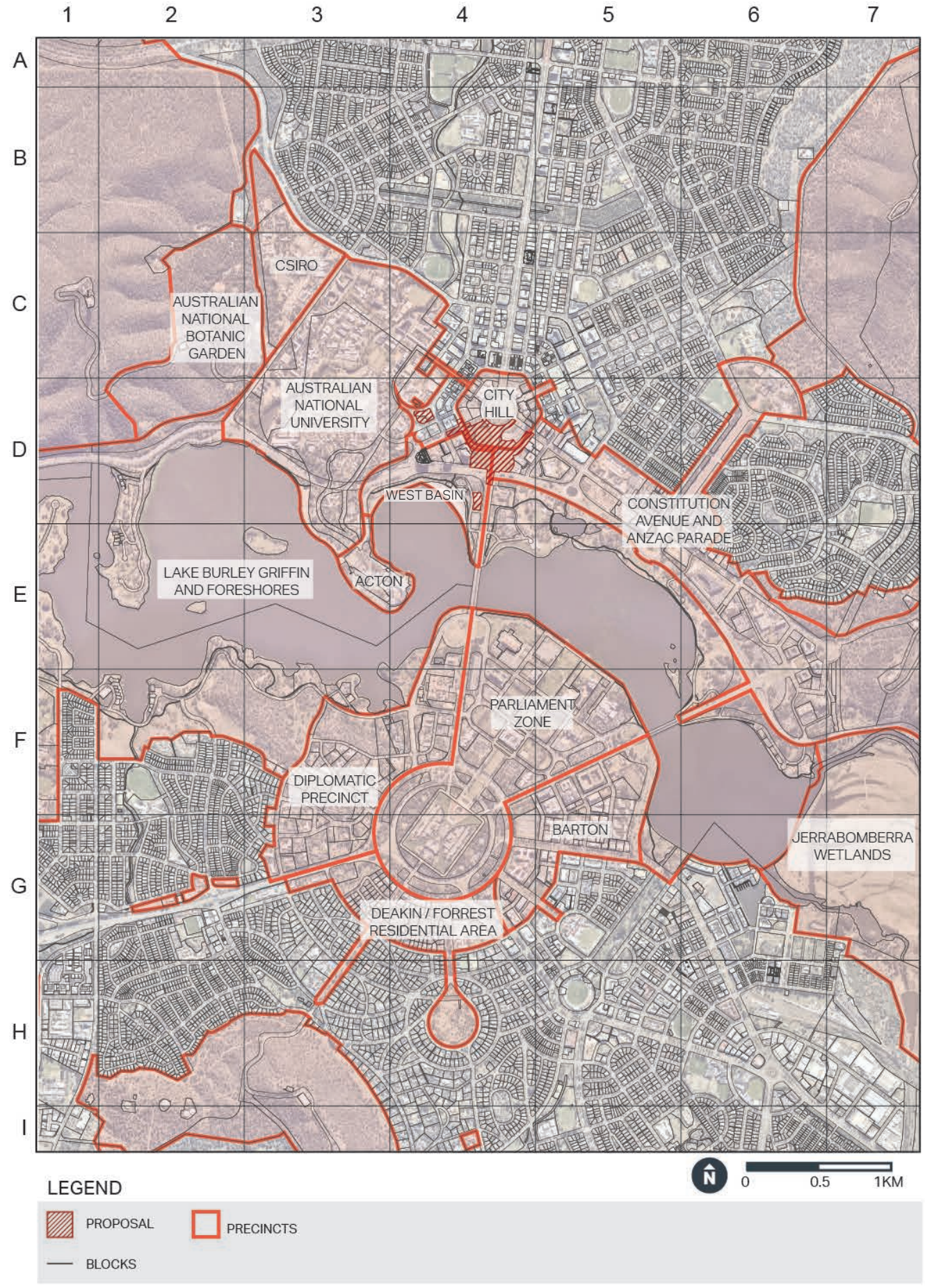

Figure 7 Precincts identified within Designated Areas in the Central National Area (NCA, 2016)

6. Reinforce the Main Avenues by:
   a. realising the identified Main Avenues of Constitution, Northbourne, Commonwealth, Kings, University, Sydney, Brisbane, and part of Canberra Avenue as multi-use boulevards providing corridors of higher-density mixed-use development, public transport, broad tree-lined footpaths with potential for outdoor dining and street parking
   d. improving the urban design and streetscape qualities of the Main Avenues as approaches to the Central National Area
7. Link national attractions by:
   j. enhancing the sense of arrival for visitors to the National Capital by improving the quality of the Approach Routes and by progressively formalising the gateway experiences at key city thresholds, culminating in arrival at the Central National Area
   k. enhancing the vistas to the national attractions and icons.

Planning principles relating to landscape character, views and visual amenity for design, planning and development within the precincts of the Central National Area affected by the Project are outlined below:

- Within the Parliamentary Zone precinct the following relate to landscape character, views and visual amenity:
  - The Land Axis and Commonwealth and Kings Avenues are important elements in making the Parliamentary Zone legible (refer to **Figure 8**). To maintain the definition of the geometry of the Zone, there must be a long-term strategy for the replacement of trees.
  - With its central location, length, width and the stark contrast between the turf and the eucalypts, the Land Axis has a powerful presence in the Parliamentary Zone. Trees should be replaced and the planting extended where appropriate to preserve the visual strength of the Land Axis.
  - The tree planting on Commonwealth and Kings Avenues reflects different attitudes to avenue planting over the generations. There is an assortment of native, coniferous and deciduous species that requires rationalisation. The original design intent of the avenue planting – to provide a backdrop of coniferous evergreen trees contrasting with the deciduous trees at the street edge – made the

Figure 8 Artists impression of City Hill looking towards the Parliamentary Zone (NCA, 2016)

avenues legible in the broader landscape and distinctive throughout the seasons. A consistent approach to replacement tree planting should be undertaken to reinstate this intent.

- A consistent approach to replacement planting should be adopted to conserve the clarity and character of these spaces. For example, red autumn foliage along the avenues, with accents of yellow at intersection points, will help to define special routes and places of interest. The brighter foliage of deciduous trees will also emphasise the major groupings of buildings and offer sun and shade control at various times of the year.

- Within the City Hill precinct the following relate to landscape character, views and visual amenity:
  - The symbolic importance of the City Hill Precinct should be reinforced in the design treatment of the streetscape and public places.
  - View corridors must be retained from radiating avenues to City Hill Park (refer to **Figure 9**). No buildings should bridge these avenues.
  - A limited palette of high-quality pedestrian pavement materials, street furniture and lighting will be used. Pavement and landscape design should have an elegant, simple and bold design emphasising the geometry and formality of the Main Avenues.
  - London Circuit should serve as a gateway, providing a transition between the boulevard character of the avenues and the urban scale of the inner City Hill Precinct. The transition should be achieved through the use of urban design and traffic engineering treatments that serve to physically and psychologically divert traffic from the avenues onto London Circuit, thereby limiting access to the inner City Hill Precinct to predominantly local traffic. London Circuit should operate as the main public transport circuit for Canberra Central.
- Within the West Basin precinct the following relate to landscape character, views and visual amenity:
  - Landscape planting should reinforce the urban structure of West Basin and its integration with the setting of the Central National Area and the Lake Burley Griffin parklands.
  - A formal treatment should be applied to the Main Avenues, major streets and the waterfront promenade, and continuous street trees should define the pattern of city streets extending to the lake.
  - The visual impact of parking on the public domain should be minimised by integrating parking layouts with street tree plantings and pavement design.

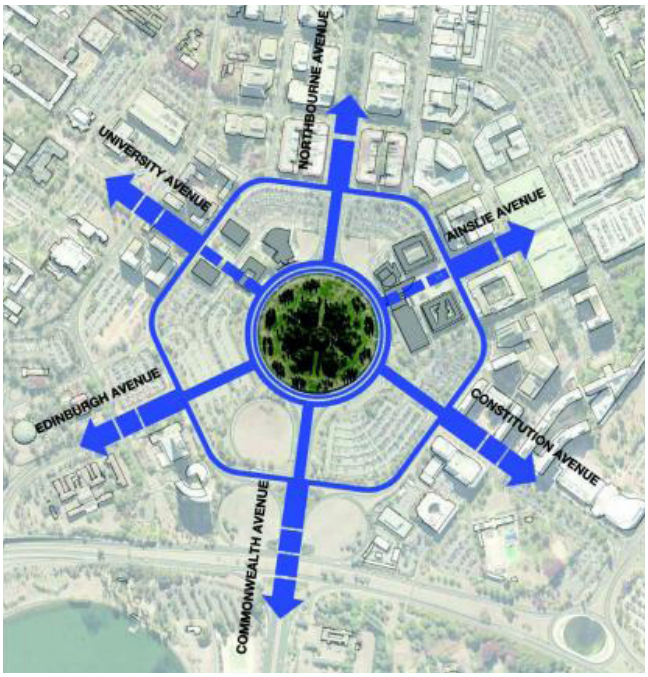

Figure 9 Views and vistas from City Hill (NCA, 2016)

- A limited palette of high quality pedestrian pavement materials, street furniture and lighting should be used. Pavement and landscape design should have an elegant, simple and bold design emphasising the geometry and formality of the Main Avenues.

3.3 Canberra's Living Infrastructure Plan

The purpose on the Canberra's Living Infrastructure Plan: Cooling the City (LIP) is to provide direction for growing metropolitan areas within Canberra to address the challenges related to climate change, including:

- Reducing the urban heat island effect
- Retaining water in the landscape
- Improving water penetration
- Improving access to nature in the city
- Maintaining ecosystem services and biodiversity in the city's landscape.

Living infrastructure comprises a city's natural assets. Within the urban environment this includes street trees, public and private open spaces, green roofs and balconies and green walls. The LIP aims to integrate living infrastructure into the urban form and to support ecologically sustainable development.

Key actions identified by the LIP to address the climate change challenges are:

1. To expand existing asset management system - with a complete survey and mapping of the existing living infrastructure and urban living infrastructure
2. Living infrastructure target – 30% tree canopy cover and 30% permeable surfaces in Canberra's urban footprint by 2045
3. Microclimate Assessment Guide – to inform a city cooling works program across centres, urban renewal projects and urban intensification precincts
4. Microclimate Assessment Program – to introduce requirements to be implemented across centres, urban renewal projects and intensification precincts
5. Climate-wise Landscape Guide – to support effective landscape plans
6. Landscape Plans – required into Development Approval (DA) process to meet tree canopy targets
7. Actsmarts Programs – to improve sustainability outcomes across communities
8. Tree Protection Act Review – to update ACT *Tree Protection Act 2005*
9. Develop Urban Forest Strategy – to outline how to maintain and enhance public urban forest
10. City Cooling Program – identify cooling measures in areas considered to be more impacted by urban heat island effect
11. Oasis Program – identify key open space to be upgraded
12. Shadeways Program – to promote active travel along urban green corridors
13. Demonstration Projects - to showcase best practice clime-wise design through display houses and exhibitions
14. Water Sensitive Urban Design (WSUD) – to introduce WSUD in selected open space
15. Public and private investments – to explore initiatives for incentives and funding for the implementation of living infrastructure.

Within the LIP no specific recommendations for landscape, views and visual amenity have been made, however, in assessing the impact of the Project on landscape character, views and visual amenity, changes to tree cover as per the key actions to address climate change will be considered.

3.4 ACT Climate Change Strategy 2019-25

The ACT Climate Change Strategy 2019-25 (the Strategy) provides a framework for achieving a smart, sustainable and net zero emissions Territory by 2045.

The Strategy sets out the steps to be adopted to transition toward a Territory more resilient to climate change, while supporting the most vulnerable in our community and embedding climate change considerations into community decision making. Current targets are to reduce emissions (from 1990 levels) by 40% by 2020; 50-60% by 2025; 65-75% by 2030; 90-95% by 2040; 100% by 2045, and to achieve 100% renewable electricity by 2020.

Transport was the sector carrying 34% of the ACT emission in 2017-2018, and 62% in 2019-20. Promoting public and active transport will positively impact on the transport emission sector and it will support the target of reducing emissions to net zero by 2045.

The management of land use and biodiversity affects greenhouse gas emissions. Maintaining and improving landscape connectivity and resiliency is considered paramount for the preservation of natural habitat and biodiversity from the future effects of the climate change within a growing urbanised area.

Goals and actions relating to active transport are:

- GOAL 3B - Support sustainable travel choices
- GOAL 3F - Smarter use of roads
- GOAL 4I - Reduce urban heat and improve liveability.

Goals and actions related to land use and biodiversity are:

- GOAL 7A - Protect local species and habitats
- GOAL 7B - Sequester carbon in the landscape
- GOAL 7C - Encourage sustainable and resilient farming.

While the Strategy has no specific recommendations with regards to landscape character, views and visual amenity, impacts on landscape connectivity and trees with regards to the above will be considered. These elements have value as criteria in the identification of Landscape Character Zones (LCZs) and subsequent assessment of impact on these LCZs.

3.5 ACT Planning Strategy 2018

The vision of the ACT Planning Strategy 2018 is to be a sustainable, competitive and equitable city that respects Canberra as a city in the landscape and the National Capital while being responsive to the future and resilient to change. It aims for the city to be compact and efficient, diverse, sustainable and resilient, liveable and accessible.

The ACT Planning Strategy outlines directions under each of the overall aims and draws upon those policy and planning documents that help to achieve those directions.

3.6 ACT Transport Strategy 2020

Key transport outcomes have been identified: to manage congestion; reduce emissions; and support a compact and efficient city. The transport strategy must address these objectives and provide a response that offers attractive transport options but maintains the benefits of the city.

While the ACT Transport Strategy 2020 does not particularly consider landscape character, views and visual amenity, it references other policy documents that relate to these issues including Canberra’s Living Infrastructure, the ACT Climate Change Strategy and ACT Infrastructure Plan.

3.7 City Plan

The City Plan (2014) provides an over-arching strategic framework that sets a plan for development within the city centre. Detailed analysis of the landscape, both physical and functional, has resulted in the identification of five 'character types' that typify the character and activities within the city (refer to **Figure 10** and **Figure 11**, comprising:

- West Basin: area on the lake foreshore connecting Acton Peninsula with central basin of Lake Burley Griffin. Open space along lake foreshore includes large car parking areas, reducing the quality of the open space. Contains large educational precinct and commercial activity.
- City North-East: predominantly retail and commercial activities, also the central entertainment area of the city centre. High amount of pedestrian areas, low scale buildings with large floor areas.
- City Hill: a largely undeveloped area with opportunity to establish a positive character. Geographically the centre of the city but disconnected and underutilised. Some cultural and civic uses but also a large amount of car parking or vacant land.
- City North-West: include development resulting from collaboration between the ANU and ACT Government, with commercial, education and residential land use.
- City South-East: includes two large parks, some commercial and mixed use development, but also large areas of car parking or vacant land. Larger block sizes with some larger buildings but also an inconsistency of grain and scale. Tourism and recreation comprise 20% of the floor area in this zone.

The City Plan sets out a series of challenges and opportunities for development with the overall emphasis on urban intensification, increasing the mix of uses and the diversity of development types, sustainable transport use and emphasising the city centre pre-eminence in Canberra.

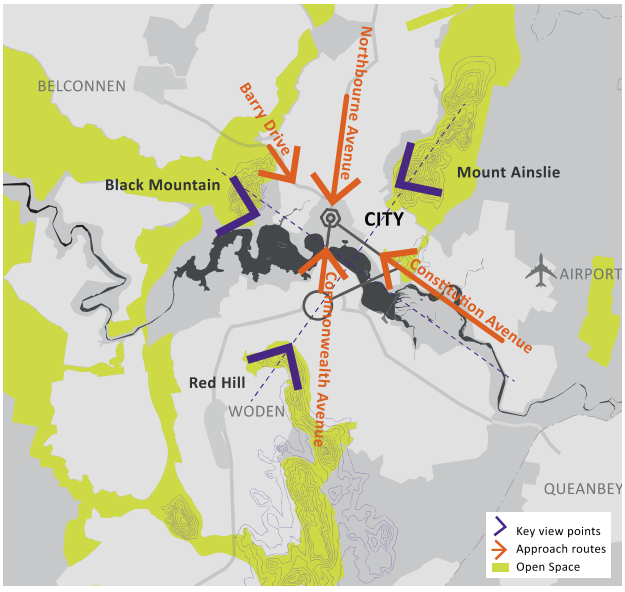

Figure 10 Views and approaches to the city (ACT Government, 2014)

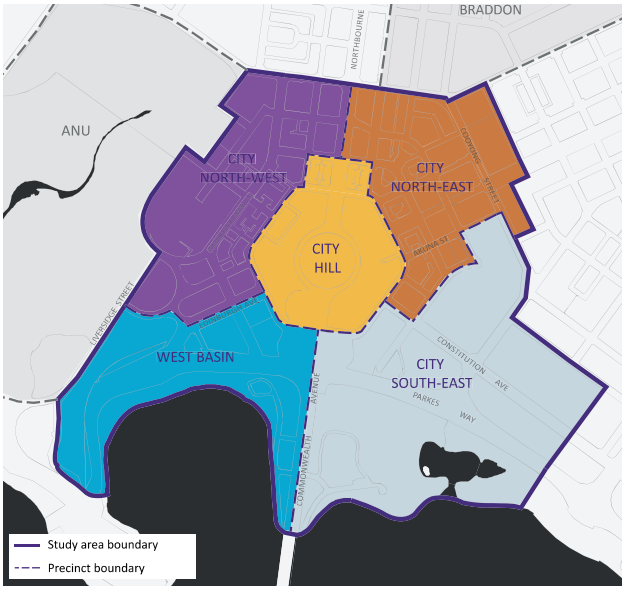

Figure 11 Character types within the City Plan study area (ACT Government, 2014)

3.8 Canberra Central Design Manual

The Canberra Central Design Manual is the approved standards and guidelines for all public realm development in the City. Its aims to ensure consistency for paving, signage, street furniture, street trees, lighting and public art within the central area of Canberra (refer to **Figure 12**).

It builds on the strategic framework of the City Plan to provide information on the materiality and detailed design of urban design elements within the city centre.

Among the recommendations in the document, a street tree master plan has been developed. The city was

divided into seven precincts related to their primary function and relationships to adjoining areas (refer to **Figure 13**). Each precinct has been allocated a list of tree species based on detailed analysis.

Tree species for areas within or adjacent to the Project include:

- City Hill precinct: a palette of *Platanus* sp. have been selected for London Circuit and *Ulnus* sp. for Vernon Circle.
- National Triangle precinct: *Quercus* sp. have been selected for Constitution Avenue and internal road networks, and *Eucalyptus* sp. and *Liquidamber styraciflua* for Parkes Way.
- West Basin precinct: a mix of *Eucalyptus* sp. and *Platanus* sp. have been selected for Edinburgh Avenue, and *Eucalyptus* sp. and *Liquidamber styraciflua* for Parkes Way.

No street trees have been recommended for Commonwealth Avenue north of the Commonwealth Avenue bridge.

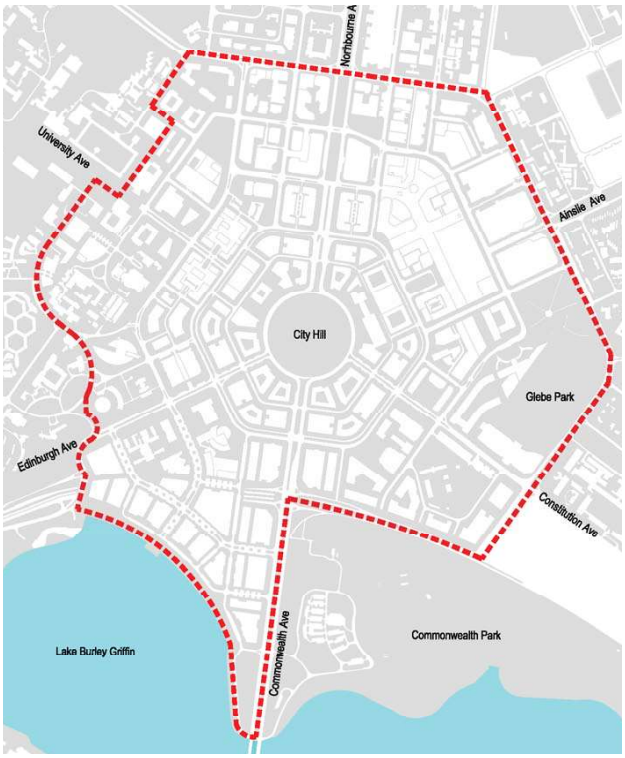

Figure 12 Area within which the Canberra Central Design Manual applies (ACT Planning and Land Authority, 2008)

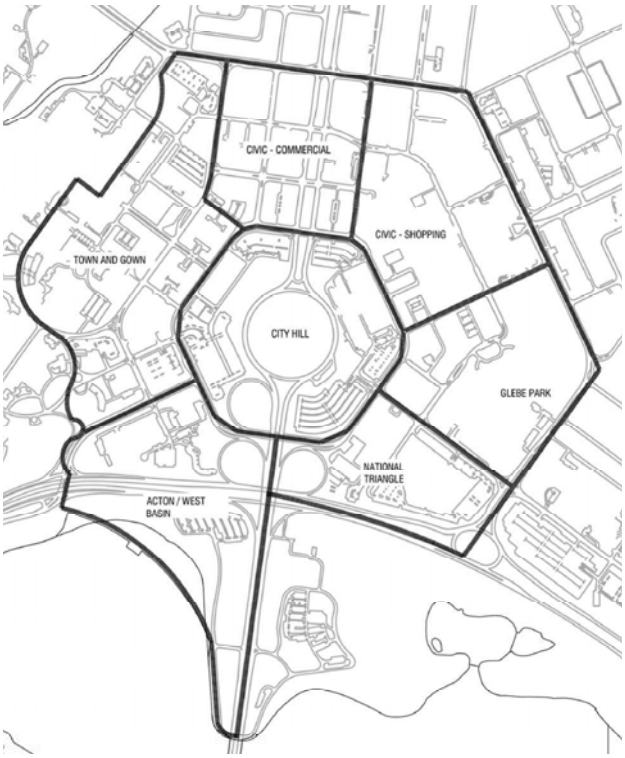

Figure 13 Street tree precincts (ACT Planning and Land Authority, 2008)

3.9 Heritage Principles for Commonwealth Avenue Master Plan

GML Heritage Pty Ltd (GML) were engaged by MPC to provide heritage advice for the Commonwealth Avenue Master Plan developed by Hassell (GML, 2020).

Commonwealth Avenue is an integral component of the Central National Area of Canberra, a place of cultural importance. Commonwealth Avenue has been nominated to the CHL as part of the 'National Land Roads' nomination and the NHL as part of 'Canberra the Planned National Capital' nomination. Commonwealth Avenue Bridge also contributes to the Lake Burley Griffin landscape, a nominated CHL and NHL place.

Commonwealth Avenue is significant as an integral and major part of Walter Burley Griffins' 1911 plan for the city. It is one of the three sides of the National Triangle, comprising a wide, tree lined avenue with plantings a mix of native and exotic trees, which is an important feature in Canberra's planning and

landscape. The following heritage principles have been recommended to provide guidance for future development of the avenue:

- Retain and enhance the formality of Commonwealth Avenue through appropriate design, aesthetic, scale and materials.
- Retain Commonwealth Avenue as a wide tree-lined boulevard, an important feature in Canberra's planning and landscape, through continuous tree planting along both the eastern and western verges.
- Retain and enhance the landscaped character of Commonwealth Avenue through a balance of soft and hard landscaping that is sustainable.
- Retain and complement the existing symmetry of the two avenues forming the two sides of the triangle—Commonwealth Avenue and Kings Avenue.
- Reinforce and draw from the underlying geometry and symbolism of the Central National Area, and the National Triangle, ensuring that Commonwealth Avenue is complementary with the two other avenues that define the National Triangle (Kings Avenue and Constitution Avenue) and reinforce a sense of place.
- Retain and draw from Commonwealth Avenue's ceremonial and symbolic importance as an entrance to the Parliamentary Zone and integral link connecting the Federal and Territory functions of Canberra.
- Maintain and support Commonwealth Avenue's function as a major and active boulevard within Canberra.
- Retain and enhance ready public access to Commonwealth Avenue.
- Retain significant views and vistas including:
  - view south to Parliament House
  - view north to City Hill
  - views to Lake Burley Griffin and other national buildings
  - distant and close views to and through Commonwealth Avenue Bridge in its lake setting
  - views to and from buildings fronting Commonwealth Avenue, such as West Block and Albert Hall.
- The dominant scale along Commonwealth Avenue, including the scale of any new structures should be well below the mature height of any trees. Any new structures should not overshadow the verticality of the historic City Hill plantings, or its ability to be read as a high point within the landscape.
- Any new development should retain and complement the design aesthetic, scale, character and form of Commonwealth Avenue Bridge.
- Retain, reinforce and complement the symmetry of Commonwealth Avenue Bridge.
- Consider and incorporate lighting which is complementary to the setting and does not compete with or distract from the prominence of Commonwealth Avenue Bridge.
- Any new structures along Commonwealth Avenue should be high quality, with durable materials and finishes in sympathetic and neutral colours.
- Retain and enhance the existing visual relationship between Commonwealth Avenue and heritage places located in the vicinity (e.g.: City Hill, which should remain visible as a hill, green space with dominant vertical plantings).
- Respect the setting of heritage places located in the vicinity ensuring that Commonwealth Avenue contributes appropriately to Canberra's ensemble of designed urban landscapes and settings that display the National Capital and projects its status, function and significance as the National Capital.
- Draw from and interpret important associations with the Griffins' and Charles Weston as part of the interpretation of heritage values.
- Interpret the heritage values of Commonwealth Avenue and include reference to its broader setting.

3.10 Historic research outline - Commonwealth Avenue Landscape Master Plan

This Commonwealth Avenue Landscape Master Plan was prepared to better understand:

- The significance of the trees (and road layout/geometry) - historic, aesthetic, associative, social.
- The fabric of the landscape, e.g. form, function, materiality, character, strength of species mix, colour, road geometry, special qualities, structural integrity.

Key dates and plantings include:

- 1921: Thomas Weston was appointed as Director of City Planning and Superintendent of Parks and Gardens and oversaw the planting of the following trees:
  - City Hill: *Cupressus sempervirens var. stricta* (Italian Cypress), *Pinus radiata (*Radiata Pine) and *Robinia pseudoacacia* (Black Locust)
  - London Circuit: *Cupressus sempervirens var. stricta* (Italian Cypress), *Cedrus atlantica* (Atlas Cedar), *Castanea sativa* (Spanish Chestnut), *Plantanus orientalis* (Oriental Plane), *Plantanus acerifolia* (London Plane) and *Prunus blireiana* (Blireiana Plum).
- Historic photographs of Commonwealth Avenue show that south of the Molonglo River was planted either side of the road and in the median as early as 1928 (although probably earlier) (refer to **Figure 14**). The northern side of the River (heading to City Hill) was not treated to the same double avenues of trees.
- During the 1940s John Peace Hobday served as Superintendent of Parks and Gardens and began the progressive removal of the cedars to make for new deciduous trees (*Ulmus carpinifolia* (Smooth-leaved Elm) to the verges.
- After the construction of Lake Burley Griffin, double avenues of deciduous trees were planted in the verges of the road north of the Commonwealth Avenue Bridge, but not within the central median (refer to **Figure 15**).

Figure 14 View south along Commonwealth Avenue to Capital Hill, 1929 (GML, 2021)

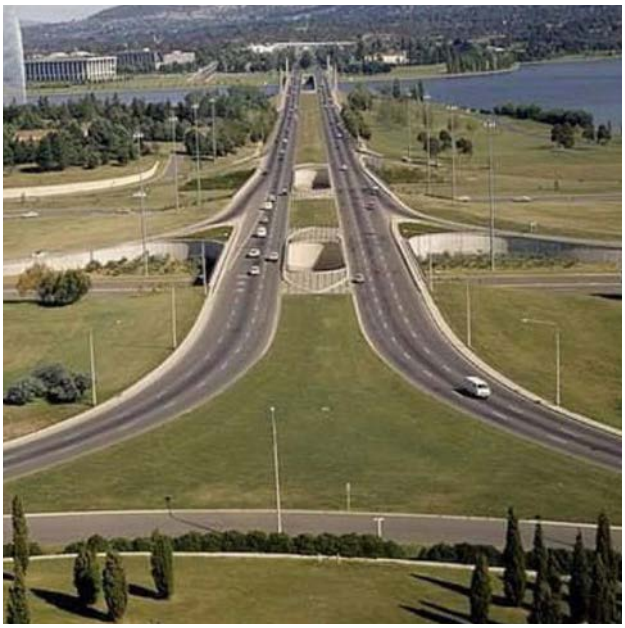

Figure 15 View south from City Hill, taken in 1975 (GML, 2021)

4.0 Methodology

4.1 Introduction

LVIA is a tool used to identify and assess the impact and significance of change due to a project on both:

- the landscape as an environmental resource in its own right
- people's views and visual amenity.

This report has been undertaken in accordance with Transport for NSW (TfNSW) *Environmental Impacts Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment EIA-N04* (2020), with more detailed guidance taken from *Guidelines for Landscape and Visual Impact Assessment, Third Edition* (2013), developed by the Landscape Institute and Institute for Environmental Management (UK), which is widely recognised as comprising an example of 'best practice' in this field.

In accordance with these guidelines, key steps in the development of the LVIA include:

1. **Environmental and planning baseline** - An analysis of the regional and local context of the Project. This includes a thorough review of background documents, including policy and planning instruments, as well as an analysis of the environment within which the Project lies (refer to **Chapter 3.0** and **Chapter 5.0**).
2. **Design review** - A summary of design outcomes (refer to **Chapter 2.1**):
   - urban and landscape design
   - sustainability
3. **Impact assessment**:
   - **Landscape character impact assessment** - An assessment of the anticipated impact of the Project on landscape character as a result of the final design outcome (refer to **Section 4.3.1**)
   - **Visual Impact Assessment** - An evaluation of the impact of the Project on existing views and visual amenity within the study area (refer to **Section 4.3.2**)
4. **Mitigation** – Design outcomes and mitigation measures to avoid, reduce or mitigate adverse impacts that the Project may impose within the study area (refer to **Section 7.3**)

4.2 Environmental and planning baseline

4.2.1 Desktop analysis

Existing data was gathered and reviewed, including:

- Site inspection protocols, Project design, and similar examples of key infrastructure elements
- GIS mapping, including visual envelope mapping (refer to **Section 4.2.1.1**), zoning / land use, topography and land cover
- Information from Google Earth and Google Street View.

Using this data, a preliminary assessment of the landscape and visual resources was undertaken and used to inform the site inspection.

4.2.1.1. Zone of Theoretical Visibility

The likely visibility of the Project, once operational, from surrounding areas was broadly mapped to define a Zone of Theoretical Visibility (ZTV). This provides an indication of which parts of the Project are likely to be viewed from surrounding areas. The mapping typically shows 'worst case', i.e. some receptors may only see a small portion of the Project, while other receptors may view a more substantial part of the Project. This mapping accounts for landform, built form and vegetation.

This map was generated using the function tool 'Viewshed' in ArcMap (version 10.8).

4.2.1.2. Legislation and strategic context

A background document review was undertaken to ascertain any information that would assist in identifying LCZs, sensitive visual receptors or as criteria for assessment of the impact of the Project on landscape character and views. Policy and planning documents were reviewed as well as a review of heritage reports for this and related projects (refer to **Chapter 3.0**).

4.2.2 Site inspection

A site inspection was undertaken by two AECOM team members on the 7th and 8th of June 2021. The purpose of the inspection was to:

- ground truth information gathered during the desktop analysis
- identify views from sensitive visual receptors within publicly accessible locations using information generated within the visual envelope mapping and assess landscape character
- undertake site photography suitable for preparation of visual simulations, to record key views and landscape character.

4.2.2.1. On ground photography

A series of photographs were captured at each location over a the dates listed in Section **4.2.2** using a Nikon D810 digital camera with a Sigma 24 mm f/1.4 DG HSM lens. The camera has a full frame sensor equal in size to that of 35 mm film and therefore there is no crop factor to be considered. The lens was selected for its excellent image quality and low levels of distortion.

For general site photography (i.e. recording landscape character or to illustrate typical environmental conditions) the camera was hand-held to take photos.

For the creation of panoramas (refer **4.3.3.1**) and visual simulations (refer **4.3.3.2**), the camera was mounted in a vertical position on a level tripod using an RRS panoramic head (i.e. with no tilt angle). This allows the camera to be rotated around the nodal point of the lens, removing any parallax error from the photography. A series of images were then captured from left to right in 30 degrees (°) increments, until a minimum of 120° had been recorded. Camera positions were recorded using aerial mapping data to identify the known tripod / camera locations and then cross checked against the digital model.

All images were recorded from a camera height of 1.7 m from ground level.

4.2.3 Existing environment

Information was collated and summarised into a broad description the landscape within which the Project is located. Elements and features relevant to assessment of the Project were identified, including site setting, topography, land use, landscape and heritage values.

Mapping of the existing environmental features (including topography, hydrology etc.) was generated using GIS information from ArcMap (version 10.8) and overlaid in Adobe Illustrator (version 2019). Mapping of LCZs (refer to Section **4.2.3.1**) was generated by hand over base mapping (including aerial photography) as described above.

4.2.3.1. Landscape Character Zones (LCZs)

A landscape character assessment was undertaken. This identifies what makes a place distinctive, without necessarily assigning a value to it. It considers the way different components of the environment, both natural (e.g. the influences of geology, soils, climate, flora and fauna), and cultural (e.g. the historical and current impact of land use, settlement, enclosure and other human interventions), interact together and are perceived to form a distinct pattern, which gives its particular sense of place.

To provide a framework for more clearly describing the area and assessing how the Project would affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character, distinct parts of the overall landscape have been separately defined and mapped as LCZs.

These LCZs were defined with consideration of the physical attributes of the landscape, cultural and heritage attributes and with respect to future planning designations and development proposals. The

central Canberra area is in a phase of active development, particularly the areas directly surrounding the Project (e.g. within London Circuit) and fringing Constitution Avenue. The future (planned) character must be taken into account when considering LCZs in these areas, in addition to assessing the existing landscape / environment.

4.3 Impact assessment

4.3.1 Landscape character impact assessment

Assessment of impact on landscape character considers the impact of change due to a project on the landscape as a resource in its own right. Impacts on landscape character are assessed at operation only as it is assumed that the landscape outside the Projects operational footprint would be restored to its original condition after construction.

4.3.1.1. Selection of LCZs

From the LCZs identified in the landscape character assessment (refer to Section **4.2.3.1**), only LCZs deemed likely to be impacted by the Project were selected for impact assessment. These comprised either LCZs within or adjacent to the Project, or any that were deemed close enough or sensitive enough to potentially experience changes due to the Project.

4.3.1.2. Assessment of impact on landscape character

The consideration of potential impacts on landscape character is determined based on the landscape's **sensitivity to change** and the **magnitude of change** that is likely to occur. Sensitivity and magnitude are both assigned a rating based on a series of criteria, and then a matrix is used to combine the ratings to determine an overall 'Significance of Landscape Impacts' rating.

Sensitivity

The sensitivity of a LCZ to the Project is assessed and rated as being High, Moderate, Low or Negligible. The rating is based on:

- Susceptibility to change - the ability of the landscape to accommodate the Project without undue consequences for the maintenance of the existing situation or the achievement of landscape planning policies and strategies
- the value of landscape.

Criteria for the assessment of sensitivity of LCZs have been defined using a combination of the physical environment of the LCZ and policy and planning documents that relate to it. The following would influence the susceptibility of the LCZ to change:

- Does the Project lie within or adjacent to the LCZ?
- Is the Project characteristic of other elements within the LCZ?
- Does the Project fit within the general principles or precinct principles of the NCP? In particular:
  - Emphasise the national significance of the Main Avenues and Approach Routes
  - Respect the geometry and intent of the Griffins' formally adopted plan for Canberra
  - Vistas of major landscape features must be protected from and enhanced by development.

The following would influence the value of the landscape:

- Does the LCZ have any notable physical contributors to value, such as landscape features, notable aesthetic, perceptual or experiential (e.g. recreational, tourist, scenic) qualities?
- Does the LCZ contain, flank or lie within a Designated Area?
- Does the LCZ contain, flank or lie within a heritage item?

Magnitude

Magnitude of change is assessed and graded as being High, Moderate, Low or Negligible. The magnitude of the impact of the Project on a landscape is based on:

- The size or scale of change:
  - Does the Project result in the loss / addition of an element in the LCZ?
  - Are any aesthetic or perceptual aspects of the landscape altered by the Project?
  - Do the changes influence or impact upon any key characteristic of the LCZ?
- Geographical extent of impact:
  - Is the change perceivable at site level only (i.e. within the development site itself), effect the immediate setting of the site, or at the scale of the LCZ within which the Project lies (or several LCZs)?
- Duration and reversibility of impacts
  - Would the changes be felt in the short term (0-5 years), medium term (5-10 years) or over a long term (10-25 years)?
  - Would the change be permanent within the landscape?

Overall impact of change

A matrix is then used to combine the ratings for sensitivity and magnitude (refer to **Table 3**) to determine an overall rating of landscape character impact.

Table 3: Landscape and visual impact assessment matrix

		Magnitude			
		High	Moderate	Low	Negligible
Sensitivity	High	High	High to Moderate	Moderate	Negligible
	Moderate	High to Moderate	Moderate	Moderate to Low	Negligible
	Low	Moderate	Moderate to Low	Low	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Qualitative assessment of change

A rating for the quality of the change to the LCZ due to the Project is provided for each LCZ, being Beneficial, Adverse or Neutral. This rating is assigned based on professional judgment, but considers:

- the degree to which the Project fits within existing / proposed and desired landscape character
- the contribution to the landscape that the Project may make in its own right, particularly by virtue of good design, even if it is in contrast to the existing character.

The qualitative judgment often relies on the urban and landscape design for the Project (refer to **Chapter 2.1**).

4.3.1.3. Mitigation of impacts and assessment of residual risk

Mitigation measures were prepared in response to any landscape character impact issues identified in this report as High or High to Moderate. An assessment of residual risk was undertaken on these LCZs to determine the residual impact after any mitigation measures were applied.

4.3.2 Visual impact assessment

Assessment of visual impact considers the impact of change on the views available to people and their visual amenity. It assesses how the surroundings of individuals or groups of people (visual receptors) may be specifically affected by changes in the context and character of views as a result of the change or loss of existing elements within the landscape and/or the introduction of new elements (Landscape Institute and Institute for Environmental Management and Assessment, 2013). Visual impacts are assessed during construction and at operation.

4.3.2.1. Selection of viewpoints

A series of viewpoints were selected from which to assess the visual impact of the Project using a combination of information gathered from:

- ZTV mapping (refer to **Section 4.2.1.1**)
- background document review (refer to **Section 4.2.1.2**)
- the site visit (refer to **Section 4.2.2**).

Other factors such as proximity to the Project, number of visual receptors at each location and the type of visual receptors were taken into account when selecting viewpoints. Viewpoints were chosen to assess the changes due to the Project from publicly accessible locations, although some viewpoints were used to approximate these changes when seen from private locations such as residences or community facilities.

These viewpoints were then used to assess the visual impact due to the Project.

Selection of visual simulation locations

Visual simulations (photomontages, refer to **Section 4.3.3.2**) were produced from those viewpoints which were deemed to experience the greatest potential impacts from the Project. These included places which were positioned closest to the Project and / or would include highly sensitive visual receptors.

Visual simulations were not produced from other viewpoints for several reasons, including:

- they were deemed too far from the Project to receive clear views to the Project
- where the changes would be screened from view by landform or vegetation
- had very few receptors; where receptors were deemed of negligible or low sensitivity or were present in very few numbers.

4.3.2.2. Assessment of visual impact

The evaluation of potential impacts on visual amenity is based on the **sensitivity of the viewpoint** (i.e. the visual receptors it represents) to change, and the **magnitude of change** arising from the Project that is likely to occur. Sensitivity and magnitude are both assigned a rating based on a series of criteria, and then a matrix is used to combine the ratings to determine an overall ‘Significance of Visual Impacts’ rating.

For each viewpoint several criteria have been considered (in addition to sensitivity and magnitude of change) that contribute to the assessment of visual impact, including:

- the location, nature and characteristics of the viewpoint
- the type and relative number of visual receptors likely to be affected
- visual characteristics of the existing view, including the nature and extent of the skyline, aspects of visual scale and proportion, any horizontal or vertical emphasis, key foci
- elements within the view such as landform, buildings or vegetation which may interrupt, filter or otherwise influence view.

Sensitivity

The sensitivity of visual receptors at a viewpoint to the Project is assessed and rated as being High, Moderate, Low or Negligible. The rating is based on:

- susceptibility to change, which is a function of:
  - the occupation or activity of the visual receptors experiencing the view
  - the extent to which their attention or interest may therefore be focussed on the views and the visual amenity they experience at particular locations
- value attached to the view experienced, e.g.:
  - in relation to heritage assets, or through planning designations; or
  - indicators of value attached to views, e.g. through appearing on tourist maps, or provision of facilities for their enjoyment (such as parking places, sign boards and interpretative material).

More sensitive visual receptors may include:

- residents at home with living areas orientated towards the view
- people engaged in outdoor recreation where the quality of the landscape or the views are intrinsic to their enjoyment of the activity
- visitors to heritage assets or other attractions where views are an important contributor to the experience
- communities where views contribute to the landscape setting of the area.

Magnitude

The magnitude of change to views and visual amenity depends on:

- size or scale of change in the view with regard to the:
  - loss or addition of features in the view and changes in its composition;
  - degree of contrast or integration of any new features with the existing landscape, in terms of form, scale and mass, line, height, colour and texture; and
  - nature of the view of the proposed development in terms of amount of time it would be experienced, and whether the views would be full, partial or glimpses.
- geographical extent of the visual impact with different viewpoints including the:
  - angle of view in relation to the main activity of the receptor;
  - distance of the viewpoint from the proposed development; and
  - extent of area over which the changes would be visible.
- duration and reversibility of visual impacts, e.g.:
  - duration in terms of short term (0-5 years), medium term (6-15 years) or long term (16-30+ years); and
  - reversibility with regard to the prospects and practicality of a proposed change being reversed in say a generation, e.g. housing can be considered permanent, but wind energy developments for example are often argued to be reversible since they have a limited life, and could eventually be removed and the land reinstated (Landscape Institute and Institute for Environmental Management and Assessment, 2013).

The extent of magnitude is assessed and graded as being High, Moderate, Low or Negligible.

Overall impact of change

A matrix is used to combine the ratings for sensitivity and magnitude to provide an overall rating of visual Impact (refer to **Table 3**). The rating does not contain a value judgment regarding the nature of the visual change (i.e. if the change is a positive or negative impact on views).

Qualitative assessment of change

A rating for the quality of the change to views seen from each viewpoint due to the Project is provided, being Beneficial, Adverse or Neutral. This rating is assigned based on professional judgment, but considers:

- the degree to which the Project fits within existing / proposed views
- the contribution of the Project to the view, particularly by virtue of good design, even if it the overall change has been rated as High or High to Moderate.

The qualitative judgment often relies on the urban and landscape design for the Project (refer to **Section 2.1**).

4.3.2.3. Mitigation of impacts and assessment of residual risk

Mitigation measures were prepared in response to any visual impact issues identified in this report as High or High to Moderate.

An assessment of residual risk was undertaken on these viewpoints to determine the residual impact after any mitigation measures were applied.

4.3.3 Photos and visual simulations

4.3.3.1. Creation of panoramas

A series of photographs were arranged to produce a panorama from each viewpoint. These provided a baseline from which to assess changes arising from the Project.

Photographs captured on site (refer to Section **4.2.2.1** for photo capture methodology) were processed to remove any elements of lens distortion and stitched together using specialised panoramic software (PTGui Pro, version 11.18). Each photograph was tied to its adjacent image using relative tie points to create an accurate panorama. A minimum of 10 control points were used to ensure a high level of accuracy with average control point divergence measured at <1 pixel.

Panoramic photographs are then generated with a horizontal Field of View (FoV) of 124° using a true rectilinear projection to accurately simulate a camera lens with a FoV equal to 124°.

4.3.3.2. Creation of visual simulations

Visual simulations were produced to depict changes due to the Project at selected viewpoints. Visual simulations are a type of photomontage which provides the most accurate representation of relative position and size of the Project from a chosen viewpoint.

Visual simulations were prepared for key viewpoints to show the unmitigated impact of the Project (i.e. the Project on the day of completion). Refer to Section **4.3.2** for method of selecting key viewpoints from which visual simulations were to be produced.

Once the accurate background image (panorama, refer **4.3.3.1**) had been created, it was aligned into visualisation software (Autodesk 3ds Max 2016) with a virtual camera. Virtual cameras do not suffer the same distortion as real lenses because they are based on the scientific principles of a perfect lens. The virtual camera is set to the required FoV with no need for correction.

The models and plans were imported into 3DS Max and were aligned to a local datum offset from MGA56. Once the virtual and real cameras had been aligned, the image was rendered using a 3D model and photo editing software (Adobe Photoshop, version 2020) to combine the two into a seamless simulation.

During the photo editing process any vegetation or structures to be removed during construction was removed from the image.

5.0 Existing environment

5.1 Site context

Canberra and the Territory are of national significance as the outcome and symbol of the Federation and the home of Australia's democracy (NCA, 2016).

Canberra was designed on a greenfield site at the time Australia was Federated. The design, prepared by Walter Burley and Marion Mahony Griffin and influenced by the Garden City and City Beautiful movements, was selected amongst those submitted to the international town planning competition in 1911 and used the topography to provide the location, backdrop and outlooks for pivotal buildings to house major institutions or landmarks for commemoration. The open space, hills and grand avenues that highlight axes between landmarks are the symbolic and functional base for the city.

The Garden City and City beautiful movements rose to prominence during the 1890s and 1900s. These movements promoted beautification within cities to promote moral and civic virtue amongst residents and surrounded city communities with greenbelts containing industry and agriculture.

The Griffins' design had four main elements:

- the use of topography as an integral design feature and as a setting (refer to **Figure 16**)
- a symbolic hierarchy of land uses designed to reflect the order and functions of democratic government
- a geometric plan with the central triangle formed by grand avenues terminating at Capital Hill, the symbolic centre of the nation
- a system of urban centres.

The design of the city where grand landmarks are linked with strong geometric axes (the most prominent being the Water Axis and Land Axis, nominally shown in **Figure 17**) are a defining feature of the city.

Canberra has been developed as a series of separate but linked towns, established in valleys and shaped and separated from each other by a system of open space. This arrangement has protected the major hills and ridges from development, and has created a scenic backdrop and natural setting for the urban areas. It has reinforced the Garden City and City Beautiful character for which Canberra is renowned. This landscape setting makes a major contribution to the environmental quality which is a feature of Canberra's character. Conserving and enhancing the landscape setting is important in retaining the character of the National Capital.

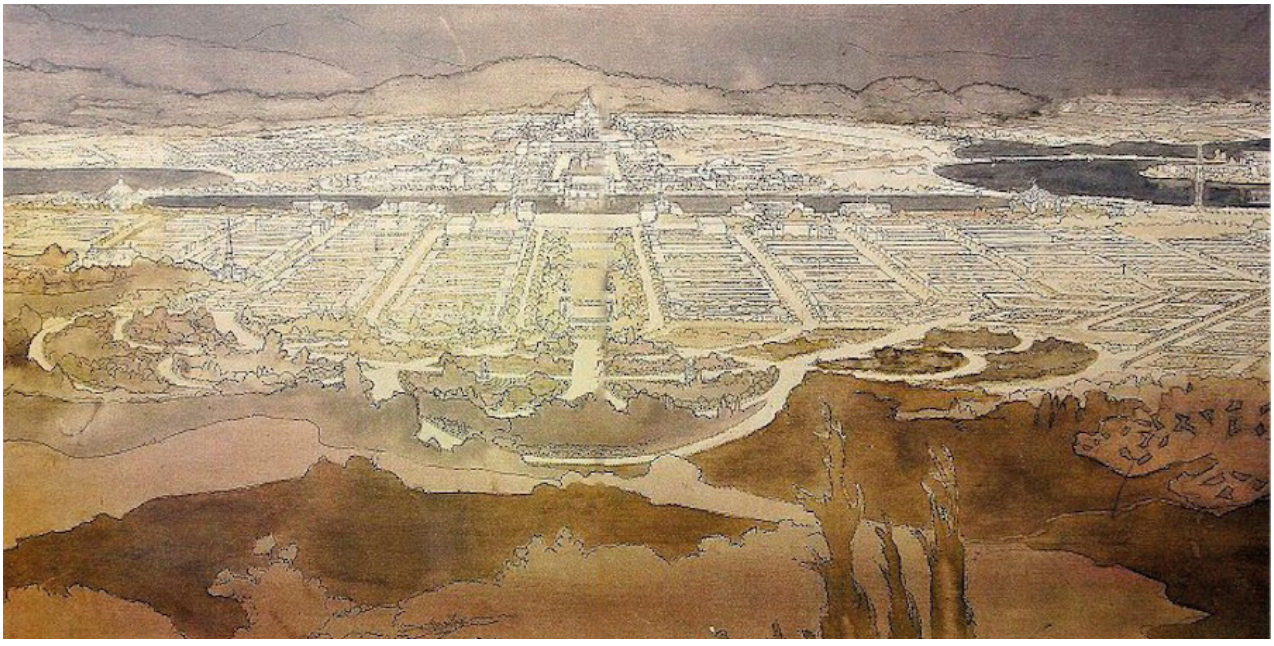

Figure 16 Watercolour painting by Marion Mahony Griffin of the view from Mount Ainslie, 1912 (National Archives of Australia, 2013)

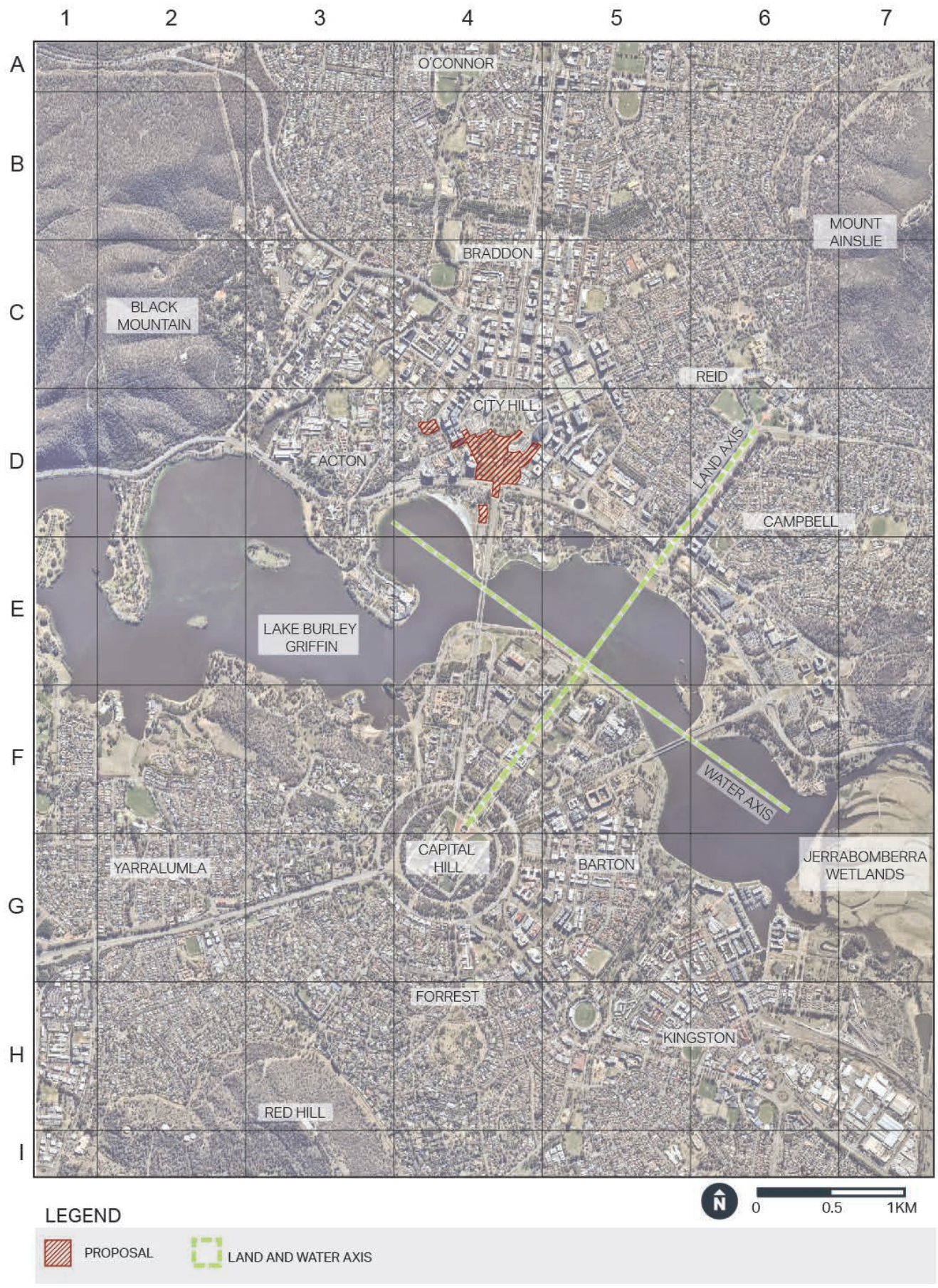

Figure 17 Site context map

5.2 Topography and hydrology

The city of Canberra was designed with topography as a dominant element: an irregular amphitheater between Black Mountain, Mount Ainslie and Mount Pleasant, with the mountain ranges of the Territory serving as a scenic backdrop. The city layout elements, comprising the National Triangle and its inferred Land and Water Axes, respond to the topographical features. The Project lies at the northern corner of the National Triangle.

The topography of the study area comprises Black Mountain to the north west (812 m AHD), Mount Ainslie to the North East (842 m AHD), and the city centre positioned within the valley between the two landmark formations. City Hill is a localised high point within the central area, providing a landmark focal point to the Northbourne Avenue vista from the north (refer to **Figure 18**).

On the southern side of Lake Burley Griffin, Capital Hill lies as another landmark focal point, positioned at the base of Red Hill, which rises to the south behind the National Triangle.

The major hydrological feature within the study area is Lake Burley Griffin, an artificial lake created by damming the Molonglo River, which flowed from east to west through the study area. Lake Burley Griffin is significant within the Canberra landscape as it forms the Water Axis within the Griffin Plan (GML, 2020).

To the east of the lake are the Jerrabomberra Wetlands, formed when the Molonglo river was dammed. The wetlands are an important habitat for local and migratory bird species (ACT Government, 2021).

Sullivans Creek is positioned within this valley but to the west, flowing south and emptying into West Basin within Lake Burley Griffin.

The topography within the study area is shown in **Figure 19**.

Figure 18 City Hill seen from London Circuit at the intersection with Northbourne Avenue

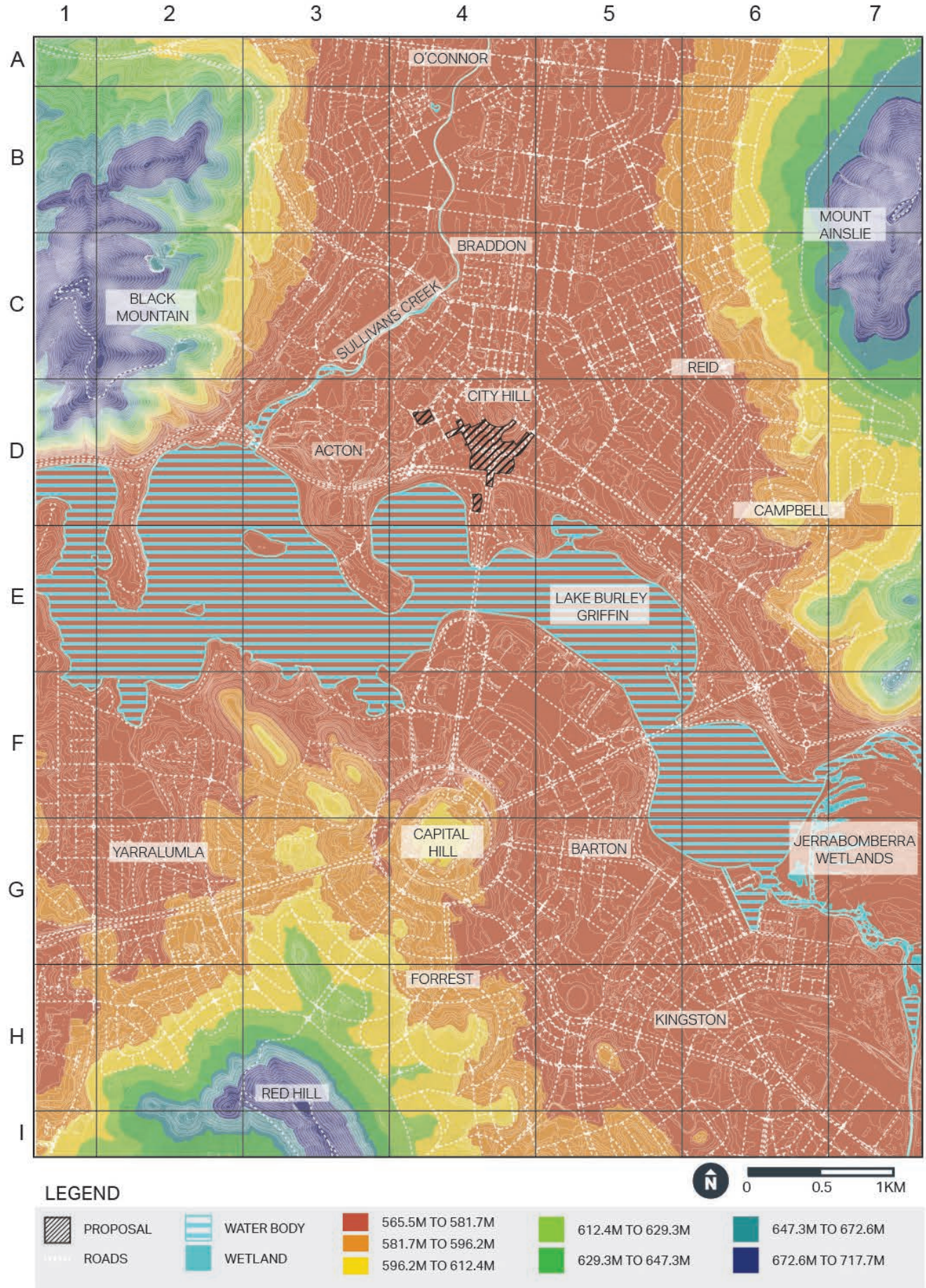

Figure 19 Topographic map

5.3 Land use

Within the study area, land use is defined by both the Territory Plan and the NCP. The NCP has identified precincts within the Designated Areas within the Central National Area and comprise (refer to **Figure 7**):

- City Hill
- West Basin
- Constitution Avenue and ANZAC Parade
- Australian National University
- Parliament Zone
- Acton
- Lake Burley Griffin and its foreshores.

While not a precinct, the Main Avenues (refer to **Figure 20**) and Approach Routes between the ACT border and the Central National Area are distinct land uses that apply to the Project.

The Territory Plan has identified land use as follows. A central core of commercial and business land uses are centred around Northbourne Avenue, flanked on either side by urban and suburban development, reducing in density as it radiates out from the road corridor. Green open space within these areas is typically arranged in bands and corridors, either responding to the topography (foothills or hydrological features such as Sullivans Creek) or planned linear parks such as Haig Park.

South of Capital Hill, residential areas dominate the landscape to the south and west, with small pockets of green open space. To the east, a triangular wedge of medium to high density residential development with some commercial development, including mixed use and accommodation.

Figure 20 The view from City Hill south along Commonwealth Avenue, which is one of the Main Avenues

5.4 Vegetation

Pre-settlement vegetation on the highest peaks and ridges within Canberra (including Black Mountain and Mount Ainslie) were Open Forest, with more gentle slopes comprising sparser tree cover in areas of Grassy Woodland. The Molonglo River, prior to the damming of Lake Burley Griffin, was vegetated with Riparian Forest. In the lower areas, including the Project site area, vegetation comprised Temperate Grassland and *E. melliodora / E. blakelyi* Grassy Woodland.

Present day vegetation includes preserved Open Forest on the peaks and upper slopes of Black Mountain and Mount Ainslie. Some areas of Open Woodland on the western lower slopes of Mount Ainslie have also been preserved.

A majority of the lower areas of Canberra have been cleared and developed, with vegetation listed as 'urban' and comprising a managed landscape of turf, exotic and native planted trees and shrubs. Some patches of grassland remain within the city, along with some wetland areas to the east of Lake Burley Griffin.

The planting / vegetation within the developed city of Canberra plays an important role in the legibility of the design of the city. Many of the structural plantings along roads and other public open spaces were part of the Griffin Plan implemented by Thomas Weston when he was Superintendent of Parks and Gardens during the 1920s, including:

- The planting of *Cupressus sempervirens var. stricta* (Italian Cypress) and *Pinus radiata (*Radiata Pine) on City Hill to reinforce views along Main Avenues and vistas (refer to **Figure 21**)
- Planting of formal avenues of trees along the Main Avenues of Canberra, including Commonwealth, Constitution and Kings Avenue
- Formal tree plantings within Haig Park, built to honour Earl Haig, the Commander-in-Chief of the British Expeditionary Forces during the First World War, comprising fourteen rows of predominantly exotic trees.

Present day vegetation coverage is shown in **Figure 22**.

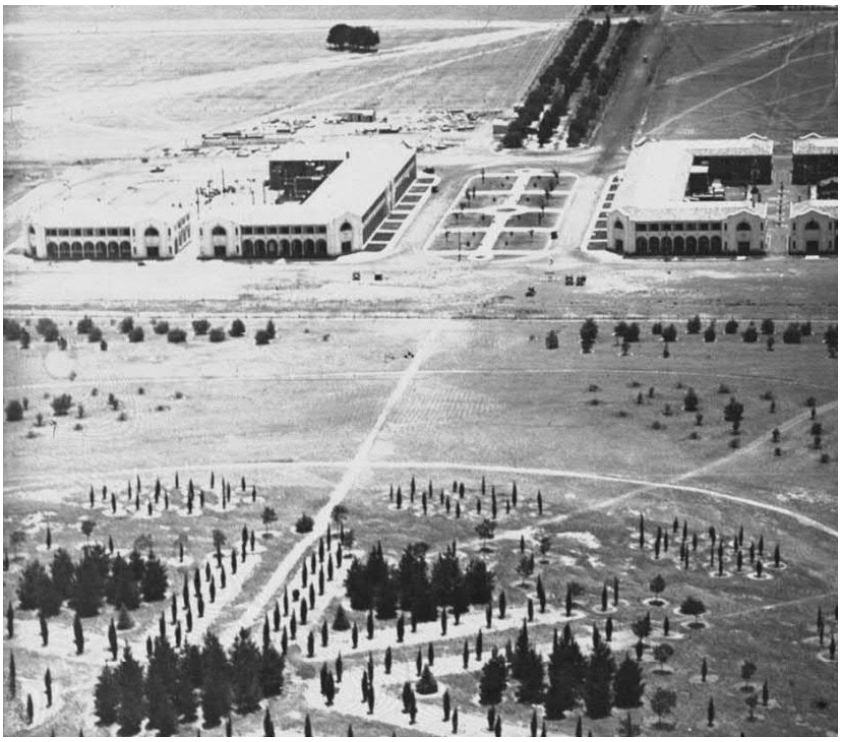

Figure 21 City Hill, 1927 (GML, 2020)

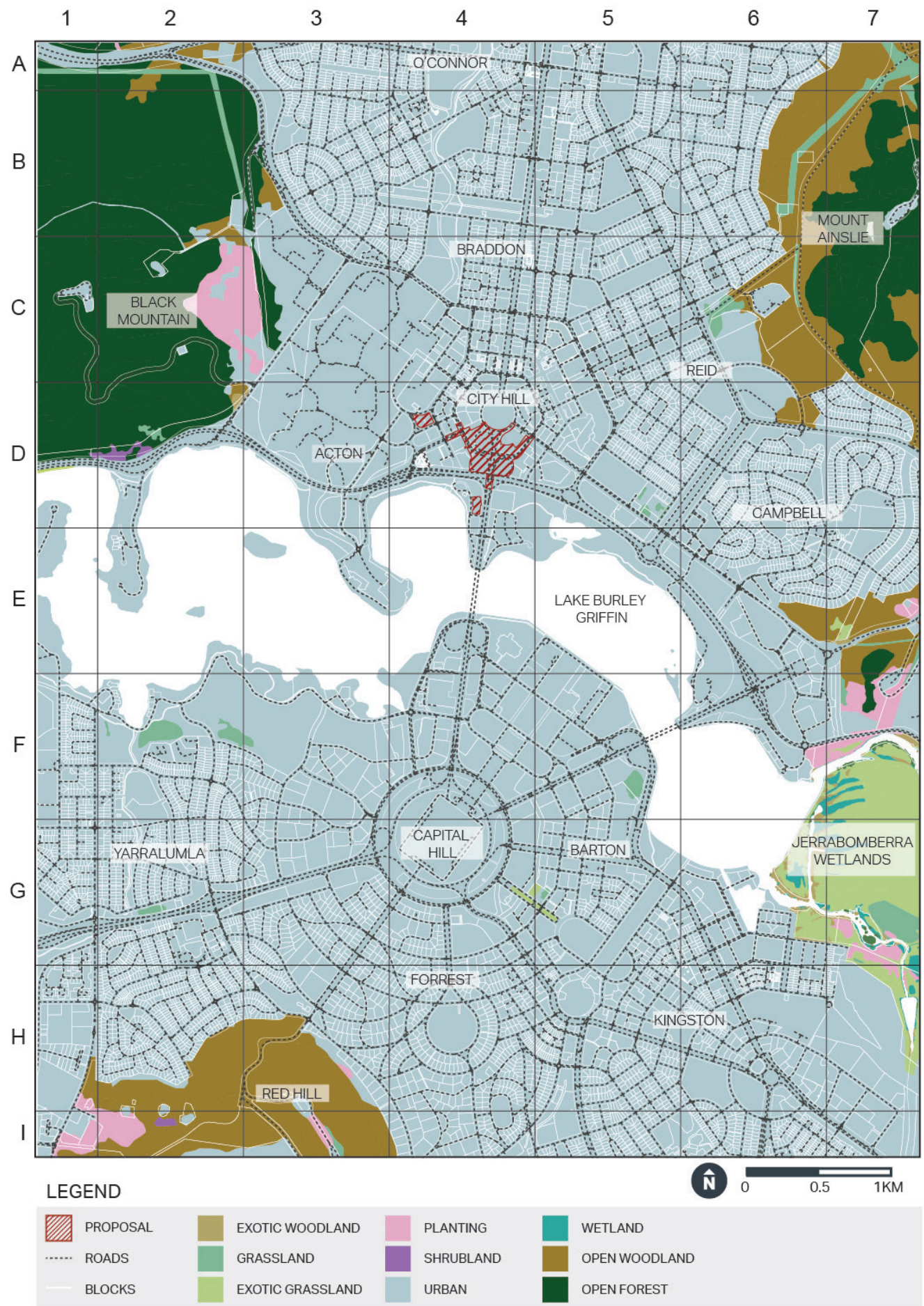

Figure 22 Vegetation coverage map

5.5 Heritage and tourism

This section provides an overview of the places and items within the study area that have identified heritage value. It has been informed by a heritage review for the City to Commonwealth Park Light Rail proposal (GML, 2020) and the HIA for the RLC Project (GML, July 2021) .

5.5.1 Historic heritage values

Places listed in the CHL, NHL and ACT Heritage Register are shown in **Figure 23** (with the exception of Canberra and Surrounding Areas).

Within the study area, items with heritage significance include:

- Canberra and Surrounding Areas / Canberra the Planned National Capital (NHL)
- Lake Burley Griffin and Adjacent Lands (CHL) and Lake Burley Griffin and Lakeshore Landscape and Parklands (NHL)
- Parliament House Vista (CHL)
- National Land Roads (CHL)
- City Hill (ACT Heritage Register)
- Parliament House and Surrounds (CHL)
- Acton Conservation Area (CHL).

Canberra is considered to have outstanding heritage value due to its importance in the history of Australia's urban planning and evolving democracy. It has a special association with Australians as the nation's capital and the seat of federal democracy, and special association for Indigenous Australians as the place significant progress has been made towards Indigenous rights and reconciliation.

Refer to **Table 4** for a summary of historic heritage values, key attributes and management policies for heritage listed places within or adjacent to the Project.

Table 4: Heritage values and key attributes of heritage items within or adjacent to the Project (modified from GML, July 2021)

Heritage values	Key attributes and management issues
Canberra the Planned National Capital	
Canberra has outstanding heritage value due to: • its history of Australia's urban planning and evolving democracy. • its importance in exhibiting an ensemble of designed urban landscapes and settings that display and project its status, function and significance as the national capital. These features are valued highly by the Canberra and Australian communities for their aesthetic appeal. • the high degree of creative and technical achievement in town planning, urban design and urban horticulture. • its special association as the nation's capital and seat of the federal democracy. Canberra also has a special association for Indigenous Australians as the place significant progress has been made towards Indigenous rights and reconciliation. • the place's special association with the lives and works of Prime Ministers and Governors-General of Australia as a group, and individual town planners Walter Burley Griffin and Marion Mahony Griffin.	Key attributes relevant to the Project include: • Public parklands that present the city as a Garden City or city in the landscape • Views to and from Mount Ainslie, Black Mountain, Red Hill and Mt Pleasant along axes and across the Central National Area • Views to Parliament House as the focal point along Commonwealth and Kings Avenues • The Griffins' use of topography and geometry in the arrangement of the city, including the Land and Water Axes • Tree lined boulevards of the Main Avenues and their associated terminal axis features • Planned nature of the city, including overall design and plantings • The Central National Area including Lake Burley Griffin and high proportion of tree planting in the public domain.

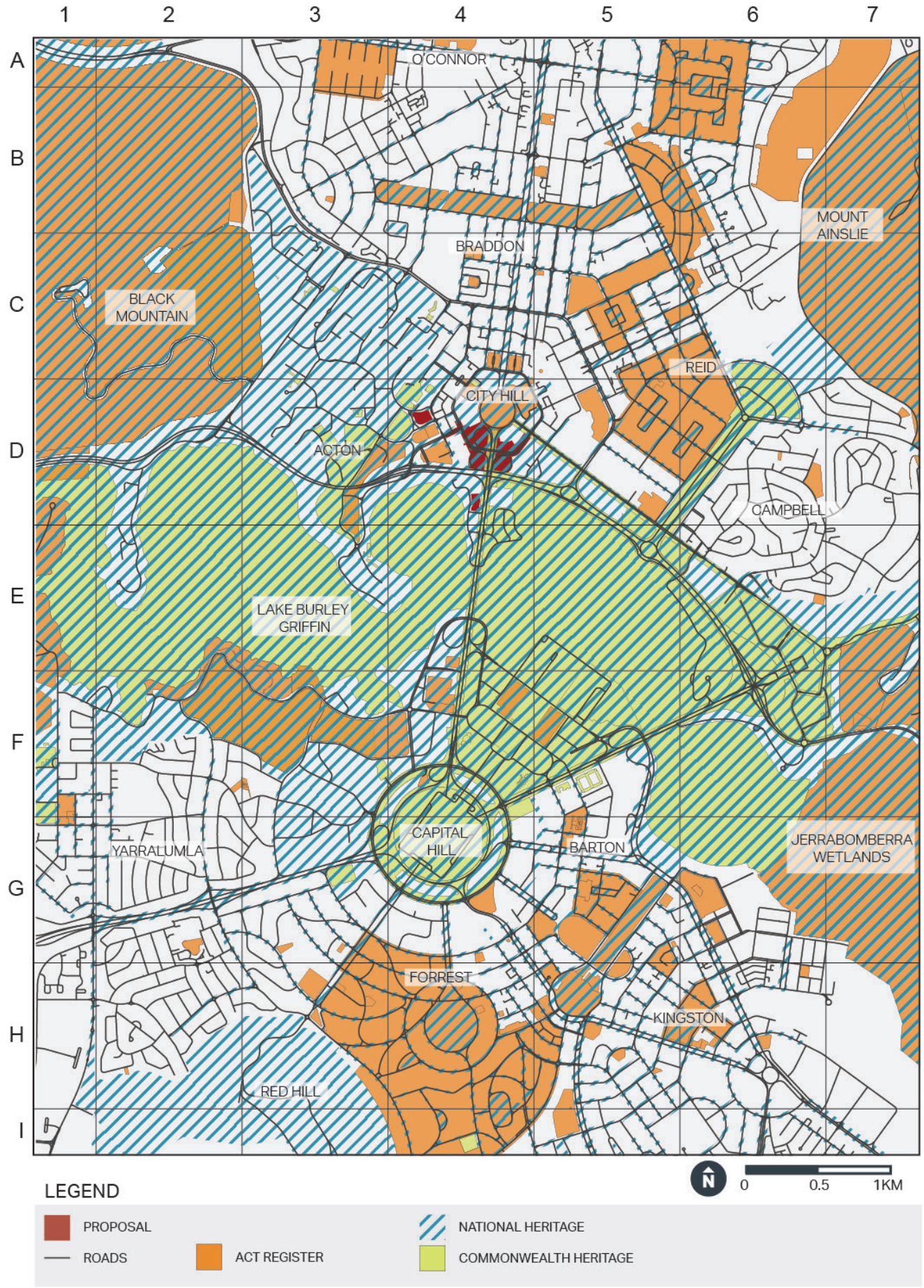

Figure 23 Heritage items within the study area.

Table 4 continued

Heritage values	Key attributes and management issues
Parliament House Vista	
The vista has significance due to: • the extensive sweeping views along the Land Axis in two directions, set within natural features of forested hills, architectural massing accentuated by open spaces, water planes and tree plantings. • its visual drama and sweeping views to terminal features. • its symbolic representation of the democratic interchange between the people and their elected representatives and its use of the natural landforms to generate a strong planning geometry. • it being an ambitious and successful example of twentieth century urban planning in Australia. • its association with the broad Australian community because of its social values as a symbol of Australia and the Federal Government. • its association with its designers, including Walter Burley Griffin and Marion Mahony Griffin, John Smith Murdoch, Thomas Charles Weston, Sir John Overall, Peter Harrison and Paul Reid.	Key attributes include: • Buildings, parklands and gardens that support governmental activity as well as national cultural life • The vista along the Land Axis • Memorial features including sculptures, plaques, commemorative trees, water features and gardens. Also, recreational landscape spaces and gathering spaces in which the community may demonstrate • The whole of the vista, its planned layout, and the view from the top of Mount Ainslie which illustrates the realisation of Marion Mahony Griffins' perspective drawing. Views and vistas are protected by the NCA, including views: • To the surrounding hill, especially Mount Ainslie, Black Mountain and Mount Pleasant • To the Parliament House • From Commonwealth and Kings Avenues, especially from the bridges.
National Land Roads	
Commonwealth Avenue is significant as an integral element of Walter Burley Griffins' 1911 plan for the national capital. Commonwealth Avenue is significant: • for its rarity as an original and major part of Griffins' design, representing one side of his planned National Triangle. • for its role in demonstrating the planning of a national capital. • as a good example of wide tree-lined avenues, which are an important feature in Canberra's planning and landscape. • as a major part of a landscape/urban design that represented a paradigm shift in urban planning in Australia. • for its associations with Walter Burley Griffin and Charles Weston, both persons of importance in Australia's cultural history.	Key attributes include: • Formality in the design and aesthetic of a wide, tree-lined avenue. • The siting, alignment and width of the avenue. • The layout and mix of native and exotic species. • Historical function as a major and active boulevard that facilitates public movement throughout Canberra. • Views north and south along the avenue. • The visual and spatial relationship of Commonwealth Avenue with Kings and Constitution Avenues, the other two sides of the National Triangle. • Ceremonial and symbolic importance as an entrance to the Parliamentary Zone. A series of principles to inform and guide development of Commonwealth Avenue are summarised in **Section 3.9**.
City Hill	
City Hill represents an important element of urban design and is an integral component of the Griffin plan. It is a generating point for the major avenues, its plantings provide visual corridors for those avenues. • City Hill provides an important landscaped open space within the CBD and enables views of the key topographical elements of the city to be seen. • The verticality of the trees and flagpole forms a landmark within the city. • Plantings have historical significance due to their association with Thomas Charles Weston. • City Hill is also of local historical significance because of its association with the first visit of a reigning British monarch to Canberra.	Key attributes include: • Grass areas and plantings of *Cupressus sempervirens 'Stricta'*, *Pinus radiata*, *Robinia pseudocacia*. • The metal flagpole in its existing location. The ACT Heritage Register require the landscape qualities of City Hill are to be retained as an important element of Canberra's planning.

5.5.2 Aboriginal heritage values

No previously recorded Aboriginal sites were located within the study area for the report (GML, 2020). Four Aboriginal heritage sites were located outside this study area on basal slopes of Mount Pleasant, comprising three stone artifact scatters and one isolated artifact.

A number of Aboriginal cultural values of the area have been identified, including that the Project area had once been part of a general thoroughfare between Mount Ainslie, Mount Pleasant and the Molonglo River. Archaeological potential had been identified in Kings Park and in the vicinity of the Molonglo River at the base of Mount Pleasant, however, landscape modification and development would have destroyed most, if not all, Aboriginal sites in these areas (GML, 2020).

An early series of desktop studies for the Light Rail to Woden project include the following recorded Aboriginal Cultural Sites and Values (GML, 2020):

- Capital Hill was identified as a ‘woman’s area’ by a Ngunawal man and part of a wider cultural landscape which includes Black Mountain and Mount Ainslie.
- Molonglo River Landscape, now inundated by Lake Burley Griffin, however, camp sites may be undisturbed, albeit submerged
- The Aboriginal Tent Embassy, which is nominated in the NHL and included in the CHL.

Consultation with the Aboriginal community has confirmed that the general landscape was, and continues to be, of significance to them. The cultural values of the study area have been impacted by past activities but endure beyond the development of Canberra.

5.5.3 Natural heritage values

Natural heritage is defined as an item or place demonstrating ‘natural significance’, meaning the importance of ecosystems, biodiversity or geodiversity for their existence or value for present and future generations. This could apply to original or modified environments.

Pre-settlement vegetation within the Project site area was natural temperate grassland and *E. melliodora / E. blakelyi* grassy woodland, however, decades of landscape changes and ongoing management have removed all remnants of the natural grassland community (GML, 2020). Despite the lack of natural grassland within the Project construction footprint, the critically endangered Golden Sun Moth (GSM) has been recorded in several locations within the Project footprint.

5.5.4 Designated cultural landscape

The National Triangle is a designated cultural landscape due to its historic character in the Central National Area.

Due to extensive vista along Land Axis, the open landscape and the prominent location of some of these heritage places, the Project has the potential to have a direct or indirect, temporary or permanent, visual or physical impacts on several listed and nominated heritage places along the proposed route.

5.5.5 Tourism

As the nation’s capital, Canberra is an important tourist destination for Australian and international visitors. Many of Canberra’s attractions lie within the centre of the city, centred around Lake Burley Griffin and the National Triangle.

Tourism in these areas comprise recreational activities based on the importance of the planned national capital, including exploring the landscape of Lake Burley Griffin (on land or on the lake itself) or visiting landscape landmarks within the city including lookouts at Black Mountain and Mount Ainslie or City Hill. Other attractions include visiting cultural destinations within the National Triangle and surrounding Lake Burley Griffin, such as the National Gallery or Questacon.

5.6 Landscape Character Zones

5 LCZs were identified within the detailed study area with broadly homogeneous characteristics or spatial qualities (refer to **Figure 24**). These are:

- LCZ 1: Parliamentary Zone and Cultural Triangle
- LCZ 2: Major Avenues and Axes
- LCZ 3: Lake Burley Griffin and Foreshores
- LCZ 4: London Circuit
- LCZ 5: Parkes Way.

The Project lies predominantly within LCZ 4: London Circuit, but also overlaps LCZ 2: Major Avenues and Axes, LCZ 3: Lake Burley Griffin and Foreshores and LCZ 4: Parkes Way.

5.6.1 LCZ 1: Parliamentary Zone and Cultural Triangle

This LCZ, shown in **Figure 25**, is located in the Parliamentary Zone in the Central National Area within the suburb of Parkes, approximately 1 km from the Project. It comprises the triangle of land bounded by Commonwealth Avenue to the west, Lake Burley Griffin to the north, and Kings Avenue to the south east and makes up a majority of the National Triangle, as defined by the NCP. Parliament house lies at the southern confluence of these avenues, and while important to LCZ 1, has not been included within this zone as it has been included within LCZ 2: Main Avenues and Axes.

LCZ 1 comprises a formal landscape, with the geometry of the road and block network responding to the triangular shape of the land parcel, bisected and bounded by axes that are integral to the structure of the city. The formal geometry and spatial arrangement respond to the symbolic importance of the zone as the heart of the nation's capital.

Spatial rationale for buildings is based on a series of campuses with internal 'campus squares' around which building layout is spaced. Each campus has a large focal building within it, around which other smaller spaces and buildings are arranged. These include:

- High Court of Australia
- National Library of Australia (refer to **Figure 26**)
- National Gallery of Australia
- National Portrait Gallery
- Questacon
- Treasury Building
- National Archives.

The topography of this LCZ is predominantly flat to very gently undulating. Buildings within the LCZ are typically large and built on podiums or local high points to give them a sense of presence within the landscape. Built form is typically of a grand scale in a mix of architectural styles, depending on use. The landform falls to Lake Burley Griffin at the northern boundary.

Views and vistas within this LCZ are compartmentalised within the landscape by the formal planting of avenues along road corridors or along boundaries (refer to **Figure 25**). This results in a framing of buildings within smaller landscape zones, while visually expressing a sense of prominence and importance within each campus. Vegetation comprises predominantly formal tree planting along boundaries, with large areas of open turf and some smaller gardens, including the National Rose Garden and the Sculpture Garden at the National Gallery of Australia.

Land uses within the LCZ are predominantly National Capital Use, with some commercial (i.e. restaurants and cafés). A series of large car parks servicing each campus are fringed by vegetation.

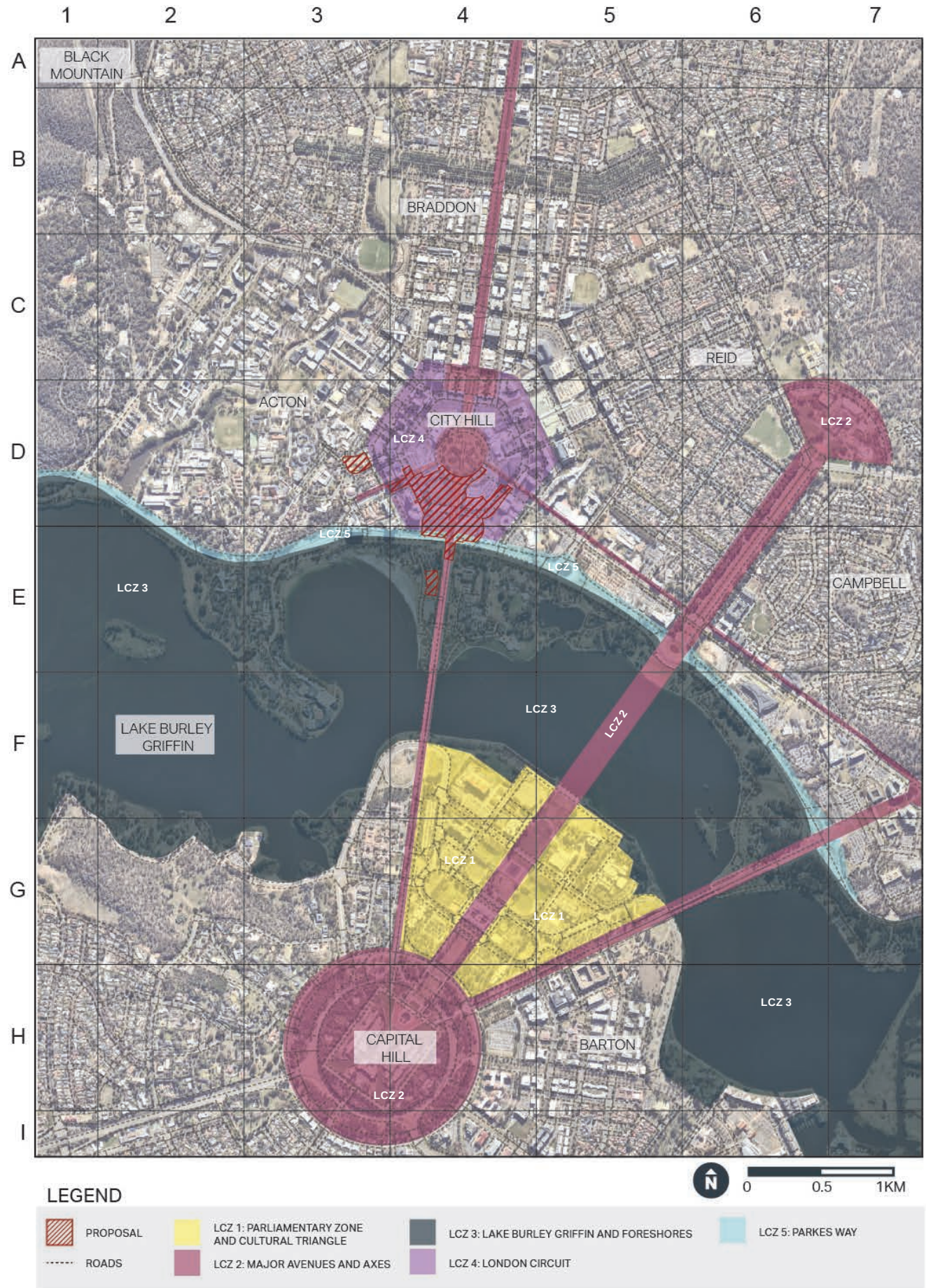

Figure 24 Landscape Character Zones

The LCZ contains several listed heritage items, the most notable for this area being the Parliament House Vista, listed on the Commonwealth Heritage List. This listing encompasses the entire area of the LCZ, however, key attributes focus on the vistas along the Land Axis and Main Avenues, to and from the current and former Parliament Houses, and to and from Black Mountain and Mount Ainslie. The formal arrangement and layout of the LCZ contributes to the preservation of these views.

5.6.2 LCZ 2: Major Avenues and Axes

This LCZ comprises a series of linear corridors and focal points. Within the study area the focal points include:

- Parliament House (refer to **Figure 27**), which is the southern focal point for:
  - the Land Axis (refer to **Figure 28**)
  - Commonwealth Avenue (refer to **Figure 29**)
  - Kings Avenue
- Old Parliament House (refer to **Figure 30**), which lies within the Land Axis
- Australian War Memorial, the northern focal point for the Land Axis and ANZAC Parade

Figure 25 Aerial photo showing LCZ (Base imagery: Google Earth Pro 7.3.3.7721 (2020) [1])

Figure 26 The National Library

Figure 27 Parliament House

Figure 28 Land Axis seen from Mount Ainslie

- City Hill (refer to **Figure 31**), which is the:
  - northern focal point for Commonwealth Avenue
  - southern focal point for Northbourne Avenue
  - western focal point for Constitution Avenue
  - eastern focal point for Edinburgh Avenue
- The Melbourne and Sydney Buildings (refer to **Figure 32**), which frame Northbourne Avenue
- Sir Thomas Blamey Square, the north eastern focal point for Kings Avenue.

The Project lies partially within this LCZ on Commonwealth Avenue near City Hill.

This LCZ emphasises a major design component of Canberra, providing strong, linear elements that assist in orientation, highlight landmarks and introduce drama and weight to areas and items within the landscape.

The topography within this LCZ varies, but typically the focal points are accentuated with raised landform (e.g. City Hill and Capital Hill, the location of Parliament House). Avenues and axes between these landmarks often drop to a low point, rising again to the next focal point. Views along the avenues and axes are an integral element, with vegetation planted as an avenue on either side of the central viewing corridor (e.g. the Land Axis) or occasionally within the central median (Commonwealth Avenue). However, when planting occurs within the central median the width of the avenue has allowed for views along the corridor to remain (refer to **Figure 29**).

Built form within this LCZ is limited to a few key landmark buildings, including the current and former Parliament Houses, which act as focal points, or framing buildings, such as the Sydney and Melbourne Buildings. Architectural style is varied, but typically monumental and formal in design.

Figure 29 View north to City Hill from Parliament House along Commonwealth Ave

Figure 30 View north along the Land Axis from Capital Hill

Figure 31 View south to City Hill from Northbourne Avenue

Figure 32 View north along Northbourne Avenue

Architecture and planting at focal points address the views and vistas along the avenues and axes they relate to, e.g.:

- the orientation and design of the current Parliament House address the major view along the Land Axis, as well as sweeping lawn areas that address Commonwealth and Kings Avenue, designed to ensure the focal point of the avenues remains largely landscape focussed
- the built form and orientation of the former Parliament House frames the Australian War Memorial when viewed along the Land Axis from the Capital Hill
- plantings of Cypress and Pine trees on City Hill provide view corridors from the centre along the avenues that radiate from it (refer to **Figure 33**).

The Main Avenues and Approach Routes are subject to a Precinct Code within the NCP as Designated Areas, however, they are not part of the Central National Area. Their importance as structural elements of the Griffins' plan for Canberra is emphasised by the desire to reinforce and protect these avenues and axes within the NCP and other planning instruments. They are listed as a heritage item within the CHL (National Land Roads).

The symbolic weight of the Land Axis (particularly with the relationship to the current and former Parliament Houses) makes this an important space for cultural functions. The Aboriginal Tent Embassy (which is listed in the CHL and nominated for inclusion in the NHL) is located within the Land Axis.

The predominant land use of this LCZ are transport corridors, with the exception of the Land Axis, which comprises public open space.

5.6.3 LCZ 3: Lake Burley Griffin and Foreshores

LCZ 3: Lake Burley Griffin and Foreshores is one of the largest LCZs within the detailed study area. It extends from the eastern to the western boundary of the detailed study area, physically bisected by two bridges at Commonwealth Avenue (refer to **Figure 34**) and Kings Avenue. The LCZ comprises the large, open expanse of water of Lake Burley Griffin and the parkland foreshore areas which address the lake rather than the land uses behind them. The Project lies adjacent to this LCZ where Commonwealth Avenue passes over parkland within a foreshore area.

Lake Burley Griffin is one of the key landscape landmarks within Canberra. Its values include its aesthetic qualities, its presence and importance in the Land and Water Axes (refer to **Figure 35**), as an iconic cultural landscape and symbol of identity, as a recreational and tourist destination, as a key component of the Griffin Plan, and its association with the creation of the national capital.

The topography of the LCZ is predominantly the flat expanse of the lake fringed by gently undulating parks. The lake edges comprise a mix of formal and informal shoreline treatments which respond to the landform and adjoining land use. The southern edge of the lake adjoining LCZ 1: Parliamentary Zone and Cultural Triangle, the lake edge responds with a straight, formal edge and ornamental avenues of pear trees. This straight, formal shoreline emphasises the Water Axis, which lies perpendicular to the Land Axis (refer to **Figure 36**).

Figure 33 View south from City Hill along Commonwealth Avenue to Parliament House

Figure 34 View west to the Commonwealth Avenue Bridge

Due to the flat topography and low lying nature of the LCZ, views and vistas across the lake and to the landscape beyond are accessible from most locations. They include views to Black Mountain along the Water Axis, to Mount Ainslie along the Land Axis, and to several landmark buildings surrounding the lake (refer to **Figure 37**). The Commonwealth Avenue Bridge water jet, as seen in **Figure 35**, provides a focal point within the lake itself.

Within the central lake area (between Commonwealth and Kings Avenues) the lake edges are unified by a wide recreational shared path. A majority of the parkland landscape beyond this path is gently undulating turf parkland with scattered native and exotic trees and occasional built form. Sculptural focal elements at different scales are often accompanied by interpretive signage, such as the Captain Cook Memorial (refer to **Figure 38**) or the display of Australians of the Year.

The LCZ contains heritage items, including Lake Burley Griffin and Adjacent Lands (CHL) and Lake Burley Griffin and Lakeshore Landscape and Parklands (NHL).

5.6.4 LCZ 4: London Circuit

This LCZ comprises the band of developed land and land which is under going development on either side of London Circuit, but not including City Hill within Vernon Circuit. The existing landscape between Vernon Circle and London Circuit currently comprises buildings developed on blocks to the north east and north west, with the remainder covered with large expanses of car parking (refer to **Figure 39**). However, this area is designated for development within planning instruments (refer to **Figure 40**) and undergoing rapid changes and will therefore be described in its current and proposed states.

The Project lies predominantly within this LCZ, centred on the intersection of London Circuit with Commonwealth Avenue.

LCZ 4: London Circuit lies within the City Hill Precinct identified within the Central National Area as defined by the NCP. As such, the City Hill Precinct is considered the municipal heart of central Canberra, forming

Figure 35 View to Black Mountain along the Water Axis

Figure 36 View to the National Gallery and the Land Axis from the protruding board walk

Figure 37 View across the lake to landmark buildings

Figure 38 The Captain Cook Memorial

the Griffins' symbolic and geographical centre for the city and a hub connecting significant Main Avenues and vistas.

The topography of the LCZ falls from the highest point at Vernon Circle to the lower London Circuit (refer to **Figure 41**), Marcus Clarke Street and Allara Street. Views along the road corridors can be seen within the LCZ, with the most significant available along the Main Avenues:

- looking north west along University Avenue (refer to **Figure 42**)
- looking south along Commonwealth Avenue
- looking south west along Constitution Avenue
- looking north along Northbourne Avenue.

The character of the LCZ is strongly influenced by the unusual road layout: concentric circular roads radiating out to a hexagonal shape, with perpendicular avenues radiating out from the LCZ. The distinctive loop roads (known as the cloverleaves) connecting Commonwealth Avenue to London Circuit and Parkes Way lie in the southern portion of this LCZ. Roads are typically wide, many with planted central medians.

Built form within the LCZ comprises a mix of mid rise to tall commercial and office buildings on large blocks, many with internal courtyard and laneway spaces. While the inner areas of the LCZ are largely undeveloped (with current land use car parking), the built form of these areas will in the future resemble the existing built form within the outer areas of the LCZ (refer to **Figure 43**). Sites within this LCZ are to be developed in accordance with their national importance at the Apex of the National Triangle.

Figure 39 Existing London Cct showing multiple car parks (Base imagery: Google Earth Pro 7.3.3.7721 (2020) [2])

Figure 40 Artists impression of City Hill looking towards the Parliamentary Zone (NCA, 2016)

Figure 41 View from London Cct west along the recent Edinburgh Ave extension to City Hill

Figure 42 View along University Avenue from the plaza at the ACT Law Courts

Vegetation within the LCZ comprises predominantly avenues of street trees and some formal plazas, such as the plaza within the Law Courts Precinct (refer to **Figure 42**). Trees within the streetscape includes predominantly exotic deciduous species, with some newer plantings referencing the Cypress trees on City Hill (refer to **Figure 41**).

Land use within the LCZ is a mix of commercial, civic and some open space and accommodation.

Several heritage items lie within this LCZ, including the Reserve Bank of Australia, the ANZ Bank Building and the Law Courts Precinct.

5.6.5 LCZ 5: Parkes Way

LCZ 5: Parkes Way is a wide, linear road (refer to **Figure 44**) that runs roughly parallel to the northern shoreline of Lake Burley Griffin, positioned behind the foreshore parkland. It often creates a barrier between the lakeside parkland and the landscape behind it, with few opportunities to cross between the two. The Project overlaps this LCZ where it intersects with Commonwealth Avenue.

The topography of the LCZ is rough to gently undulating, with steeper hills, embankments and retaining walls along its boundaries where it interfaces with adjacent LCZs (refer to **Figure 44**). A series of overhead road and pedestrian bridges span the road corridor (refer to **Figure 45** and **Figure 46**). Views within the LCZ typically lie within the road corridor, with views out of the LCZ often screened by landform or vegetation.

The spatial form within the LCZ comprises the open, linear road corridor, with three lane carriageways traveling in either direction separated by a wide turf median with occasional planted trees. Trees planted within the LCZ are typically native, with some deciduous exotic species.

The LCZ contains no heritage items, although it is crossed by LCZ 2: Main Avenues and Axes, which include Commonwealth Avenue, Kings Avenue and the Land Axis.

Figure 43 View along London Circuit to existing built form

Figure 44 View along Parkes Way from an overpass, looking west towards Commonwealth Avenue

Figure 45 View north towards the Project with Parkes Way in the foreground

Figure 46 An overpass connecting a foreshore park to New Acton

6.0 Landscape character impact assessment

6.1 LCZs affected by the Project

Five LCZs were identified within the detailed study area with broadly homogeneous characteristics or spatial qualities that could be affected by the Project (refer to **Figure 24**).

- LCZ 1: Parliamentary Zone and Cultural Triangle
- LCZ 2: Major Avenues and Axes
- LCZ 3: Lake Burley Griffin and Foreshores
- LCZ 4: London Circuit
- LCZ 5: Parkes Way.

While LCZ 1 is the only LCZ not directly affected by the Project (i.e. the Project boundary did not overlap with this LCZ) it has been assessed due to its high sensitivity of an area of national importance.

6.2 Assessment of LCZs

6.2.1 LCZ 1: Parliamentary Zone and Cultural Triangle

Refer to **Table 5** for the assessment of impact of the Project on landscape character for LCZ 1: Parliamentary Zone and Cultural Triangle.

Table 5: Landscape character assessment of LCZ 1: Parliamentary Zone and Cultural Triangle

Criteria		Response			
Existing environment		Refer to **Section 5.6.1** for a description of the existing environment.			
Description of works		None of the Project lies within or adjacent to this LCZ.			
Sensitivity		**Y**	**N**	**N/A**	**Comments**
Susceptibility	Does the Project lie within the LCZ?		●		The Project lies approximately 1 km north of this LCZ.
	Is the Project uncharacteristic within the LCZ?			●	While the Project is separated from the LCZ and therefore is not required to be characteristic of this LCZ, the LCZ lies within the heritage listed Parliamentary Vista, which places importance on views to and from this area.
	Does the Project depart from principles within the NCP?		●		The NCP requires that vistas to major landscape features must be protected. The Project lies within the view to numerous landscape features (particularly due to its position between Mount Ainslie and Black Mountain, and adjacent to City Hill), however, the Project is separated from this LCZ by a considerable distance and would be visually recessive within the view.
Value	Does the LCZ have any notable physical contributors to value?	●			The LCZ contains numerous contributors to value, including (but not limited to) the high cultural value of the buildings and landscape within the LCZ, the scale and layout of the landscape, including a formal park setting with campuses arranged around a central axis and the number of heritage items within the LCZ.
	Does the LCZ lie within a Designated Area?	●			The LCZ lies within the Parliament Zone, a precinct within the Central National Area.
	Does the LCZ contain or lie within a heritage item?	●			Numerous, as listed in Section **5.5**.

Table 5 continued

Criteria		Response				
Overall sensitivity rating		H	**M**	L	Neg	While this LCZ is a highly sensitive area due to its high landscape value, the low susceptibility to the Project results in its overall sensitivity being lowered to Moderate.
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Does the Project result in the loss / addition of an element in the LCZ		●	The Project does not fall within or adjacent to the LCZ.		
	Are any aesthetic or perceptual aspects of the landscape altered by the Project?		●	The Project does not fall within or adjacent to the LCZ and does not alter perceptual aspects, including views and vistas.		
	Do the changes affect any key characteristic of the LCZ?		●	The Project does not fall within or adjacent to the LCZ.		
Extent	Are the changes due to the Project experienced over a large area of the LCZ?		●	There would be no changes due to the Project experienced within this LCZ		
Duration	Would the changes be felt over a long period of time?		●	There would be no changes due to the Project experienced within this LCZ		
	Would the change be permanent within the landscape?		●	There would be no changes due to the Project experienced within this LCZ		
Overall magnitude rating		H	M	L	**Neg**	The distance between the LCZ and the Project would result in no changes to this LCZ.
Significance of landscape effects						
Overall impact rating		**Negligible**		There would be no changes due to the Project experienced within this LCZ		
Qualitative rating		**Neutral**		As above.		

6.2.2 LCZ 2: Major Avenues and Axes

Refer to **Table 6** for the assessment of impact of the Project on landscape character for LCZ 2: Major Avenues and Axes.

Table 6: Landscape character assessment of LCZ 2: Major Avenues and Axes

Criteria	Response
Existing environment	Refer to Section **5.6.2** for a description of the existing environment.
Description of works	The Project is partially located within this LCZ, positioned between Vernon Circle (abutting City Hill), and extending south along Commonwealth Avenue to Parkes Way. The Project would comprise the upgrade of Commonwealth Avenue along its length within the Project Boundary, and the raising of London Circuit resulting in an at-grade intersection with Commonwealth Avenue. New pedestrian pathways, cycle paths, landscaping to the verges and medians (including street trees and trees at the proposed intersection) would be installed.

Table 6 continued

Criteria		Response				
Sensitivity		**Y**	**N**	**Comments**		
Susceptibility	Does the Project lie within the LCZ?	●		The Project lies within this LCZ on Commonwealth Avenue between Vernon Circle and Parkes Way.		
	Is the Project uncharacteristic within the LCZ?		●	The Project is not uncharacteristic within this LCZ. Within this LCZ, the Project comprises the upgrade of an existing Main Avenue and the addition of an intersection with a perpendicular road at a key location.		
	Does the Project depart from principles within the NCP?		●	The Project adheres to the principles set out in the NCP, particularly: Emphasise the national significance of the Main Avenues and Approach Routes Respect the geometry and intent of the Griffins' formally adopted plan for Canberra In addition, the Project adheres to general planning principles relating to landscape character, particularly: Within Canberra Central, roads, bridges, waterways and public landscaping projects should reinforce and complement the geometric lines of the Main Avenues		
Value	Does the LCZ have any notable physical contributors to value?	●		Yes, the Main Avenues (particularly Commonwealth Avenue), visually reinforce the geometry of the Griffin Plan, linking symbolic landmarks within the city (namely City Hill with Capital Hill and Parliament House). The view corridors along the Main Avenues and axes also reinforce the relationships to larger landforms, including Mount Ainslie and Black Mountain.		
	Does the LCZ lie within a Designated Area?	●		Yes.		
	Does the LCZ contain or lie within a heritage item?	●		Yes, as outlined in **Chapter 3.0** and **Section 5.5**.		
Overall sensitivity rating		H	**M**	L	Neg	Similar to that with LCZ 1: Parliamentary Zone and Cultural Triangle, while this LCZ is a highly sensitive area due to its high landscape value, the susceptibility to the Project results in its overall sensitivity being lowered to Moderate. This relates to the Project as an upgrade of an existing characteristic feature, and the Project adhering to the principles in the NCP, which effectively lowers the susceptibility of the LCZ to the Project.
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Does the Project result in the loss / addition of an element in the LCZ	●		The Project does result in the loss of elements within the LCZ, namely the removal of a bridge over London Circuit, and the removal of trees within the LCZ. The Project also results in the addition of elements within the view, comprising the addition of a signalised intersection, new pedestrian and cycle facilities and landscaping, including new street trees.		
	Are any aesthetic or perceptual aspects of the landscape altered by the Project?		●	No. The key aesthetic and perceptual aspects of the LCZ are retained and protected, including strong, linear elements that assist in orientation, highlight landmarks and introduce drama and weight to areas and items within the landscape.		
	Do the changes affect any key characteristic of the LCZ?		●	As above, the key linear elements that link key landmarks within the landscape are not affected by the Project.		
Extent	Are the changes due to the Project experienced over a large area of the LCZ?		●	The changes occur over a small area within the overall LCZ, however, within a key visual linkage between City Hill and Capital Hill along Commonwealth Avenue.		

Table 6 continued

Criteria		Response				
Duration	Would the changes be felt over a long period of time?	●		These changes would be felt over the long term, however, the Project would be expected to 'bed down' within the landscape as the street trees and landscaping matured.		
	Would the change be permanent within the landscape?	●		The changes would be permanent within the landscape, with no chance of reversibility		
Overall magnitude rating		H	M	**L**	Neg	The magnitude of change due to the Project within this LCZ is considered to be Low. While the Project would result in the removal of a bridge, addition of an intersection, and reconfiguration of elements within the road corridor of a Main Avenue, the changes occur over a small proportion of the LCZ and are in keeping with the characteristic of the LCZ.
Significance of landscape effects						
Overall impact rating		**Moderate to Low**		The overall impact on landscape character of the Project on this LCZ is considered to be Moderate to Low. While the Project would result in the removal of a bridge, addition of an intersection, and reconfiguration of elements within the road corridor of a Main Avenue, the changes are considered to be: • in character with that of the Main Avenues and axes, thereby lowering the susceptibility of the LCZ to changes in character • only experienced over a small portion of the greater LCZ • in keeping with principles of the NCP and Griffin Plan and Legacy.		
Qualitative rating		**Beneficial**		The Project would result in a beneficial change to the locality surrounding it. The resulting intersection at Commonwealth Avenue and London Circuit and the upgrade to Commonwealth Avenue would result in an improvement on the landscape character of that area, particularly due to the planting of street trees on the eastern and western verges of Commonwealth Avenue, which would strengthen and frame the views along the road corridor between two landmarks. An increase in tree canopy is an identified action in Canberra's Living Infrastructure Plan (ACT Government, 2019). The species of tree chosen could reinforce the cultural importance and heritage aspects of the avenue, including the use of 'Sentinel' trees to define connections to Parliamentary Zone and the provision of a backdrop of coniferous evergreen trees contrasting with deciduous trees at the street edge, both of which have been adopted in the landscape plan for the Project. The urban design and landscape concept integrate with the proposed urban design framework for Commonwealth Avenue, which consider the heritage aspects and landsdcape importance of the Main Avenues as described within the NCP and other policy documents.		

6.2.3 LCZ 3: Lake Burley Griffin and Foreshores

Refer to **Table 7** for the assessment of impact of the Project on landscape character for LCZ 3: Lake Burley Griffin and Foreshores.

Table 7: Landscape character assessment of LCZ 3: Lake Burley Griffin and Foreshores

Criteria	Response
Existing environment	Refer to Section **5.6.3** for a description of the existing environment.
Description of works	None of the Project lies within or adjacent to this LCZ.

Table 7 continued

Criteria		Response				
Sensitivity		**Y**	**N**		**Comments**	
Susceptibility	Does the Project lie within the LCZ?		●		The Project does not lie within the LCZ, however, the changes would extend along Commonwealth Avenue which lies within 50 m of the boundary of the LCZ.	
	Is the Project uncharacteristic within the LCZ?			●	While the Project does not lie within the LCZ and therefore is not required to be characteristic of it, the LCZ lies within the heritage listed Parliamentary Vista, which places importance on views to and from this area.	
	Does the Project depart from principles within the NCP?		●		The NCP requires that vistas to major landscape features must be protected. While the Project lies within an area including views to numerous landscape features (e.g. Mount Ainslie and Black Mountain), it is somewhat visually separated from this LCZ due to landform and vegetative screening.	
Value	Does the LCZ have any notable physical contributors to value?	●			There are multiple contributors to value within this LCZ, including (but not limited to) recreational pathways and open areas, signage, attractions, artworks and memorials, the most visually prominent being the water jet to the east of the Commonwealth Avenue Bridge.	
	Does the LCZ lie within a Designated Area?	●			The LCZ lies within the Lake Burley Griffin and foreshores, a precinct within the Central National Area.	
	Does the LCZ contain or lie within a heritage item?	●			Lake Burley Griffin and Lakeshore Landscape / Lake Burley Griffin and Adjacent Lands are listed in the NHL and CHL.	
Overall sensitivity rating		H	**M**	L	Neg	While this LCZ is a highly sensitive area due to its high landscape value, the low susceptibility to the Project results in its overall sensitivity being lowered to Moderate.
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Does the Project result in the loss / addition of an element in the LCZ		●	The Project does not fall within or adjacent to the LCZ.		
	Are any aesthetic or perceptual aspects of the landscape altered by the Project?		●	As the Project does not fall within this LCZ, no perceptual aspects are altered. The LCZ is separated from the Project by distance and landform, therefore the Project does not alter any aesthetic elements within the LCZ.		
	Do the changes affect any key characteristic of the LCZ?		●	The Project does not fall within or adjacent to the LCZ.		
Extent	Are the changes due to the Project experienced over a large area of the LCZ?		●	There would be no changes due to the Project experienced within this LCZ		
Duration	Would the changes be felt over a long period of time?		●	There would be no changes due to the Project experienced within this LCZ		
	Would the change be permanent within the landscape?		●	There would be no changes due to the Project experienced within this LCZ		
Overall magnitude rating		H	M	L	**Neg**	The Project would result in no changes to this LCZ.
Significance of landscape effects						
Overall impact rating		**Negligible**		There would be no changes due to the Project experienced within this LCZ.		
Qualitative rating		**Neutral**		As above.		

6.2.4 LCZ 4: London Circuit

Refer to **Table 8** for the assessment of impact of the Project on landscape character for LCZ 4: London Circuit.

Table 8: Landscape character assessment of LCZ 4: London Circuit

Criteria		Response				
Existing environment		Refer to Section **5.6.4** for a description of the existing environment.				
Description of works		Within this LCZ the Project would comprise the raising of London Circuit at Commonwealth Avenue, with retaining walls constructed both east and west of Commonwealth Avenue to facilitate a new intersection at Commonwealth Avenue, and the removal of two of the loop roads (also known as the cloverleaves) either side of the intersection. The intersection itself lies within the adjoining LCZ 2: Main Avenues and Axes. London Circuit would be reconfigured between the Edinburgh Avenue intersection and Constitution Avenue. Changes would include new road surfacing and lane markings, wide, vegetated median strips with street trees, new verge landscaping (including street trees extending along both sides of the road along the length of the upgraded road), turfed batters and retaining walls to make up the level change on either side of Commonwealth Avenue nearing the intersection, new road furniture and lighting.				
Sensitivity		**Y**	**N**	**Comments**		
Susceptibility	Does the Project lie within the LCZ?	●		A large amount of the Project lies within this LCZ, comprising changes to the length of the London Circuit between Edinburgh Avenue and nearing Constitution Avenue.		
	Is the Project uncharacteristic within the LCZ?		●	There are elements of the Project within this LCZ that depart from the existing character of the area, e.g. the removal of one of the cloverleaves, which are prominent landforms within the LCZ. However, the removal of the cloverleaves and at-grade car parking are anticipated within strategic planning documents and are therefore considered characteristic within the future (anticipated) character of the area. The raising of London Circuit and the upgrading of the length of the roadway, particularly the new landscaping and provision of pedestrian and cycle infrastructure, are considered within the existing character of the LCZ.		
	Does the Project depart from principles within the NCP?		●	The LCZ overlaps with the City Hill precinct described in the NCP. The Project aligns with key guiding principles, including London Circuit serving as a gateway, with traffic diverted to London Circuit from the Main Avenues, thereby reducing traffic to the inner City Hill area. The Project also respects the geometry and intent of the Griffins' formally adopted plan for Canberra.		
Value	Does the LCZ have any notable physical contributors to value?	●		The circular to hexagonal street layout and tree-lined streets are unique to this LCZ, providing a unique experience within the city centre.		
	Does the LCZ lie within a Designated Area?	●		Yes - the LCZ lies within the City Hill precinct as defined within the NCP.		
	Does the LCZ contain or lie within a heritage item?	●		Yes, most notably Civic Square and the Law Courts precinct and heritage listed buildings associated with it.		
Overall sensitivity rating		H	**M**	L	Neg	Similar to LCZs 1 and 2, this LCZ is a sensitive area due to its high landscape value, however, the low susceptibility to the Project results in its overall sensitivity being lowered to Moderate.

Table 8 continued

Criteria		Response				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Does the Project result in the loss / addition of an element in the LCZ	●		The Project would result in the loss of several elements within the LCZ, including (but not limited to) existing trees, two cloverleaves, and the at-grade road that travels under Commonwealth Avenue. Retaining walls and embankments used in the creation of the new raised road would be new elements within the LCZ, as well as on-verge cycleways, signage and traffic signals. The upgrade of elements within the London Circuit road corridor would, however, result in a replacement of elements, such as road and footpaths, street trees, and street furniture.		
	Are any aesthetic or perceptual aspects of the landscape altered by the Project?	●		The unique road layout (including the circular form of Vernon Circle and the hexagonal London Circuit) would be preserved, however, the road levels would change, resulting in the the visual hierarchy of London Circuit altered within the LCZ. London Circuit would feel like a more local road, with pedestrian and cycle facilities linking to Commonwealth Avenue.		
	Do the changes affect any key characteristic of the LCZ?		●	As above, key elements characteristic of the LCZ would not be altered by the Project. The removal of one of the cloverleaves, while unique to the LCZ, is anticipated as part of the expected future character of the area with the development of City Hill precinct, as described in the NCP.		
Extent	Are the changes due to the Project experienced over a large area of the LCZ?	●		The changes due to the Project would occur over a moderate proportion of the overall LCZ. The LCZ is quite small, therefore changes within it have the ability to affect large proportions of it.		
Duration	Would the changes be felt over a long period of time?	●		The changes would be experienced over the long term.		
	Would the change be permanent within the landscape?	●		The Project would result in a permanent change in the landscape with no chance of reversibility. However, the area is undergoing development in line with strategic planning documents outlined in **Chapter 3.0**.		
Overall magnitude rating		H	**M**	L	Neg	The magnitude of change due to the Project within this LCZ is considered to be Moderate. The greatest changes experienced within the LCZ would be the raising of the road corridor on either side of Commonwealth Avenue, including the retaining walls required to support the proposed intersection and the removal of one of the cloverleaves to the north west.
Significance of landscape effects						
Overall impact rating		**Moderate**		The overall impact of the Project on landscape character within this LCZ is considered to be Moderate. While the LCZ is inherently sensitive given its central location, unique character and heritage items, the Project is somewhat characteristic considering the anticipated changes due to ongoing development, which will improve the overall character of the area as it progresses. The ongoing development of the LCZ as a mixed use zone would be facilitated by the Project.		
Qualitative rating		**Beneficial**		The change to the LCZ due to the Project is considered to be Beneficial. While the materiality of the retaining walls has not yet been decided and therefore cannot be assessed, the upgrade of London Circuit road corridor, particularly the inclusion of street trees on either side of the road between Edinburgh Avenue and nearing Constitution Avenue, would unify the road, providing an almost continuous ring of Plane Trees (*Platanus x acerifolius*) along its entirety. An increase in tree canopy is an identified action in Canberra's Living Infrastructure Plan (ACT Government, 2019) amongst other policy documents. An improvement in the quality of the public realm, including verges with footpaths, planting, cycleways and the at-grade access with adjacent blocks fulfil key strategic direction of policy and planning documents, including the ACT Planning Strategy and ACT Transport strategy.		

6.3 LCZ 5: Parkes Way

Refer to **Table 9** for the assessment of impact of the Project on landscape character for LCZ 5: Parkes Way.

Table 9: Landscape character assessment of LCZ 5: Parkes Way

Criteria		Response				
Existing environment		Refer to Section **5.6.5** for a description of the existing environment.				
Description of works		While the Project boundary overlaps Parkes Way due to construction activity, there would be no operational elements that remain within the LCZ.				
Sensitivity		**Y**	**N**	**Comments**		
Susceptibility	Does the Project lie within the LCZ?	●		The Project boundary overlaps with the northern road verge of Parkes Way near the south west and south east clover leaves.		
	Is the Project uncharacteristic within the LCZ?		●	The Project is not uncharacteristic within this LCZ, the overall character of LCZ 5 being a road corridor and the Project comprising changes to an existing road corridor.		
	Does the Project depart from principles within the NCP?		●	The NCP requires that vistas to major landscape features must be protected. While the Project lies within an area including views to numerous landscape features (e.g. Mount Ainslie and Black Mountain), it is somewhat visually separated from this LCZ due to landform and vegetative screening.		
Value	Does the LCZ have any notable physical contributors to value?		●	Not particularly - the LCZ comprises a wide road corridor.		
	Does the LCZ lie within a Designated Area?	●		The LCZ lies within Constitution Avenue and ANZAC Parade, a precinct within the Central National Area.		
	Does the LCZ contain or lie within a heritage item?		●	No.		
Overall sensitivity rating		H	M	**L**	Neg	The sensitivity of this LCZ is considered to be Low. It is a visually contained road corridor which lies close to the Project but would not experience changes within it due to the Project at operation.
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Does the Project result in the loss / addition of an element in the LCZ		●	The Project does not fall within or adjacent to the LCZ.		
	Are any aesthetic or perceptual aspects of the landscape altered by the Project?		●	No.		
	Do the changes affect any key characteristic of the LCZ?		●	The Project does not fall within or adjacent to the LCZ.		
Extent	Are the changes due to the Project experienced over a large area of the LCZ?		●	There would be no changes due to the Project experienced within this LCZ		
Duration	Would the changes be felt over a long period of time?		●	There would be no changes due to the Project experienced within this LCZ		
	Would the change be permanent within the landscape?		●	There would be no changes due to the Project experienced within this LCZ		
Overall magnitude rating		H	M	L	**Neg**	The Project would result in no changes to this LCZ.

Table 9 continued

Criteria	Response	
Significance of landscape effects		
Overall impact rating	**Negligible**	There would be no changes due to the Project experienced within this LCZ
Qualitative rating	**Neutral**	As above.

6.4 Mitigation of impact to landscape character

No LCZs returned a High or High to Moderate impact rating on landscape character due to the Project and therefore no mitigation measures are required. However, the following recommendation responds to observations based on the design in response to the existing and desired landscape character (refer to **Table 10**).

6.5 Assessment of residual risk

No LCZs returned a High or High to Moderate overall impact assessment rating, therefore no assessment of residual risk is required.

Table 10: Observations and recommendations

Ref	Issue / observation	Recommendation
O1	The materiality of the retaining walls would be important to the quality of the urban design outcome within LCZ 3: London Circuit.	Materiality of retaining walls is recommended to include a texture or pattern to reduce the visual solidity of the surface of the wall, or provision of planting between the retaining wall and the adjacent paving to reduce the visual prominence of the walls from the surrounding area. Of the options being considered, walls clad in *Wee Jasper Stone* are preferable over in-situ concrete.
O2	While views are not typically considered in landscape character as they are experienced by visual receptors (and therefore considered in the visual impact assessment rather than the landscape character assessment), views are an important element within the heritage values of some of the LCZs, particularly the views along Main Avenues. For this reason, visual clutter that threatens to impact those views should be kept to a minimum, including infrastructure elements that 'lean' into the corridors. These include traffic lights, street lighting and electricity poles and wires.	Ensure the palette of taller infrastructure items are as visually unobtrusive as possible, particularly along Commonwealth Avenue.

7.0 Visual impact assessment

7.1 Visibility of the Project

The Zone of Theoretical Visibility (ZTV) map shows the theoretical area which would receive views to the Project. The mapping has used all visible elements of the Project, including ground-level changes, street lighting, traffic poles and landscaping, including trees. While the visual envelope map suggests that views to the Project could be seen from up to 5 kms away, the Project would actually be more visually contained. Only the taller items of the Project would be seen from many locations and these taller items are typically more visually recessive, typically either slender forms (e.g. cranes, light poles or traffic lights) or vegetation, which comprises an attractive element within the view that breaks up areas of hard surfaces within the city (refer to **Figure 47**). Due to the visually recessive nature of these items, it would be unlikely that these would be discernible from the surrounding landscape from these distances.

A taller band of development along the western edge of London Circuit (refer to **Figure 48**) would screen most of the ground-level changes seen from the surrounding landscape, particularly from elevated areas such as Black Mountain. Existing vegetation would blend with proposed vegetation to break down the expanse of hard surfaces of buildings and paving / road surfaces.

Refer to **Figure 49** for ZTV map.

Figure 47 The view east from Black Mountain, with taller buildings surrounding London Circuit and City Hill seen in the middle ground of the view

Figure 48 Taller buildings fringing London Circuit screen views to the Project from the west

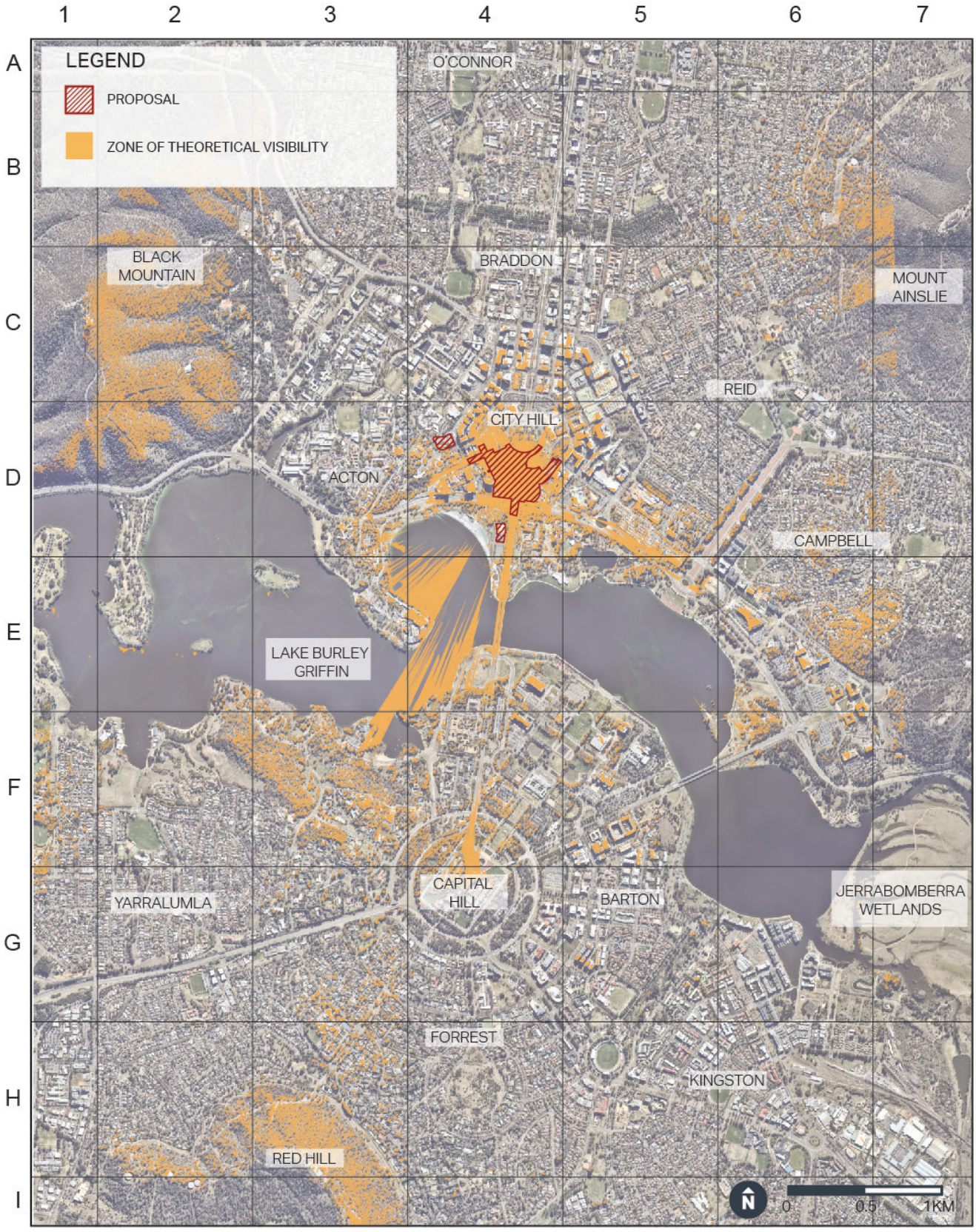

Figure 49 Zone of Theoretical Visibility of the Project

7.2 Assessment of viewpoints

7.2.1 Representative viewpoints

12 representative viewpoints were chosen to assess the visual impact of the Project from the surrounding landscape (refer to **Figure 50** and **Figure 51**). These viewpoints are described in **Table 11**.

Table 11: Viewpoints for assessment of visual impact

Viewpoint	Description	Requirement / rationale	Photography /visual simulation rationale
Viewpoint 1: City Hill West	View south west along Edinburgh Avenue from City Hill	• City Hill is listed as a heritage item in the ACT Heritage Register • Views from City Hill are listed as important in the NCP, particularly along the Main Avenues	• Series of photos stitched to panorama to represent existing view • No visual simulation created due to limited operational changes anticipated to be seen from viewpoint
Viewpoint 2: City Hill South	View south along Commonwealth Avenue from City Hill	• City Hill is listed as a heritage item in the ACT Heritage Register • Views from City Hill are listed as important in the NCP, particularly along the Main Avenues and towards Capital Hill	• Panorama created to represent existing view • Visual simulation created due to importance of the view and the operational changes likely to be seen from this location
Viewpoint 3: 7 London Circuit	View south east along London Circuit	• Viewpoint close to the operational changes • Lies within the Central National Area	• Panorama created to represent existing view • Visual simulation created to show approach to Project on London Circuit
Viewpoint 4: 1 London Circuit	View south east along London Circuit from the QT Canberra hotel	• Viewpoint close to the operational changes • Lies within the Central National Area	• Panorama created to represent existing view • Visual simulation created to illustrate the London Circuit rising to meet Commonwealth Avenue.
Viewpoint 5: London Circuit South West	View from London Circuit looking east towards the Project	• Viewpoint close to the operational changes • Lies within the Central National Area	• Panorama created to represent existing view • No visual simulation created - due to the height of the retaining wall at this location, the view along the road corridor would be blocked by the retaining wall.
Viewpoint 6: London Circuit South East	View from near the south eastern corner of London Circuit looking west to the Project	• Viewpoint close to the operational changes • Lies within the Central National Area	• Panorama created to represent existing view • Visual simulation created due to close proximity of viewpoint to operational changes
Viewpoint 7: Commonwealth Avenue	View from Commonwealth Avenue north towards the Project	• Views to and from City Hill are listed as important in the NCP, particularly along the Main Avenues • View corridor listed as key in the City Plan • National Land Roads listed in CHL	• Panorama created to represent existing view • Visual simulation created due to importance of the view and the operational changes likely to be seen from this location

Table 11 continued

Viewpoint	Description	Requirement / rationale	Photography /visual simulation rationale
Viewpoint 8: Parkes Way Overpass	View from the Parkes Way overpass north west towards the Project	• National Land Roads listed in CHL	• Panorama created to represent existing view • No visual simulation created due to limited operational changes anticipated to be seen from viewpoint
Viewpoint 9: Archbishops Residence	View from the garden outside the Archbishops house north west towards the Project	• Location of interest close to the operational changes	• Panorama created to represent existing view • No visual simulation created due to limited operational changes anticipated to be seen from viewpoint
Viewpoint 10: Lake Burley Griffin / Land Axis	View from the south bank of Lake Burley Griffin looking north-north west towards the Project	• Parliament House Vista listed within the CHL • Lake Burley Griffin and foreshores listed within both CHL and NHL	• Panorama created to represent existing view • No visual simulation created due to distance between viewpoint and operational changes (not likely to be seen)
Viewpoint 11: Black Mountain	View from the Telstra Tower on Black Mountain looking south-south east towards the Project	• Key view to the Central National Area within the City Plan and the NCP • Tourist destination where views are integral to the experience	• Single photo (rather than panorama) taken to represent view due to distance from view and elevation of viewpoint • No visual simulation created due to distance between viewpoint and operational changes (not likely to be seen)
Viewpoint 12: Mount Ainslie	View from the lookout on Mount Ainslie looking south west towards the Project	• Key view to the Central National Area within the City Plan and the NCP • Tourist destination where views are integral to the experience	• Single photo (rather than panorama) taken to represent view due to distance from view and elevation of viewpoint • No visual simulation created due to distance between viewpoint and operational changes (not likely to be seen)
Viewpoint 13: Parliament House	View from Parliament House lawn north along Commonwealth Avenue towards the Project	• Parliament House Vista listed within the CHL • View corridor listed as key in the City Plan • National Land Roads listed in CHL	• Panorama created to represent existing view • No visual simulation created due to distance between viewpoint and operational changes (not likely to be seen)

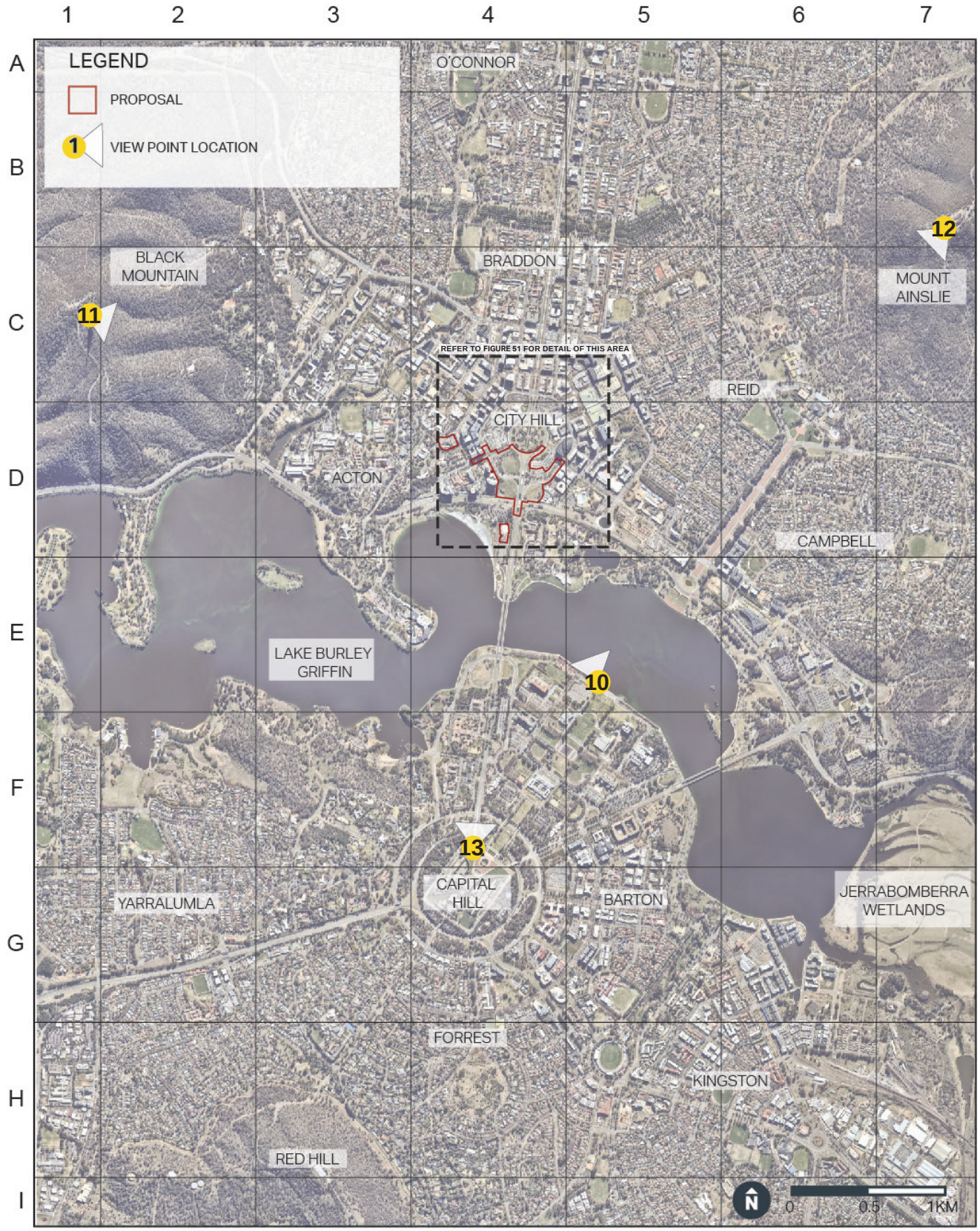

Figure 50 Distant viewpoints

Figure 51 Viewpoints within the detail area shown in **Figure 50**

7.2.2 Viewpoint 1: City Hill West

Refer **Table 12** for the assessment of impact of the Project on views from Viewpoint 1.

Table 12: Visual impact assessment of Viewpoint 1: City Hill West

Criteria		Response		
Viewpoint location		This viewpoint is located on City Hill within City Hill Park on the western side of the hill between the avenue of Cypress trees looking south west along Edinburgh Avenue. The viewpoint is positioned approximately 200 m from the intersection of London Circuit and Edinburgh Avenue.		
Viewpoint rationale		This viewpoint has been chosen to represent views from City Hill, which is a heritage listed item (ACT Heritage Register). Views from this location are listed as important in the NCP and City Plan, the views illustrate the geometric layout of the Griffin Plan. City Hill is positioned at the northern corner of the National Triangle. This location is a tourist destination containing landmarks including a flagpole at the peak of the hill, erected to mark the Territory becoming self-governing, and the Canberra Centenary Column. The planting, coupled with the topography within the park, focusses views along the avenues radiating out from City Hill.		
Visual receptors		A moderate number of visual receptors would experience the view from this viewpoint and include visitors to a recreational open space, including tourists and locals. Locals using the park as a pedestrian thoroughfare are more likely to use the path provided on the side of the park, which provides a shorter distance between likely destinations.		
Existing view		The existing view from this location is shown in **Figure 52** and **Figure 53**. This view comprises a framed view to the south west between an avenue of Cypress trees, across Vernon Circle and along the length of Edinburgh Avenue, which culminates in vegetation where the road bends to the south. The intersection of London Circuit with Edinburgh Avenue is seen in the middle ground but is visually recessive within the view. London Circuit is predominantly screened from view by a construction site to the north and vegetation (trees) to the south. The road pavement and passing traffic of Vernon Circle is a more visually prominent horizontal element (road) within the view than London Circuit. The row of Cypress trees framing the view, as well as others within the park to the north and south, provide a strong vertical emphasis within the view. This is reiterated by the skyline to the south west, which is punctuated by tall, vertical built form on either side of Edinburgh Avenue. To the north and south of this avenue the landscape flattens somewhat between the trees, with lower, more horizontal buildings to the north and a view to the vegetated horizon to the south. Within the middle ground of the view, construction activity (including hoarding around a construction site and the top of temporary sheds and demountables) is visible to the north of Edinburgh Avenue between London Circuit and Vernon Circle where a large commercial building is being built. This development is expected to be mirrored on the other side of Edinburgh Avenue in the near future, as described in the NCP for desired development of the City Hill Precinct.		
Sensitivity		**Y**	**N**	**Comments**
Susceptibility	Does the occupation / activity of the visual receptor add to their sensitivity to the view?	●		This viewpoint is likely to attract tourists and other visual receptors who would be using the park to walk through. The quality of the view would be important to the enjoyment of the recreational / tourist experience.
	Would visual receptors be focussed on the view?	●		Tourists and local walkers visiting this location are likely to be focussed on the view.
	Are receptors likely to see views for long periods of time?		●	Visitors are likely to pause to reflect on the view before moving on to experience the view from another part of the park. Park benches are supplied within the park, but not focussed on this view to the south west along Edinburgh Avenue.

Table 12 continued

Criteria		Response				
Value	Is the view from this viewpoint listed as important in the National Capital or Territory Plans?	●				View listed within the NCP and City Plan. City Hill is a precinct within the Central National Area (it is a Designated Area). The view corridors from City Hill are particularly mentioned. London Circuit is identified as a gateway between the avenues and the inner City Hill area, and is visible within this view.
	Are there other planning or heritage assets attached to the view?	●				This location is important both in its heritage context and from a planning perspective as described in the viewpoint rationale.
	Are there other indicators of value attached to the view?	●				The planting within City Hill park focusses the attention of visitors along the avenues, including along Edinburgh Avenue. The park contains landmarks, including commemorative items such as the flagpole and the Centenary Column.
Overall sensitivity rating		**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 1 is considered to be High. The viewpoint is positioned within an important area from a heritage and planning perspective.
CONSTRUCTION						
Anticipated change in view		It is likely that some changes will be seen within the view. These would include some construction activity in the middle ground of the view on Vernon Circle to the left of frame (south) and construction at the intersection of Edinburgh Avenue and London Circuit in the background of the view. This construction activity is likely to be seen more clearly on Vernon Circle than on London Circuit due to the distance from London Circuit and the landform, which partially screens views to London Circuit from this location. Most of the view to the construction activity would be screened by the Cypress trees within City Hill Park.				

Figure 52 View from Viewpoint 1 looking south west along Edinburgh Avenue

Figure 53 Detail of **Figure 52** showing the view south west along Edinburgh Avenue

Table 12 continued

Criteria		Response				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?	●		The construction of the Project would result in the addition of construction activity within the view, however, this is likely to be seen as an increase in construction activity within the view, as there is already construction happening on either side of Edinburgh Avenue within the view. Removal of trees to the south of the intersection may be seen.		
	Would the change result in a high degree of contrast to the existing situation?		●	As construction is already seen within the view, the addition of construction activity due to the Project would not result in a high degree of contrast to the existing situation. Further, there is likely to be more construction within the area as development continues within London Circuit and the surrounding area.		
	Is the change prominent within the view?		●	It is unlikely that the construction activity for the Project would be prominent within the view, particularly with the position of London Circuit in the middle ground of the view and the trees within City Hill Park which partially screen views to the west.		
Extent	What is the angle of the view in relation to the receptor?			The changes within the view would be positioned in the middle ground to the south of the focal point within the view. Cypress trees within City Hill Park provide a 'tunnel' along which the view is focussed, most of the changes would be positioned to the left of the Main Avenue of trees, reducing the visual prominence of the construction activity due to the angle of viewing.		
	Is the viewpoint close to the Project?		●	The viewpoint is moderately close to portions of the construction activity, but these areas closest to the viewpoint would be partially screened by existing trees.		
	Does the change encompass a large extent of the view?		●	No, the majority of the view would remain unchanged.		
Duration	Would the changes be seen over the long term?		●	The changes would be seen over the short term (up to two years).		
	Would the change be permanent?		●	Construction would not be permanent.		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint is considered to be Low. The change would be seen as an extension of construction activity already happening within the view, however, construction activity would be more visually prominent within the view.
Significance of visual impacts during construction						
Overall impact rating		**Moderate**		The overall visual impact rating for the viewpoint during the construction period is Moderate. This rating is largely due to the high sensitivity of the visual receptors at the viewpoint, rather than the magnitude of the change. The changes, while visible within the view, are expected to be an increase in construction activity due to existing construction activity within the view, and would be seen in the middle ground. Importantly, the extended view along Edinburgh Avenue would be preserved.		
Qualitative rating		**Adverse**		The Project would result in an adverse effect on the view from this location during construction, introducing the visual clutter associated with construction activity to a key focal point in the view.		
OPERATION						
Anticipated change in view		At completion, the Project would comprise an alteration to the intersection of London Circuit and Edinburgh Avenue, including changes to the road surface and lane markings, pedestrian pavement and street trees. While these changes may be seen within the view, they are in the middle ground and visually recessive within the greater view.				

Table 12 continued

Criteria		Response				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?		●	There would be no elements added or removed from the view, however, there would be a slight change in the configuration of elements at the intersection of London Circuit and Edinburgh Avenue.		
	Would the change result in a high degree of contrast to the existing situation?		●	No, as above, the changes would be seen as a replacement of existing elements within the view.		
	Is the change prominent within the view?		●	No, the intersection of London Circuit and Edinburgh Avenue is positioned in the middle ground of the view and is difficult to see in detail due to landform and distance.		
Extent	What is the angle of the view in relation to the receptor?			The changes are seen in the central point of the view in the middle ground.		
	Is the viewpoint close to the Project?	●		The changes are approximately 200 m from the viewpoint.		
	Does the change encompass a large extent of the view?		●	No, due to the trees within City Hill Park framing and screening views from this viewpoint, the changes would only be visible within a small proportion of the view.		
Duration	Would the changes be seen over the long term?	●		The changes would be seen over the long term, however, would become less visually prominent within the view as the landscaping (street trees) mature.		
	Would the change be permanent?	●		The changes would be permanent with no chance of reversibility.		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint at operation of the Project is considered to be Negligible. The changes are likely to be seen, but would be not only visually recessive within the view, but comprise a like for like replacement of elements at the intersection of London Circuit and Edinburgh Avenue. These would be seen from a moderate distance, where the finer details of the intersection would not be clearly seen.
Significance of visual impacts at operation						
Overall impact rating		**Negligible**		While visual receptors at this viewpoint are likely to be sensitive to changes to views from within City Hill Park, the changes due to the Project seen when looking to the south west along Edinburgh Avenue would be difficult to ascertain as a change within the view, given the replacement of elements at the intersection. The changes would be visually recessive and seen from a reasonable distance.		
Qualitative rating		**Neutral**		Due to the above, there would be no change in the quality of the view from this viewpoint. The key elements within the view: the framing quality of the trees within City Hill Park, the gun-barrel view along Edinburgh Avenue, and the focal point of that view along the road ending in the dark eucalypt vegetation, would not be affected by the Project.		

7.2.3 Viewpoint 2: City Hill South

Refer to **Table 13** for the assessment of impact of the Project on views from Viewpoint 2.

Table 13: Visual impact assessment of Viewpoint 2: City Hill South

Criteria		Response		
Viewpoint location		This viewpoint is located on City Hill within City Hill Park on the southern side of the hill between the avenue of Cypress trees looking south along Commonwealth Avenue. The viewpoint is positioned approximately 50 m north of Vernon Circle and 200 m from the intersection of London Circuit and Commonwealth Avenue.		
Viewpoint rationale		As per Viewpoint 1, this viewpoint has been chosen to represent views from City Hill, which is a heritage listed item (ACT Heritage Register). Views from this location are listed as important in the NCP and City Plan, the views illustrate the geometric layout of the Griffin Plan. City Hill is positioned at the northern corner of the National Triangle. This location is a tourist destination from which views along Commonwealth Avenue to Capital Hill can be enjoyed. Canberra Renewal Authority have proposed the City Hill Footpath which, if implemented, would provide a viewing platform from this location (construction is anticipated to occur in 2022).		
Visual receptors		A moderate number of visual receptors would experience the view from this viewpoint and include visitors to a recreational open space, including tourists and locals. Locals using the park as a pedestrian thoroughfare are more likely to use the path provided on the side of the park, which provides a shorter distance between likely destinations.		
Existing view		The existing view from this location is shown in **Figure 54** and **Figure 55**. The composition of the view from Viewpoint 2 is similar to that seen from Viewpoint 1 in that it comprises a framed view between an avenue of Cypress trees along a Main Avenue, however, the view south from this location is along Commonwealth Avenue (one side of the National Triangle) and terminates at Parliament House on Capital Hill. A horizontal band of low shrubs are seen in the foreground of the view at the edge of City Park fringing Vernon Circle, with the two carriageways and median of Commonwealth Avenue extending south to a low point at the Commonwealth Avenue Bridge, which spans Lake Burley Griffin. The lake itself is not seen from this location. The intersection of London Circuit with Commonwealth Avenue is not seen within the view as London Circuit passes below Commonwealth Avenue. The row of Cypress trees framing the view, as well as others within the park to the north and south, provide a strong vertical emphasis within the view. There are a couple of taller buildings seen to the west, partially screened by the Cypress trees. The remainder of the view, particularly to the south along the avenue, is devoid of tall buildings so the dark, vegetated hillsides surrounding Canberra can be seen on the horizon. The distinctive flagpole on Parliament House bisects the horizon line and can be seen in relief against the sky, as can several light and flag poles in the middle ground of the view. The linear view along the avenue, culminating in the focal point of Parliament House, is a strong, characteristic view with vertical emphasis repeated throughout. The key focal point is emphasised by the design of the Parliament House building and flagpole, and landscape elements (including the road pavement, paler grassed median, flagpoles, vertical structures on the bridge and avenue of trees on either side of the road) within the view all combine to further strengthen this focal point within the view.		
Sensitivity		**Y**	**N**	**Comments**
Susceptibility	Does the occupation / activity of the visual receptor add to their sensitivity to the view?	●		This viewpoint is likely to attract tourists and other visual receptors who would be using the park to walk through. The quality of the view would be important to the enjoyment of the recreational / tourist experience. The view from this location includes the view along a Main Avenue to Parliament House.
	Would visual receptors be focussed on the view?	●		Tourists and local recreational walkers visiting this location are likely to be focussed on the view.
	Are receptors likely to see views for long periods of time?	●		Most visitors are likely to pause to reflect on the view before moving on to experience the view from another part of the park, however, unlike Viewpoint 1, a park bench is supplied within the park which is positioned to allow the visual receptor to focus on this view to the south along Commonwealth Avenue, potentially lengthening the time they would spend contemplating this view.

Table 13 continued

Criteria		Response				
Value	Is the view from this viewpoint listed as important in the NCP or Territory Plan?	●		View listed within the NCP and City Plan. City Hill is a precinct within the Central National Area (it is a Designated Area). The view corridors from City Hill are particularly mentioned. London Circuit is identified as a gateway between the avenues and the inner City Hill area, and is visible within this view.		
	Are there other planning or heritage assets attached to the view?	●		This location is important both in its heritage context and from a planning perspective as described in the viewpoint rationale. The view also includes the Parliament House Vista, which is listed in the CHL.		
	Are there other indicators of value attached to the view?	●		The planting within City Hill park focusses the attention of visitors along the avenues, including along Commonwealth Avenue. The park contains landmarks, including commemorative items such as the flagpole and the Centenary Column.		
Overall sensitivity rating		**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 2 is considered to be High. The viewpoint is positioned within an important area from a heritage and planning perspective.
CONSTRUCTION						
Anticipated change in view		Construction activity is anticipated to be seen in middle to background of the view, comprising hoarding around the works, the construction of temporary lanes to bypass the works in the road pavement, demolition of the bridge, and construction of the new intersection and upgraded Commonwealth Avenue road corridor. Due to the fall in the road to the south towards Lake Burley Griffin, then the rise towards Capital Hill, it is likely that the view to Parliament House would still be visible during construction. The view to the construction activity would be seen primarily framed between the row of Cypress trees that focus the view from this location along Commonwealth Avenue to a focal point at Parliament House on Capital Hill. Some construction activity would be seen to the west (right of frame) between the trees in City Hill Park. Views to the east (left of frame) would be screened by landform and vegetation.				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?	●		Removal of existing trees would result in the loss of elements within the view. The construction activity would be a series of additional elements within the view.		
	Would the change result in a high degree of contrast to the existing situation?	●		The construction activity would be in contrast with the existing view, which currently comprises an elongated view along a Main Avenue to a landmark element. The resulting view would comprise the visual clutter of construction, surrounded by hoarding where used.		
	Is the change prominent within the view?	●		The construction activity would primarily occur within the focal area of the view, seen between Cypress trees planted to frame the view along the Main Avenue to Parliament House. The view to the construction activity between breaks in the trees to the west would be less visually prominent within the view.		
Extent	What is the angle of the view in relation to the receptor?			The changes would be seen directly in front of the viewpoint, with some works seen at an oblique viewing angle to the west (right of frame)		
	Is the viewpoint close to the Project?	●		The changes would be seen in the middle to background from a distance of approximately 50 m. The closest construction activity would occur on Vernon Circle.		
	Does the change encompass a large extent of the view?	●		The construction activity would be seen over approximately 1/3 of the view from this viewpoint, however, would visually result in construction being seen in every break in the trees to the landscape beyond City Hill Park. It is therefore considered prominent within the overall view, particularly as these areas are the most important within the context of the view seen from this location.		

Table 13 continued

Criteria		Response				
Duration	Would the changes be seen over the long term?		●	The changes would be seen over the short term (up to two years).		
	Would the change be permanent?		●	The changes would be temporary, seen only during the construction period.		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint during construction of the Project is considered to be High. The construction would be seen in the middle ground of the view, but framed between trees planted to focus the viewers attention on the view along Commonwealth Avenue to Parliament House. Some construction would be seen between gaps in other trees to the west.
Significance of visual impacts during construction						
Overall impact rating		**High**				The overall impact of the Project during construction on the view from this viewpoint is considered to be High. The high sensitivity of visual receptors coupled with the visual prominence of the changes and the position of construction within the framed view result in the high rating. The changes would only be temporary and seen over a short term, however, this was not enough to lower the overall rating.
Qualitative rating		**Adverse**				The Project would result in an adverse effect on the view from this location during construction, introducing the visual clutter associated with construction activity to a key focal point in the view.
OPERATION						
Anticipated change in view		**Figure 56** and **Figure 57** show the anticipated changes to the view from this viewpoint at operation. The Project would be seen within the middle ground of the view, framed between the Cypress trees in City Hill Park which direct the view along Commonwealth Avenue south towards Capital Hill and Parliament House. The foreground of the view remains unchanged, comprising the turf and trees within City Hill Park, terminating in a row of shrubs fringing Vernon Circle. Beyond this, the extent of the central median on Commonwealth Avenue remains largely unchanged, however, the proposed median would be planted with shrubs and groundcovers, the variation in colour and texture of which would be seen. London Circuit is more visually prominent within the view, with the raised road corridor and traffic seen in the middle ground to the east (left of Commonwealth Avenue) and west (right of Commonwealth Avenue). The road is lined with deciduous trees, which when in leaf provide a brighter green canopy within the existing view to the eucalypts in the landscape beyond. The intersection of London Circuit and Commonwealth Avenue appears more prominently within the view than the existing bridge over London Circuit. While the road pavement of the intersection is screened from view by the shrubs and groundcovers in the central median, the traffic lights and road signage are seen as new elements within the view, albeit visually recessive ones due to their slender forms. The mast arm traffic lights would 'lean' into the intersection and be seen within the corridor view along the road. The 'sentinel' trees at the corners of the intersection may be visible, however, as the species have yet to be chosen, it is unclear if the trees would be more visually prominent due to foliage colour or form when viewed amongst the surrounding vegetation.				

Figure 54 Existing view from Viewpoint 2 looking south along Commonwealth Avenue

Figure 55 Detail of **Figure 54** showing the existing view from Viewpoint 2

Figure 56 Visual simulation showing changes to the view seen from Viewpoint 2

Figure 57 Detail of **Figure 56** showing proposed changes to the view seen from Viewpoint 2

Table 13 continued

Criteria		Response		
Magnitude		**Y**	**N**	**Comments**
Size / scale	Would the Project result in the addition or removal of elements within the view?	●		The Project would result in the addition of elements within the view, including the raised London Circuit on either side of Commonwealth Avenue, the most prominent element being the street trees, the intersection itself, again, with street trees the most visible new elements within the view. New electrical infrastructure and signage would be seen. The vegetated median on Commonwealth Avenue would be a 'new' element within the view due to the taller, mixed planting.
	Would the change result in a high degree of contrast to the existing situation?		●	No. The key elements within the view remain unchanged, being the 'gun'-barrel' view along Commonwealth Avenue to Capital Hill and Parliament House, with the road corridor fringed with trees. The street tree planting on either side of Commonwealth Avenue due to the Project further frames this view along the corridor.
	Is the change prominent within the view?		●	As above, the key elements of the view remain unchanged, therefore the changes do not appear visually prominent within the view.
Extent	What is the angle of the view in relation to the receptor?			The changes would be seen directly in front of the viewpoint, framed between the Cypress trees in City Hill Park.
	Is the viewpoint close to the Project?	●		The changes would be seen in the middle to background from a distance of approximately 50 m.
	Does the change encompass a large extent of the view?		●	The changes are considered to encompass a moderate to small extent of the view. Like the construction works, the changes would be seen framed between trees in City Hill Park, however, there would be no changes seen beyond this area, therefore the extent is smaller (and less visually prominent) than seen during construction.
Duration	Would the changes be seen over the long term?	●		The changes would be seen over the long term.
	Would the change be permanent?	●		The changes would be permanent with no chance of reversibility.

Overall magnitude rating	**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint at operation is considered to be Moderate. The Project would result in the addition of elements within the view in the middle ground, framed by the Cypress trees within City Hill Park. The changes, however, are similar in character to the existing view, comprising a focussed view along Commonwealth Avenue, fringed with street trees and terminating in the view to Capital Hill and Parliament House. Many of the elements within the view are visually recessive, including traffic lights and signage, although the traffic lights would 'lean' into the view corridor along Commonwealth Avenue.

Significance of visual impacts at operation		
Overall impact rating	**High to Moderate**	The overall visual impact of the Project at operation on the view from this viewpoint is considered to be High to Moderate. This rating has resulted from the sensitivity of visual receptors seeing the culturally important view along a Main Avenue to Parliament House, coupled with the changes being within the focal area of this view.
Qualitative rating	**Beneficial**	The changes are considered to be Beneficial. While the addition of the intersection within the view is placed in the centre of the middle ground, the most visually prominent elements of the Project would be the addition of street trees, which help frame the view along the road corridor and assist in placing emphasis on the focal point on Capital Hill. The trees also add to the garden setting of the view. The taller shrubs and groundcovers in the median of the road assist in framing the view, as well as the taller shrubs screening the road pavement of the proposed intersection, thereby reducing the visual prominence of the new piece of road infrastructure within the view.

7.2.4 Viewpoint 3: 7 London Circuit

Refer to **Table 14** for the assessment of impact of the Project on views from Viewpoint 3.

Table 14: Visual impact assessment of Viewpoint 3: 7 London Circuit

Criteria				Response
Viewpoint location				This viewpoint is located on the western footpath outside 7 London Circuit, looking south along London Circuit. 7 London Circuit is a 5 storey commercial building positioned on a corner of London Circuit. The viewpoint is positioned approximately 400 m north west of the intersection between London Circuit and Commonwealth Avenue.
Viewpoint rationale				This viewpoint has been chosen to represent views from London Circuit from a location close to the operational changes of the Project. This viewpoint lies within the Central National Area of Canberra, close to the Law Courts Precinct.
Visual receptors				A high number of visual receptors would experience the view from this viewpoint, predominantly comprising workers and visitors to the city centre, but also may include tourists to the central Canberra area. Visual receptors would include pedestrians on the footpath, but also passers-by on the road which would include motorists and cyclists. There is some seating within the forecourt of the building, however, receptors are not expected to spend long periods of time here, it would be more of a meeting place as the bench seating is positioned close to the footpath.
Existing view				The existing view from this location is shown in **Figure 58** and **Figure 59**. The view from this viewpoint looking south comprises the London Circuit road corridor, which is two lanes travelling in either direction with a narrow concrete median strip. A wide, paved footpath with parking indent can be seen to the right of frame in the foreground, extending to the signalised intersection of London Circuit and Gordon Street in the middle ground and the intersection with Edinburgh Avenue in the background. The view along London Circuit is framed by deciduous street trees on either side of the road. A row of tall buildings on the western side of the road screen views to the landscape beyond, directing the eye along the length of the road corridor. A single low building surrounded by a flat expanse of car parking can be seen on the eastern side of the road, along with construction activity such as cranes, temporary fencing and stacked demountables in the middle to background to the left of frame. The view to the distant horizon is screened in all directions by vegetation and built form. Taller development similar to the height and scale of 7 London Circuit is expected to be constructed in the near future along the eastern side of the road, as described in the NCP for desired development of the City Hill Precinct. Once built, the view from this location would be narrow, directed between built form on either side of the road, however, the road corridor would visually widen within the view to include a wider, more pedestrian friendly footpath and verge as seen on the western edge of London circuit. A strong terminal focal point would be created at the point where London Circuit visually terminates as the road bends to the left.
Sensitivity		**Y**	**N**	**Comments**
Susceptibility	Does the occupation / activity of the visual receptor add to their sensitivity to the view?		●	Visual receptors at this viewpoint would predominantly comprise workers and visitors to the city centre, most of which would be either travelling on the footpath or on the road.
	Would visual receptors be focussed on the view?		●	Most visual receptors at this viewpoint are unlikely to be focussed on the view as they walk or drive past this location. There is some seating at the entry to 7 London Circuit but this is likely to be provided as a temporary meeting place or place to drink a quick coffee, rather than somewhere to spend time and appreciate the view.
	Are receptors likely to see views for long periods of time?		●	Visual receptors at this viewpoint are most likely to see the view for short periods of time as they walk or drive past or pause to meet someone at the benches provided in the building forecourt.

Table 14 continued

Criteria		Response				
Value	Is the view from this viewpoint listed as important in the NCP or Territory Plan?		●	The view is not listed as important within these documents. However, this viewpoint lies within a precinct within the Central National Area (it is a Designated Area). London Circuit is identified as a gateway between the avenues and the inner City Hill area.		
	Are there other planning or heritage assets attached to the view?	●		This viewpoint lies within the Central National Area. The Acton Conservation Area (ACT Heritage Register) boundary is visible within the view, on the western side of London Circuit past Edinburgh Avenue.		
	Are there other indicators of value attached to the view?		●	There are no other indicators of importance of view from this location.		
Overall sensitivity rating		**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 3 is considered to be Moderate. While there is no strong historic or cultural importance to the view seen from this location, the viewpoint lies within the Central National Area and is important a location within the City Hill precinct. In addition, a high number of visual receptors would see the view from this location.
CONSTRUCTION						
Anticipated change in view		Construction activity is anticipated to be seen in the middle ground of the view, comprising construction activity and hoarding along London Circuit and at the intersection with Edinburgh Avenue. London Circuit would be closed to traffic for a period of time to vehicles heading south towards Commonwealth Avenue. The construction activity would include removal of trees and demolition of the road and pavements, earthworks, construction of the new intersection and road pavements, footpaths and cycle facilities, electrical infrastructure, landscaping and installation of street furniture.				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition / removal of elements within the view?	●		Changes due to the Project would result in the removal of elements within the view (tree removal) but mostly the addition of construction traffic, hoarding and construction activity within the view.		
	Would the change result in a high degree of contrast to the existing situation?		●	Construction activity is currently seen within the view on the north eastern side of London Circuit, including hoarding, car parking, cranes and site sheds. The change is still considered to result in an increase in construction activity seen in the London Circuit road corridor in the middle ground of the view.		
	Is the change prominent within the view?		●	No, it is likely that the construction activity would be seen from a moderate distance, framed between built form and another construction site.		
Extent	What is the angle of the view in relation to the receptor?			The changes would be seen directly in the centre of the view, but in the distance (middle ground).		
	Is the viewpoint close to the Project?	●		Construction would occur approximately 150 m away at its closest point.		
	Does the change encompass a large extent of the view?		●	The construction activity would only be seen within a small proportion of the overall view from this location.		
Duration	Would the changes be seen over the long term?		●	The changes would be seen over the short term (up to 2 years).		
	Would the change be permanent?		●	The changes would be temporary.		

Table 14 continued

Criteria		Response				
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint is considered to be Low. The change would be seen as an extension of construction activity already happening within the view into the road corridor of London Circuit in the middle ground of the view. Most of the construction activity would likely be screened by this existing construction and trees that would be retained on the north eastern verge of London Circuit..
Significance of visual impacts during construction						
Overall impact rating		**Moderate to Low**				The overall visual impact rating for the viewpoint during the construction period is Moderate to Low. The changes, while visible within the view, are expected to be an increase in construction activity due to existing construction activity within the view, and would be seen in the middle ground. Most of the view from this viewpoint would remain unchanged.
Qualitative rating		**Adverse**				The Project would result in a slight adverse effect on the view from this location during construction due to the increase in construction activity within the view.
OPERATION						
Anticipated change in view		**Figure 60** and **Figure 61** show the anticipated changes to the view from this viewpoint at operation. The Project would be seen within the middle to background of the view, comprising the reinstatement of London Circuit from the intersection of Edinburgh Avenue. A new central median would be seen, along with new pedestrian and cycle paths, street trees on either side of the road, and a retaining wall seen in the background on the southern edge of London Circuit (right of frame). London Circuit road pavement would be seen to raise slightly into the distance, where it turns to the east and is screened from view behind the proposed street trees.				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?	●		The Project would result in the addition of some elements within the view, but would visually comprise a replacement of most elements within the London Circuit streetscape. The raising of the London Circuit as it approaches Commonwealth Avenue would be a different element within the view.		
	Would the change result in a high degree of contrast to the existing situation?		●	The changes would be seen in the middle to background of the view and be commensurate with the existing character of the road. There would be no change to the foreground of the view.		
	Is the change prominent within the view?		●	The changes would not be visually prominent within the view.		
Extent	What is the angle of the view in relation to the receptor?			The changes would be seen directly in the centre of the view, but in the distance (middle ground).		
	Is the viewpoint close to the Project?	●		Changes would be seen from approximately 150 m away.		
	Does the change encompass a large extent of the view?		●	No, the changes would occur in the middle to background and only occur within a very small proportion of the view.		
Duration	Would the changes be seen over the long term?	●		The changes would be seen over the long term.		
	Would the change be permanent?	●		The changes would be permanent with no chance of reversibility		

Figure 58 View from Viewpoint 3 looking south east along London Circuit

Figure 59 Detail of **Figure 58** showing the existing view along London Circuit

Figure 60 Visual simulation showing changes to the view seen from Viewpoint 3

Figure 61 Detail of **Figure 60** showing changes to the view seen from Viewpoint 3

Table 14 continued

Criteria	Response				
Overall magnitude rating	**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint due to the Project at operation is considered to be Low. The changes would be visible within a small proportion of the view and result in a similar view along the London Circuit road corridor. The most visually prominent element of the Project would be the street trees framing London Circuit.
Significance of visual impacts at operation					
Overall impact rating	**Moderate to Low**				The overall visual impact rating for this viewpoint is considered to be Moderate to Low. The Project would result in an altered view along London Circuit, fringed with street trees on either side, and rising from Edinburgh Avenue to the point at which it turns to the east and is screened from view. A majority of the overall view from this location remains unchanged. These changes to the view would be seen by visual receptors which would predominantly comprise workers and visitors to the city centre, most of which would be either travelling on the footpath or on the road.
Qualitative rating	**Neutral**				The Project would not alter the quality of the view seen from this viewpoint. The changes, as listed above, would be seen in limited amount of detail due to the viewing distance, and would predominantly be seen as slight alteration to the road pavement and a replacement of verge treatments.

7.2.5 Viewpoint 4: 1 London Circuit

Refer to **Table 15** for the assessment of impact of the Project on views from Viewpoint 4.

Table 15: Visual impact assessment of Viewpoint 4: 1 London Circuit

Criteria	Response
Viewpoint location	This viewpoint is located on the driveway of 1 London Circuit looking south east along London Circuit towards Commonwealth Avenue. The viewpoint is positioned on the boundary of the Project at the entry point to the QT Hotel. It is assumed that this location would not be in use during construction due to changes to the verge up to the property boundary. There is an alternative entry into the property from the rear on Marcus Clarke Street.
Viewpoint rationale	This viewpoint has been chosen to represent views from London Circuit where the road corridor begins to rise up to meet Commonwealth Avenue. It would be frequented by locals and tourists, particularly as it is the entry to the hotel on London Circuit. This viewpoint is located on the footpath but from outside a hotel with unimpeded views to the Project.
Visual receptors	From the footpath, a low to moderate number of visual receptors would experience the view. From the road, a high number of motorists would see the view as they drove along London Circuit, including tourists and locals. A moderate number of visual receptors would see the view from their hotel rooms to the Project, however, the view seen by these receptors can only be estimated as they are on private property.
Existing view	The existing view from this location is shown in **Figure 62** and **Figure 63**. The view south east along London Circuit from this viewpoint is visually dominated by the road corridor in the foreground, including one lane travelling in either direction separated by a concrete median strip. The verge on either side of the road includes a narrow concrete footpath, turf, shrubs and street trees. A car park is seen in the middle ground of the view on the north eastern side of the road, predominantly screened by vegetation. Some built form is seen rising above the vegetation to the north, and vegetation seen at the gap in street trees to the east at the point where London Circuit turns to join Commonwealth Avenue. The eye is drawn along the road to a focal point to the south east, where trees on either verge frame the view to the treetops in the landscape beyond one of the cloverleaves to the south of London Circuit.

Table 15 continued

Criteria		Response				
Sensitivity		**Y**	**N**	**Comments**		
Susceptibility	Does the occupation / activity of the visual receptor add to their sensitivity to the view?		●	Visual receptors at this viewpoint would predominantly comprise workers and visitors to the city centre travelling on the footpath or on the road, however, tourists would see the view from the QT Hotel.		
	Would visual receptors be focussed on the view?		●	Most visual receptors at this viewpoint are unlikely to be focussed on the view as they walk or drive past this location.		
	Are receptors likely to see views for long periods of time?		●	Visual receptors at this viewpoint are most likely to see the view for short periods of time as they walk or drive past this location.		
Value	Is the view from this viewpoint listed as important in the NCP or Territory Plan?		●	The view is not listed as important within these documents. However, this viewpoint lies within a precinct within the Central National Area (it is a Designated Area). London Circuit is identified as a gateway between the avenues and the inner City Hill area.		
	Are there other planning or heritage assets attached to the view?	●		This viewpoint lies within the Central National Area and on the boundary of the Acton Conservation Area (ACT Heritage Register).		
	Are there other indicators of value attached to the view?		●	There are no other indicators of importance of view from this location.		
Overall sensitivity rating		**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 4 is considered to be Moderate. While there is no strong historic or cultural importance to the view seen from this location, the viewpoint lies within the Central National Area and is an important location within the City Hill precinct.
CONSTRUCTION						
Anticipated change in view		It is assumed that this viewpoint would not be accessible during construction due to the changes that would occur to the entire verge up (and potentially within) the property boundary.				
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint is considered to be Negligible as it is assumed the view from the footpath would not be seen during construction.
Significance of visual impacts during construction						
Overall impact rating		**Negligible**		The overall visual impact of the Project at operation is Negligible. The Project would not be seen from this location during construction.		
Qualitative rating		**Neutral**		The quality of the view would therefore not be affected by the Project.		
OPERATION						
Anticipated change in view		**Figure 64** and **Figure 65** show the anticipated changes to the view from this viewpoint at operation. The Project would be seen within the foreground to background of the view, comprising the reinstatement of London Circuit from the intersection of Edinburgh Avenue to the east until the road disappears from view. A new central median planted with turf would be seen, along with new pedestrian and cycle paths, street trees on either side of the road, and a retaining wall along the southern edge of the road (right of frame). London Circuit would be seen towards the east, where it turns towards Commonwealth Avenue and is screened from view behind the proposed street trees.					

Figure 62 View from Viewpoint 4 looking south east along London Circuit

Figure 63 Detail of **Figure 62** showing the view south east along London Circuit

Figure 64 Visual simulation showing changes to the view seen from Viewpoint 4

Figure 65 Detail of **Figure 64** showing changes to the view seen from Viewpoint 4

Table 15 continued

Criteria		Response				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?	●		The Project would result in the addition of elements within the view (particularly the increase in street trees in the verges), but would visually comprise a replacement of other typical streetscape elements within the road corridor. The raising of the London Circuit as it approaches Commonwealth Avenue would be a different element within the view. The car park on the northern side of the road would have been removed during the construction phase. The street trees and change in grades would screen most of the landscape beyond the end of London Circuit.		
	Would the change result in a high degree of contrast to the existing situation?		●	The changes would be seen in the fore and middle ground of the view and be commensurate with the existing character of the road. The rising landform would be a different element, as would the addition of street trees in the verges, but remains as a road corridor within the view. It is noted that one of the differences in the existing (refer to **Figure 62**) and proposed views (refer to **Figure 64**) is that the existing view is taken in winter, while the proposed view is modelled with leaves on the trees and therefore looks lusher and shadier than the existing. This creates a far greater visual difference than if both were taken in winter or during summer.		
	Is the change prominent within the view?	●		The changes would be visually prominent within the view.		
Extent	What is the angle of the view in relation to the receptor?			The changes would be seen directly in the centre, left and right of frame within the view, and within the foreground, middle and background of the view.		
	Is the viewpoint close to the Project?	●		Changes would be seen from the immediate foreground		
	Does the change encompass a large extent of the view?	●		Yes, the changes would be seen across the entire view.		
Duration	Would the changes be seen over the long term?	●		The changes would be seen over the long term, with the more open view along London Circuit becoming more visually enclosed as the street trees mature.		
	Would the change be permanent?	●		The changes would be permanent with no chance of reversibility		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint is considered to be High. The rating is based primarily on the extent of the view affected, with the reconfiguration of the road corridor and landform within the view.
Significance of visual impacts at operation						
Overall impact rating		**High to Moderate**		The overall visual impact of the Project at operation on the view from this viewpoint is considered to be High to Moderate. This rating has resulted from the moderate sensitivity of visual receptors coupled with the changes being seen throughout the entire view at close proximity.		
Qualitative rating		**Beneficial**		The changes are considered to be Beneficial. The replacement of elements within the road corridor would result in a new, pedestrian and cycle friendly design outcome, with street trees framing the view along the road corridor.		

7.2.6 Viewpoint 5: London Circuit South West

Refer to **Table 16** for the assessment of impact of the Project on views from Viewpoint 5.

Table 16: Visual impact assessment of Viewpoint 5: London Circuit South West

Criteria				Response
Viewpoint location				This viewpoint is located on a footpath London Circuit in front of the Breakfree Capital Tower hotel looking east along London Circuit to the intersection with Commonwealth Avenue.
Viewpoint rationale				This viewpoint has been chosen to represent the view to the Project from London Circuit from a location that would experience the removal of the Commonwealth Avenue overpass clearly. This viewpoint is located on the footpath but from outside a hotel with unimpeded views to the Project from upper levels.
Visual receptors				From the footpath, a low number of visual receptors would experience the view. From the road, a high number of motorists would see the view as they drove along London Circuit, including tourists and locals. A moderate number of visual receptors would see the view from their hotel rooms to the Project, however, the view seen by these receptors can only be estimated as they are on private property. The view from the ground level from the hotel to London Circuit is partially screened by vegetation.
Existing view				The existing view from this location is shown in **Figure 66** and **Figure 67**. The view east along London Circuit from this viewpoint is visually dominated by the road corridor in the foreground, including one lane travelling in either direction on London Circuit, separated by a concrete median strip, and an elevated access road linking to Commonwealth Avenue to the right of frame. The verge on either side of the road includes a narrow concrete footpath, turf and street trees. The Commonwealth Avenue overpass is seen in the middle ground of the view, visually terminating the view at ground level on either side of London Circuit, which is seen passing beneath and beyond the overpass. The horizon is predominantly screened, with the tops of tall buildings seen in the background to the north (left of frame) and some taller tree canopies seen above the raised plane of ground to the south (right of frame). The focal point of the view lies in the continuation of London Circuit underneath Commonwealth Avenue, with the built up landform on either side drawing the eye along the road. Trees on either verge also frame the view along London Circuit.
Sensitivity		**Y**	**N**	**Comments**
Susceptibility	Does the occupation / activity of the visual receptor add to their sensitivity to the view?		●	While the quality of views are typically more important to the enjoyment of the tourist experience, visual receptors at this location would be predominantly passers-by and therefore would not have their attention focussed on views.
	Would visual receptors be focussed on the view?		●	From the ground level visual receptors would not be focussed on the view. From the upper floors of the hotel they may be, but not focussed on the view to the road as seen in **Figure 66**.
	Are receptors likely to see views for long periods of time?		●	As above - from ground level, receptors are not likely to experience the view for long periods of time.
Value	Is the view from this viewpoint listed as important in the NCP or Territory Plan?		●	The view is not listed as important within these documents. However, this viewpoint lies within a precinct within the Central National Area (it is a Designated Area). London Circuit is identified as a gateway between the avenues and the inner City Hill area.
	Are there other planning or heritage assets attached to the view?	●		This viewpoint lies within the Central National Area and on the boundary of the Acton Conservation Area (ACT Heritage Register).
	Are there other indicators of value attached to the view?		●	There are no other indicators of importance of view from this location.

Table 16 continued

Criteria	Response				
Overall sensitivity rating	**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 5 is considered to be Low. The viewpoint is positioned on a busy roadway with no views to any landmark or heritage listed features. While the sensitivity of hotel visitors and residents would be higher, the view from the upper levels of the hotel are likely to be focussed on the larger landscape elements beyond the roadways seen at ground level.
CONSTRUCTION					
Anticipated change in view	It is assumed that this viewpoint would not be accessible during construction due to the changes that would occur to the entire verge up (and potentially within) the property boundary.				
Overall magnitude rating	**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint is considered to be Negligible as it is assumed the view from the footpath would not be seen during construction.
Significance of visual impacts during construction					
Overall impact rating	**Negligible**				The overall visual impact of the Project at operation is Negligible. The Project would not be seen from this location during construction.
Qualitative rating	**Neutral**				The quality of the view would therefore not be affected by the Project.
OPERATION					
Anticipated change in view	While a visual simulation for this location has not been prepared, a rough diagram showing the scale of the retaining wall when seen from this viewpoint is shown in **Figure 68**. At operation, the Project would result in a 2 m high retaining wall topped with fencing / balustrade on top dominating the foreground of the view. The viewpoint would be located on the proposed Penstock Valve maintenance access path at the foot of the retaining wall. Taller elements on London Circuit, including street trees, lighting and signage may be seen above the retaining wall in the foreground and middle ground of the view.				

Magnitude		Y	N	Comments
Size / scale	Would the Project result in the addition or removal of elements within the view?	●		The Project would result in the addition of the 2 m retaining wall, which would screen most other elements from the view. Street trees, lighting and signage may be seen as additional elements within the view, as would the paved surface of the Penstock Valve maintenance access path.
	Would the change result in a high degree of contrast to the existing situation?	●		Yes, the once open view to the London Circuit road corridor would become an enclosed view along a retaining wall to the landscape to the south of the viewpoint.
	Is the change prominent within the view?	●		The retaining wall is a very prominent element within the view.
Extent	What is the angle of the view in relation to the receptor?			The changes would be seen across most of the view.
	Is the viewpoint close to the Project?	●		Yes.
	Does the change encompass a large extent of the view?	●		Yes, as described above.
Duration	Would the changes be seen over the long term?	●		The changes would be seen over the long term.
	Would the change be permanent?	●		The changes would be permanent with no chance of reversibility

Figure 66 View from Viewpoint 5 looking south east along London Circuit

Figure 67 Detail of **Figure 66** showing the view south east along London Circuit

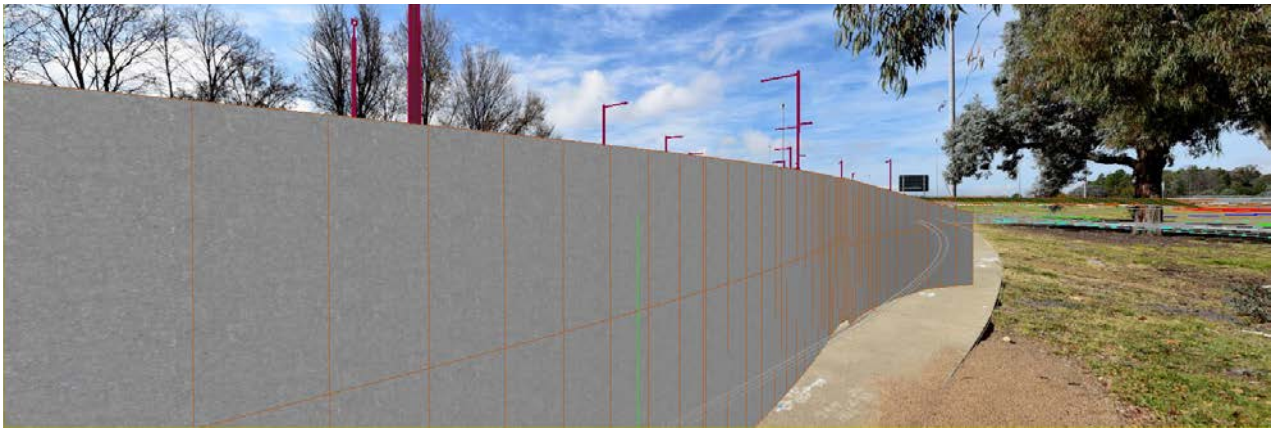

Figure 68 A rough diagram showing the 3D model overlaid on the existing view (**Figure 66**) showing the relationship of the proposed retaining wall to the viewpoint.

Table 16 continued

Criteria	Response				
Overall magnitude rating	**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint is considered to be High. The rating is based on the extent of the view affected, with the retaining wall becoming the dominant element within the view.
Significance of visual impacts at operation					
Overall impact rating	**Moderate**				The overall visual impact of the Project at operation on the view from this viewpoint is considered to be Moderate. This rating is driven by the low sensitivity of receptors at this location rather than the magnitude of change, where the changes are seen throughout the entire view at close proximity.
Qualitative rating	**Adverse**				The changes are considered to be Adverse. The quality of the view is lowered by the close proximity of the retaining wall.

7.2.7 Viewpoint 6: London Circuit South East

Refer to **Table 17** for the assessment of impact of the Project on views from Viewpoint 6.

Table 17: Visual impact assessment of Viewpoint 6: London Circuit South East

Criteria		Response		
Viewpoint location		This viewpoint is located near the south eastern corner of London Circuit, approximately 30 m south west of 255 London Circuit and 170 m south east of the intersection of London Circuit with Commonwealth Avenue. The viewpoint looks west along London Circuit to the overpass of Commonwealth Avenue.		
Viewpoint rationale		This viewpoint has been chosen to represent views from London Circuit from close proximity to the operational changes. This viewpoint lies within the Central National Area.		
Visual receptors		From the footpath, a low number of visual receptors would experience the view. From the road, a high number of motorists would see the view as they drove along London Circuit, including tourists and locals.		
Existing view		The existing view from this location is shown in **Figure 69** and **Figure 70**. The view east along London Circuit from this viewpoint is visually dominated by the road corridor in the foreground, including one lane travelling in either direction on London Circuit, separated by a concrete median strip, and an elevated access road linking to Commonwealth Avenue to the left of frame. The verge on the northern side of the road (to the right of frame) includes a narrow concrete footpath, turf and street trees. A car park can be seen behind the vegetative screening in the verge. The Commonwealth Avenue overpass is seen in the middle ground of the view with London Circuit passing beneath and extending beyond the overpass. A bank of tall buildings is seen in the background to the west (centre of frame), extending north and disappearing from view behind vegetation. The tops of trees within Acton Park is seen to the south screening the view to the horizon.		
Sensitivity		**Y**	**N**	**Comments**
Susceptibility	Does the occupation / activity of the visual receptor add to their sensitivity to the view?		●	While a proportion of the visual receptors would be tourists, a majority of passers-by on London Circuit would comprise local traffic. The view would be seen for a short period of time and mostly from a commuter perspective.
	Would visual receptors be focussed on the view?		●	Visual receptors are unlikely to be focussed on the view from this location.
	Are receptors likely to see views for long periods of time?		●	Visual receptors would experience the view for short periods of time as they travelled past the viewpoint.

Table 17 continued

Criteria		Response				
Value	Is the view from this viewpoint listed as important in the NCP or Territory Plan?		●	No, however, this viewpoint lies within a precinct within the Central National Area (it is a Designated Area). London Circuit is identified as a gateway between the avenues and the inner City Hill area.		
	Are there other planning or heritage assets attached to the view?		●	No.		
	Are there other indicators of value attached to the view?		●	There are no other indicators of importance of view from this location.		
Overall sensitivity rating		**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 6 is considered to be Low. The viewpoint is positioned on a busy roadway with no views to any landmark or heritage listed features.
CONSTRUCTION						
Anticipated change in view		It is assumed that this viewpoint would not be accessible during construction due to the changes that would occur to the entire verge.				
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint is considered to be Negligible as it is assumed the view from the footpath would not be seen during construction.
Significance of visual impacts during construction						
Overall impact rating		**Negligible**		The overall visual impact of the Project at operation is Negligible. The Project would not be seen from this location during construction.		
Qualitative rating		**Neutral**		The quality of the view would therefore not be affected by the Project.		
OPERATION						
Anticipated change in view		**Figure 71** and **Figure 72** show the anticipated changes to the view from this viewpoint at operation. The Project would be seen within the fore, middle and background of the view, comprising the reinstatement of London Circuit from the viewpoint extending west along London Circuit. While the road width (including the central median) would be similar, the view along the road would be visually softened by the inclusion of planted medians and street trees introduced to verges on either side of the road. Pedestrian and cycle paths would be included, widened from the existing experience. The landform within the view would change, with London Circuit rising to meet Commonwealth Avenue. Views to the landscape beyond the road corridor would be partly or completely screened by proposed street trees.				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?	●		The Project would result in the addition and removal of elements within the view. The most visually prominent elements would be the addition of the vegetation planted in the central median, the street trees, particularly on the southern side of the road where there previously were none, widening of the footpath, inclusion of a cycleway and the changes to the landform, resulting in the raised road corridor replacing the existing Commonwealth Avenue bridge with London Circuit passing underneath. The slip lane connecting Commonwealth Avenue to London Circuit would also be removed, replaced with the at-grade intersection.		
	Would the change result in a high degree of contrast to the existing situation?	●		Yes, particularly due to the increase in pedestrian footpath and the addition of street trees on either side of the road.		
	Is the change prominent within the view?	●		The changes are prominent within the view.		

Figure 69 View from Viewpoint 6 looking west along London Circuit

Figure 70 Detail of **Figure 69** showing the view west along London Circuit

Figure 71 Visual simulation showing changes to the view seen from Viewpoint 6

Figure 72 Detail of **Figure 71** showing changes to the view seen from Viewpoint 6

Table 17 continued

Criteria		Response				
Extent	What is the angle of the view in relation to the receptor?			The changes would be seen across most of the view, including the central portion of the view.		
	Is the viewpoint close to the Project?	●		Yes, the changes would be seen in the fore, middle and background of the view.		
	Does the change encompass a large extent of the view?	●		Yes, as described above.		
Duration	Would the changes be seen over the long term?	●		The changes would be seen over the long term, although the view would change as the trees matured.		
	Would the change be permanent?	●		The changes would be permanent with no chance of reversibility		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint is considered to be High. The changes would result in the upgrade of the existing road corridor, but to a formally landscaped street with wide pedestrian facilities and a planted median. The changes are seen within the entire view from this location.
Significance of visual impacts at operation						
Overall impact rating		**Moderate**		The overall visual impact of the Project at operation on the view from this viewpoint is considered to be Moderate. This rating is driven by the low sensitivity of receptors at this location rather than the magnitude of change, where the changes are seen throughout the entire view at close proximity.		
Qualitative rating		**Beneficial**		The changes are considered to be Beneficial. While the raising of London Circuit to the intersection with Commonwealth Avenue may raise the overall visual prominence of the road within the view, the wide pedestrian pathway and cycle infrastructure shaded by street trees are improvements to the view. The street trees frame the view along the road corridor and the vegetated median reduce the visual prominence of the road pavement within the view.		

7.2.8 Viewpoint 7: Commonwealth Avenue

Refer to **Table 18** for the assessment of impact of the Project on views from Viewpoint 7.

Table 18: Visual impact assessment of Viewpoint 7: Commonwealth Avenue

Criteria	Response
Viewpoint location	This viewpoint is located on Commonwealth Avenue at the intersection with Parkes Way, looking north towards London Circuit. The Project extends to the northern side of the bridge over Parkes Way, approximately 120 m north of the viewpoint.
Viewpoint rationale	This viewpoint has been chosen to represent the view along Commonwealth Avenue from close proximity to the Project. Views to and from City Hill are listed as important in the NCP and City Plan, particularly along the Main Avenues.
Visual receptors	A high number of visual receptors would experience the view from this viewpoint as they passed by on foot or in a vehicle, and include locals and tourists.

Table 18 continued

Criteria		Response				
Existing view		The existing view from this location is shown in **Figure 73** and **Figure 74**. The view in the foreground includes the road and footpath of Commonwealth Avenue bridge over Parkes Way, including the bridge fencing and pedestrian safety infrastructure. The turfed verges, median and batters with scattered trees within the Parkes Way road corridor are seen to the west of Commonwealth Avenue, with the Parkes Way road pavement extending westwards towards Acton. In the background of the view City Hill is seen at the termination of Commonwealth Avenue. The distinctive plantings of Cypress pines are seen in relief against the sky. The tall city buildings fringing London Circuit and Marcus Clarke Street are seen to the west of City Hill behind the expanse of turfed batter associated with one of the cloverleaves between Parkes Way and London Circuit.				
Sensitivity		**Y**	**N**	**Comments**		
Susceptibility	Does the occupation / activity of the visual receptor add to their sensitivity to the view?		●	A majority of passers-by on Commonwealth Avenue would comprise vehicular traffic comprising locals and tourists. The quality of the view is unlikely to be important to the enjoyment of passers-by at this location as it is taken from within the road corridor where receptors would be moving from one place to the next.		
	Would visual receptors be focussed on the view?		●	While Commonwealth Avenue is a Main Avenue and has significance, particularly in the views along the corridor, the road narrows to cross over Parkes Way at this location resulting in a stretch of road that would be more dominated by road infrastructure and less picturesque than other points along the road. Visual receptors are therefore unlikely to be focussed on the view from this location.		
	Are receptors likely to see views for long periods of time?		●	Visual receptors would experience the view for short periods of time as they travelled past the viewpoint.		
Value	Is the view from this viewpoint listed as important in the NCP or Territory Plan?	●		The viewpoint is positioned on Commonwealth Avenue near City Hill. This view corridor is listed as important within the NCP and City Plan. City Hill is a precinct within the Central National Area (it is a Designated Area).		
	Are there other planning or heritage assets attached to the view?	●		This location is important both in its heritage context and from a planning perspective as described in the viewpoint rationale. The viewpoint lies within the Parliament House Vista, which is listed in the CHL, and a National Land Road, also listed in the CHL. The view includes City Hill, which is listed in the ACT Heritage Register.		
	Are there other indicators of value attached to the view?		●	No, the view is still from within a main road corridor with a majority of visual receptors comprising motorists driving on the road.		
Overall sensitivity rating		**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 7 is considered to be Moderate. The viewpoint is positioned within an important area with views along the corridor having heritage and planning importance, however, the low susceptibility to change at this location lowers the overall sensitivity of the viewpoint.
CONSTRUCTION						
Anticipated change in view		Construction activity is anticipated to be seen in middle to background of the view, comprising tree removal, hoarding around the works, the construction of temporary lanes to bypass the works in the road pavement, demolition of the bridge over London Circuit, and construction of the new intersection and upgraded Commonwealth Avenue road corridor. Due to the fall in the road to the south from City Hill towards Lake Burley Griffin, it is unlikely that City Hill would still be visible during construction. The view to the construction activity would be seen primarily along the Commonwealth Avenue road corridor, with some construction activity seen to the west (left of frame) on the embankment within one of the cloverleaves between Parkes Way and London Circuit. Views to the east (left of frame) would be seen but be less visually prominent within the view.				

Table 18 continued

Criteria		Response				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?	●		Removal of existing trees would result in the loss of elements within the view. The construction activity would be a series of additional elements within the view.		
	Would the change result in a high degree of contrast to the existing situation?	●		The construction activity would be in contrast with the existing view, which currently comprises an elongated view along a Main Avenue to a landmark element. The resulting view would comprise the visual clutter of construction, surrounded by hoarding where used.		
	Is the change prominent within the view?	●		The construction activity would primarily occur within the focal area of the view, seen along Commonwealth Avenue and to the west adjacent to Parkes Way. The view to the construction activity to the east would be less visually prominent within the view.		
Extent	What is the angle of the view in relation to the receptor?			The changes would be seen in the centre of the view and also at an oblique angle predominantly to the west.		
	Is the viewpoint close to the Project?	●		The changes would occur in the middle to background of the viewpoint from a distance of approximately 120 m away.		
	Does the change encompass a large extent of the view?	●		The changes would be seen over a large proportion of the view from this location.		
Duration	Would the changes be seen over the long term?		●	The changes would be seen over the short term (up to 2 years).		
	Would the change be permanent?		●	The changes would be temporary.		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint during construction of the Project is considered to be High. The construction would be seen in the middle ground of the view, over a large proportion of the view. The work is likely to at least partially screen views to City Hill.
Significance of visual impacts during construction						
Overall impact rating		**High to Moderate**		The overall impact of the Project during construction on the view from this viewpoint is considered to be High to Moderate. The moderate sensitivity of visual receptors due to the importance of the view corridor, coupled with the visual prominence of the changes and the position of construction within the view result in the rating. The changes would only be temporary and seen over a short term.		
Qualitative rating		**Adverse**		The Project would result in an adverse effect on the view from this location during construction, introducing the visual clutter associated with construction activity within the view.		

Table 18 continued

Criteria		Response				
OPERATION						
Anticipated change in view		**Figure 75** and **Figure 76** show the anticipated changes to the view from this viewpoint at operation. The Project would be seen within the middle and background of the view, comprising the new raised London Circuit extending from the west (left of frame) next to the Breakfree Capital Tower to the intersection with Commonwealth Avenue, then continuing to the east at the proposed raised level. The turfed batter to the south of London Circuit would be retained within the view, however, the road within the cloverleaf would be removed. The proposed retaining wall would be screened by existing retained trees. New street trees would be seen fringing London Circuit to the east and west of Commonwealth Avenue, visually unifying the road corridor within the landscape. The different tree planting at the proposed intersection frames the view along the road corridor, and although this cant be seen due to the angle of viewing from this viewpoint, would frame the view along Commonwealth Avenue to City Hill from within the road corridor to the south. Taller electrical infrastructure would be seen within the new intersection including traffic lights on mast arms and street lighting. The new median to the north of the intersection would be seen in the background, providing a decorative vegetated end to the Commonwealth Avenue road corridor, seen below City Hill.				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?	●		The Project would result in the addition of elements within the view, including the at-grade intersection of Commonwealth Avenue and London Circuit, the raised London Circuit extending up to the intersection, and street trees on London Circuit and Commonwealth Avenue, including at the intersection.		
	Would the change result in a high degree of contrast to the existing situation?		●	No. The key elements within the view remain unchanged, these being the view along Commonwealth Avenue to City Hill with views to Parkes Way to the west. The street tree planting on London Circuit and Commonwealth Avenue due to the Project are more prominent than existing street trees.		
	Is the change prominent within the view?	●		As above, the key elements of the view remain unchanged, therefore the changes do not appear visually prominent within the view.		
Extent	What is the angle of the view in relation to the receptor?			The changes would be seen directly in front of the viewpoint and from a slightly oblique angle to the west beyond Parkes Way to London Circuit.		
	Is the viewpoint close to the Project?		●	While the changes were considered to be close to the viewpoint during construction, they would be seen from a further distance at operation due to the visually prominent elements within the view at operation occurring on London Circuit and near the intersection, which are approximately 250 m away, seen in the middle to background of the view.		
	Does the change encompass a large extent of the view?	●		The changes would be seen over approximately half of the extent of the view.		
Duration	Would the changes be seen over the long term?	●		The changes would be seen over the long term, although would change over time as the street trees matured.		
	Would the change be permanent?	●		The changes would be permanent with no chance of reversibility		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint at operation is considered to be Moderate. The Project would result in the addition of elements within the view in the middle ground, however, the key elements in the resulting view would be similar in character to the existing view. Many of the elements within the view are visually recessive, including traffic lights and signage. The street trees would be the most visually prominent new element within the view.

Figure 73 Existing view from Viewpoint 7 looking north along Commonwealth Avenue

Figure 74 Detail of **Figure 73** showing the existing view north along Commonwealth Avenue

Figure 75 Visual simulation showing proposed changes to the view seen from Viewpoint 7

Figure 76 Detail of **Figure 75** showing proposed changes to the view seen from Viewpoint 7

Table 18 continued

Criteria	Response				
Significance of visual impacts at operation					
Overall impact rating	**Moderate**				The overall visual impact of the Project at operation on the view from this viewpoint is considered to be Moderate. The Project would be seen by a high number of passers-by on a Main Avenue, but not from a position where the view would be particularly valued by receptors. The changes include the upgrade of Commonwealth Avenue, the addition of an intersection, and the raising of London Circuit. The most visually prominent change would be the introduction of street trees, which would frame the view to City Hill and reinforce the London Circuit road corridor on either side of Commonwealth Avenue.
Qualitative rating	**Beneficial**				The changes are considered to be Beneficial. While the raising of London Circuit to the intersection with Commonwealth Avenue may raise the visual prominence of this road within the view, the addition of street trees are improvements to the view. The use of trees along London Circuit define the road corridor running perpendicular to Commonwealth Avenue, and the choice of different tree species at the intersection frame the view to City Hill along the corridor.

7.2.9 Viewpoint 8: Parkes Way Overpass

Refer to **Table 19** for the assessment of impact of the Project on views from Viewpoint 8.

Table 19: Visual impact assessment of Viewpoint 8: Parkes Way Overpass

Criteria	Response				
Viewpoint location	This viewpoint is located on a pedestrian overpass spanning Parkes Way approximately 300 m south east of the intersection of London Circuit and Commonwealth Avenue. The overpass is a major pedestrian linkage between the Canberra CBD and Lake Burley Griffin foreshore parkland.				
Viewpoint rationale	This viewpoint has been chosen to represent views from the pedestrian overpass and from within the Parkes Way road corridor. National Land Roads (including Parkes Way) are listed in the CHL.				
Visual receptors	A moderate number of visual receptors would experience the view from the pedestrian overpass, a high number of visual receptors would travel along Parkes Way.				
Existing view	The view west from this viewpoint is dominated by the Parkes Way road corridor, seen from above. The 'gun-barrel' view along the corridor comprises the turfed median with scattered trees in the foreground, along with the west-bound and east-bound carriageways on either side. To the south (left of frame), tall vegetation fringing Commonwealth Park is seen above a retaining wall, screening views to the landscape to the south. To the north, low built form and vegetation fringing Parkes Way and Constitution Avenue can be seen, screening the view to the landscape to the north west. The top of City Hill can be seen over the vegetation to the north west (right of frame). The Project would be positioned behind the parkland in the background of the view as shown in and **Figure 78** and **Figure 77**. It would be completely screened from view at this viewpoint, therefore a detailed assessment of the sensitivity and magnitude has not been completed. The existing view from this location is shown in **Figure 77**.				
Overall sensitivity rating	**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 8 is considered to be Negligible as the visual receptors would not be able to see the Project during construction or at operation from this location.
Overall magnitude rating	**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint is considered to be Negligible, no portion of the Project would be seen during construction or at operation.

Table 19 continued

Criteria	Response	
Significance of visual impacts during construction and at operation		
Overall impact rating	**Negligible**	The overall visual impact of the Project at operation is Negligible. The Project would not be seen from this location due to screening by landform, built form and vegetation, as illustrated by **Figure 77** and **Figure 78**.
Qualitative rating	**Neutral**	The quality of the view would therefore not be affected by the Project.

Figure 77 View from Viewpoint 8 looking west along Parkes Way

Figure 78 Aerial photo showing the Project in relation to the viewpoint (Base imagery: Google Earth Pro 7.3.3.7721 (2020) [3])

7.2.10 Viewpoint 9: Archbishops Residence

Refer to **Table 20** for the assessment of impact of the Project on views from Viewpoint 9.

Table 20: Visual impact assessment of Viewpoint 9: Archbishops Residence

Criteria						Response
Viewpoint location						This viewpoint is located in the front courtyard of the Archbishops residence (refer to **Figure 79**), approximately 280 m south of the intersection of London Circuit and Commonwealth Avenue.
Viewpoint rationale						This viewpoint has been chosen to represent views from the Archbishops residence which is a location of interest close to the operational changes. The raised garden can be accessed from within Commonwealth Park and is likely to be a minor tourist destination.
Visual receptors						A low number of visual receptors would experience the view from this viewpoint and include visitors to the garden and grounds as well as residents and staff within the house.
Existing view						The existing view from this location is shown in **Figure 80** and **Figure 81**. The view from this viewpoint comprises the gardens and immediate property surrounds in the foreground. Raised garden beds constructed of decorative stonework are seen amongst gravel pathways. Large trees and shrubs surround the property, partially screening views to the north and north west. Views to the west can be seen, including the vegetation within Acton Park on the western side of Commonwealth Avenue.
Sensitivity		**Y**	**N**			**Comments**
Susceptibility	Does the occupation / activity of the visual receptor add to their sensitivity to the view?	●				This viewpoint is likely to attract tourists and other visual receptors who would be using the grounds and Commonwealth Park to walk through. The quality of the view would be important to the enjoyment of the recreational / tourist experience.
	Would visual receptors be focussed on the view?		●			Tourists and local walkers visiting this location are likely to be focussed on the view, however, from this viewpoint the focus of the view is internal to the space rather than to the landscape beyond the boundary of the garden.
	Are receptors likely to see views for long periods of time?		●			Most visitors are likely to pause to reflect on the view before moving on to experience the view from another part of Commonwealth Park.
Value	Is the view from this viewpoint listed as important in the NCP or Territory Plan?		●			The view is not listed within any planning or heritage documents.
	Are there other planning or heritage assets attached to the view?		●			The location is not listed, nor does it contain any listed items within the view.
	Are there other indicators of value attached to the view?	●				The residence would have value due to people of Catholic faith who have chosen to visit this location as it is the Archbishops residence.
Overall sensitivity rating		**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 9 is considered to be Low. Although it is likely the location would be visited by tourists, it would probably only draw a low number of people who would be more focussed on the landscape inside the boundary of the property.
CONSTRUCTION						
Anticipated change in view						Construction activity that could potentially be seen from this viewpoint include the demolition of the bridge over London Circuit and construction activity along Commonwealth Avenue, particularly near Parkes Way. At its closest, the construction activity would be approximately 100 m from this viewpoint.

Table 20 continued

Criteria		Response				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?		●	The Project may result in construction activity glimpsed between small gaps in the trees that screen a majority of the Project from view. However, due to the small glimpses of the Project that may be seen between the trees, it is unlikely that these would be noticeable within the overall view.		
	Would the change result in a high degree of contrast to the existing situation?		●	No, as above, the construction activity, if seen, would be difficult to ascertain any detail in the activity, therefore would not be a high degree of contrast to the existing situation		
	Is the change prominent within the view?		●	No, due to vegetative screening.		
Extent	What is the angle of the view in relation to the receptor?			The changes may be seen at an oblique angle to the main focal elements within the view, those being the garden within the grounds.		
	Is the viewpoint close to the Project?	●		Moderately close - with the closest construction activity likely to be approximately 100 m north of the viewpoint		
	Does the change encompass a large extent of the view?		●	No, only a very small proportion of the view.		
Duration	Would the changes be seen over the long term?		●	The changes would be seen over the short term (up to 2 years).		
	Would the change be permanent?		●	The changes would be temporary.		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint is considered to be Low. Construction activity may be seen from this location, but would only be seen as glimpse views through gaps in existing vegetation adjacent to the property. It is unlikely that any detail would be seen.
Significance of visual impacts during construction						
Overall impact rating		**Low**		The overall visual impact of the Project during construction is considered to be Low. A low number of visual receptors are likely to see the changes, which would predominantly be screened from view by existing vegetation.		
Qualitative rating		**Neutral**		As it is unlikely that construction activity would be seen in any detail, with a majority of the changes screened by vegetation, there would be no change to the overall quality of the view from this viewpoint due to the Project during construction.		
OPERATION						
Anticipated change in view		Changes due to the Project may be seen along Commonwealth Avenue, but if seen, a majority of the detail of the road pavement (including the proposed at-grade intersection) and footpaths would be obscured from view by proposed street trees on the eastern side of Commonwealth Avenue and in the southern verge of London Circuit. It is likely that the most visually prominent change would be these rows of street trees.				

Figure 79 The Archbishops residence and gardens

Figure 80 Existing view from Viewpoint 9 looking north west towards London Circuit

Figure 81 Detail of **Figure 80** showing the existing view towards London Circuit

Table 20 continued

Criteria		Response				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?		●	As noted for during the construction period, it is unlikely that the Project would result in changes that would be noticeable when viewed between the gaps in trees at the property boundary.		
	Would the change result in a high degree of contrast to the existing situation?		●	It would be difficult to see the changes, in addition to that they would be visually recessive within the greater landscape.		
	Is the change prominent within the view?		●	No, due to vegetative screening.		
Extent	What is the angle of the view in relation to the receptor?			The changes may be seen at an oblique angle to the main focal elements within the view, those being the garden within the grounds.		
	Is the viewpoint close to the Project?	●		Moderately close - with the closest part of the Project approximately 100 m north of the viewpoint		
	Does the change encompass a large extent of the view?		●	No, only a very small proportion of the view.		
Duration	Would the changes be seen over the long term?	●		The changes would be seen over the long term.		
	Would the change be permanent?	●		The changes would be permanent with no chance of reversibility		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint is considered to be Negligible. It is unlikely that any detail of the Project would be seen from this location.
Significance of visual impacts at operation						
Overall impact rating		**Negligible**		The overall visual impact of the Project at operation is Negligible. It is unlikely that it would be seen from this location due to vegetative screening near the boundary of the property.		
Qualitative rating		**Neutral**		The quality of the view would therefore not be affected by the Project.		

7.2.11 Viewpoint 10: Lake Burley Griffin / Land Axis

Refer to **Table 21** for the assessment of impact of the Project on views from Viewpoint 10.

Table 21: Visual impact assessment of Viewpoint 10: Lake Burley Griffin / Land Axis

Criteria	Response
Viewpoint location	This viewpoint is located on the board walk on the southern edge of Lake Burley Griffin. This location is also positioned on the Land Axis where the , City Hill within City Hill Park on the southern side of the hill between the avenue of Cypress trees looking south along Commonwealth Avenue. The viewpoint is positioned approximately 50 m north of Vernon Circle and 200 m from the intersection of London Circuit and Commonwealth Avenue.
Viewpoint rationale	This viewpoint has been chosen to illustrate views to the Project from this position as it represents several views that are important due to cultural, heritage and tourism factors, including: • The location lies within the Parliament House Vista, listed within the CHL • The location lies on both the Water and the Land Axes, both important elements within the Griffin Plan where views along these axes have historic and cultural significance • Lake Burley Griffin and foreshores are listed in both the CHL and the NHL • This location is a major tourist location with high visitation rates.

Table 21 continued

Criteria	Response				
Visual receptors	A high number of visual receptors would see the view from this location, including tourists and local visitors. The viewpoint is located on a small protrusion onto the lake from which views along the Water Axis to Black Mountain, and along the Land Axis to the Australian War Memorial.				
Existing view	The existing view from this location is shown in **Figure 82** and **Figure 83**. The view from this location comprises sweeping views across the expanse of Lake Burley Griffin, including the southern foreshore walkway with an avenue of pear trees to the west (to the left of frame), leading the eye to the Commonwealth Avenue bridge over the lake and Black Mountain in the background, silhouetted against the sky. The northern bank of the lake is seen to the east (right) of the water jet, comprising the undulating green turf of the parkland punctuated with groups of trees and occasional built form. The city skyline is seen behind the parkland, with the landform of Mount Ainslie on the horizon rising to the north east. The Project would be positioned behind the parkland in the middle ground of the view as shown in **Figure 83** and **Figure 84**. It would be completely screened from view at this viewpoint, therefore a detailed assessment of the sensitivity and magnitude has not been completed.				
Overall sensitivity rating	**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 10 is considered to be Negligible as the visual receptors would not be able to see the Project during construction or at operation from this location.
Overall magnitude rating	**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint is considered to be Negligible, no portion of the Project would be seen during construction or at operation.
Significance of visual impacts during construction and at operation					
Overall impact rating	**Negligible**				The overall visual impact of the Project at operation is Negligible. The Project would not be seen from this location due to screening by landform, built form and planting, as illustrated by **Figure 83** and **Figure 84**.
Qualitative rating	**Neutral**				The quality of the view would therefore not be affected by the Project.

Figure 82 Existing view from Viewpoint 10 looking north west towards the Project

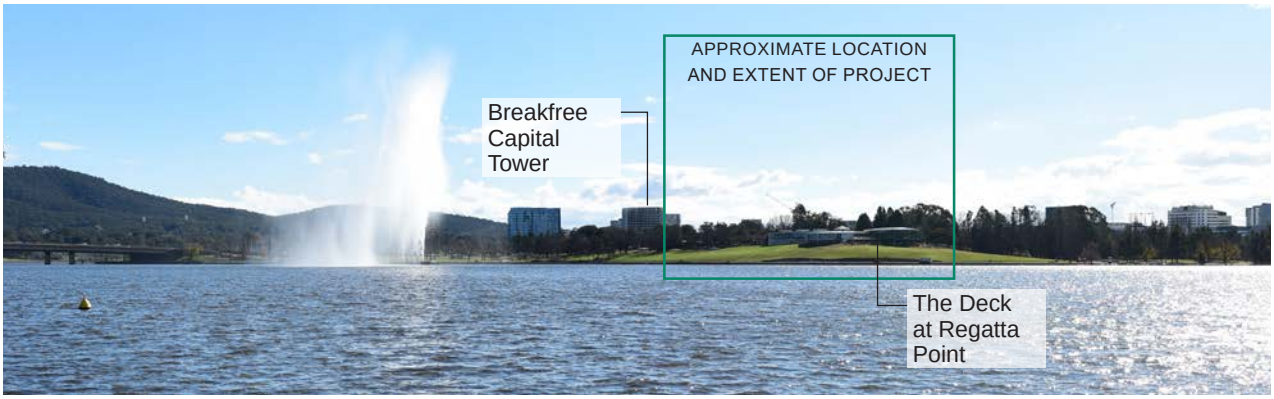

Figure 83 Detail of **Figure 82** showing the view looking north west towards the Project

Figure 84 Aerial photo showing the Project in relation to the viewpoint (Base imagery: Google Earth Pro 7.3.3.7721 (2020) [4])

7.2.12 Viewpoint 11: Black Mountain

Refer to **Table 22** for the assessment of impact of the Project on views from Viewpoint 11.

Table 22: Visual impact assessment of Viewpoint 11: Black Mountain

Criteria	Response
Viewpoint location	This viewpoint is located on Black Mountain within the viewing deck of the Telstra Tower. The location is positioned approximately 3 km north west of the intersection of Commonwealth Avenue and London Circuit.

Table 22 continued

Criteria		Response				
Viewpoint rationale		This viewpoint has been chosen to represent views from Black Mountain. The view from this location is listed as a key view to the Central National Area within the City Plan and the NCP, with the view illustrating the geometric layout of the Griffin Plan. This location is a tourist destination from which views to Canberra can be enjoyed.				
Visual receptors		A moderate to high number of visual receptors would experience the view from this viewpoint and include visitors to a recreational open space including tourists and locals.				
Existing view		The existing view from this location is shown in **Figure 85** and **Figure 86**. The view comprises sweeping panoramic views of the city from an elevated position (812 m AHD). The foreground of the view comprises the forested slope of Black Mountain falling to the south and east towards Lake Burley Griffin. Parkes Way can be seen following the shoreline to the west of the Acton peninsula, which separates the west basin from the main basin of the lake. The Commonwealth Avenue Bridge is seen spanning the lake and marking the eastern edge of the National Triangle. The city centre can be seen in the middle ground of the view with Mount Ainslie behind it in the background. The dark, vegetated hills surrounding Canberra can be seen as a backdrop against the horizon.				
Sensitivity		**Y**	**N**	**Comments**		
Susceptibility	Does the occupation / activity of the visual receptor add to their sensitivity to the view?	●		This viewpoint is likely to attract tourists and other visual receptors using the location for recreational purposes. The quality of the view would be important to the enjoyment of the recreational / tourist experience.		
	Would visual receptors be focussed on the view?	●		Tourists and local visitors are likely to be focussed on the view.		
	Are receptors likely to see views for long periods of time?		●	Most visitors are likely to pause to reflect on the view before moving on to experience the view from another part of the tower. They may pause to examine the view for moderate periods of time.		
Value	Is the view from this viewpoint listed as important in the NCP or Territory Plan?	●		The view is listed within the NCP and City Plan.		
	Are there other planning or heritage assets attached to the view?	●		This location is important both in its heritage context and from a planning perspective.		
	Are there other indicators of value attached to the view?	●		Yes, the tower is fitted with explanatory signage and markers to explain and point out elements within the view.		
Overall sensitivity rating		**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 11 is considered to be High. The viewpoint is important from a tourism, heritage and planning perspective.
CONSTRUCTION						
Anticipated change in view		It is likely that only the tallest and most visually prominent construction elements, such as cranes, would be visible from this location due to the distance of viewing and the partial screening of the Project by built form fringing London Circuit and Marcus Clarke Street.				

Table 22 continued

Criteria		Response				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?	●		The tallest and most visually prominent construction equipment may be seen from this location. However, there are existing cranes and construction equipment in the local surrounding area to the Project, therefore these elements are not new within the landscape surrounding City Hill. The area will undergo further development as outlined in strategic and planning documents and are therefore somewhat anticipated within the view in the future.		
	Would the change result in a high degree of contrast to the existing situation?		●	These elements would be difficult to see from the distance of 3 km, therefore they would not result in a high degree of contrast with the surrounding area.		
	Is the change prominent within the view?		●	No, due to the distance of viewing coupled with the tall screening elements surrounding the Project. The construction activity would be viewed against the backdrop of the land, which further reduces the visual prominence of construction elements within the view.		
Extent	What is the angle of the view in relation to the receptor?			The changes would be seen in the centre of the view in the middle ground.		
	Is the viewpoint close to the Project?		●	The Project is seen from a distance of approximately 3 km.		
	Does the change encompass a large extent of the view?		●	The Project would be seen within a very small portion of the view.		
Duration	Would the changes be seen over the long term?		●	The changes would be seen over the short term (up to 2 years).		
	Would the change be permanent?		●	The changes would be temporary.		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint during construction is considered to be Negligible. It is unlikely the Project would be seen during construction, with most of the construction screened by built form and viewed from a distance of approximately 3 km.
Significance of visual impacts during construction						
Overall impact rating		**Negligible**		The overall visual impact of the Project at operation is Negligible. The Project is unlikely to be seen from this location due to screening by landform and viewing distance.		
Qualitative rating		**Neutral**		The quality of the view would therefore not be affected by the Project.		
OPERATION						
Anticipated change in view		From this location, the Project would comprise the replacement of road infrastructure and the addition of some street trees along London Circuit and Commonwealth Avenue. However, it is unlikely that these elements would be seen due to screening by built form, the low profile and low visual prominence of the changes and the distance of viewing.				
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint at operation is considered to be Negligible. The Project at operation would be less visually prominent than that experienced during construction.
Significance of visual impacts at operation						
Overall impact rating		**Negligible**		The overall visual impact of the Project at operation is Negligible. The Project is unlikely to be seen from this location due to screening by landform and viewing distance.		
Qualitative rating		**Neutral**		The quality of the view would therefore not be affected by the Project.		

Figure 85 Existing view from Viewpoint 11 looking east from Telstra Tower to central Canberra

Figure 86 Detail of **Figure 85** showing the existing view east from Viewpoint 11

7.2.13 Viewpoint 12: Mount Ainslie

Refer to **Table 23** for the assessment of impact of the Project on views from Viewpoint 12.

Table 23: Visual impact assessment of Viewpoint 12: Mount Ainslie

Criteria						Response
Viewpoint location						This viewpoint is located on Mount Ainslie within the lookout at the top of the mountain. The location is positioned approximately 3.2 km north east of the intersection of Commonwealth Avenue and London Circuit.
Viewpoint rationale						This viewpoint has been chosen to represent views from Mount Ainslie. The view from this location is listed as a key view to the Central National Area within the City Plan and the NCP, with the view illustrating the geometric layout of the Griffin Plan. This location is a tourist destination from which views to Canberra can be enjoyed.
Visual receptors						A moderate to high number of visual receptors would experience the view from this viewpoint and include visitors to a recreational open space including tourists and locals. Unlike the view from the Telstra Tower on Black Mountain, this viewpoint is a public open space with areas designed to accommodate large groups of visitors.
Existing view						The existing view from this location is shown in **Figure 87** and **Figure 88**. The view comprises sweeping panoramic views of the city from an elevated position (842 m AHD). The foreground of the view comprises the forested slope of Mount Ainslie falling to the south and west towards Lake Burley Griffin. The view south west along the Land Axis to Parliament House is a dominant element within the view, bisected by Lake Burley Griffin in the middle ground. The city centre can be seen in the middle ground of the view but to the west (right of frame), partially screened by vegetation in the foreground. The dark, vegetated hills surrounding Canberra can be seen as a backdrop to the city against the horizon.
Sensitivity		**Y**	**N**			**Comments**
Susceptibility	Does the occupation / activity of the visual receptor add to their sensitivity to the view?	●				This viewpoint is likely to attract tourists and other visual receptors using the location for recreational purposes. The quality of the view would be important to the enjoyment of the recreational / tourist experience.
	Would visual receptors be focussed on the view?	●				Tourists and local visitors are likely to be focussed on the view.
	Are receptors likely to see views for long periods of time?		●			Most visitors are likely to pause to reflect on the view before moving on to experience the view from another part of the lookout. They may pause to examine the view for moderate periods of time.
Value	Is the view from this viewpoint listed as important in the NCP or Territory Plan?	●				The view is listed within the NCP and City Plan.
	Are there other planning or heritage assets attached to the view?	●				This location is important both in its heritage context and from a planning perspective.
	Are there other indicators of value attached to the view?	●				Yes, the lookout contains explanatory signage and markers to explain and point out elements within the view.
Overall sensitivity rating		**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 12 is considered to be High. The viewpoint is important from a tourism, heritage and planning perspective.
CONSTRUCTION						
Anticipated change in view						Similar to that at Black Mountain, it is likely that only the tallest and most visually prominent construction elements, such as cranes, would be visible from this location due to the distance of viewing and screening by vegetation and built form.

Table 23 continued

Criteria		Response				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?	●		The tallest and most visually prominent construction equipment may be seen from this location. However, there are existing cranes and construction equipment in the local surrounding area to the Project, therefore these elements are not new within the landscape surrounding City Hill. The area will undergo further development as outlined in strategic and planning documents and are therefore somewhat anticipated within the view in the future.		
	Would the change result in a high degree of contrast to the existing situation?		●	These elements would be difficult to see from the distance of over 3 km, therefore they would not result in a high degree of contrast with the surrounding area.		
	Is the change prominent within the view?		●	No, due to the distance of viewing coupled with the tall screening elements surrounding the Project.		
Extent	What is the angle of the view in relation to the receptor?			The changes would be seen in the centre of the view in the middle ground.		
	Is the viewpoint close to the Project?		●	The Project is seen from a distance of approximately 3.1 km.		
	Does the change encompass a large extent of the view?		●	The Project would be seen within a very small portion of the view.		
Duration	Would the changes be seen over the long term?		●	The changes would be seen over the short term (up to 2 years).		
	Would the change be permanent?		●	The changes would be temporary.		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint during construction is considered to be Negligible. It is unlikely the Project would be seen during construction, with most of the construction screened by built form and viewed from a distance of over 3 km.
Significance of visual impacts during construction						
Overall impact rating		**Negligible**		The overall visual impact of the Project at operation is Negligible. The Project is unlikely to be seen from this location due to screening by landform and viewing distance.		
Qualitative rating		**Neutral**		The quality of the view would therefore not be affected by the Project.		
OPERATION						
Anticipated change in view		From this location, the Project would comprise the replacement of road infrastructure and the addition of some street trees along London Circuit and Commonwealth Avenue. However, it is unlikely that these elements would be seen due to screening by built form, the low profile and low visual prominence of the changes and the distance of viewing.				
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint during operation is considered to be Negligible. The Project at operation would be less visually prominent than that experienced during construction.
Significance of visual impacts at operation						
Overall impact rating		**Negligible**		The overall visual impact of the Project at operation is Negligible. The Project is unlikely to be seen from this location due to screening by landform and viewing distance.		
Qualitative rating		**Neutral**		The quality of the view would therefore not be affected by the Project.		

Figure 87 Existing view from Viewpoint 12 looking south west towards central Canberra

Figure 88 Detail of **Figure 87** showing the existing view south west towards London Circuit

7.2.14 Viewpoint 13: Parliament House

Refer to **Table 24** for the assessment of impact of the Project on views from Viewpoint 13.

Table 24: Visual impact assessment of Viewpoint 13: Parliament House

Criteria	Response
Viewpoint location	This viewpoint is located on the lawn at the northern corner of Parliament House looking north along Commonwealth Avenue towards City Hill, approximately 2.4 km from the Project.
Viewpoint rationale	This viewpoint has been chosen to represent views along Commonwealth Avenue between the two major landmarks bookending this vista. This stretch of road comprises the western edge of the National Triangle and Parliament House Vista and is one of the culturally important views within the city, linking the civic centre from the centre of government. Views from this location are listed as important in the NCP and City Plan, illustrating the geometric layout of the Griffin Plan. Parliament House is a tourist destination from which views along Commonwealth Avenue to City Hill can be enjoyed.
Visual receptors	A moderate to high number of visual receptors would experience the view from this viewpoint and include tourists and locals.
Existing view	The existing view from this location is shown in**Figure 89** and **Figure 90**. The foreground of the view is dominated by the manicured green lawn of Parliament House, sloping down to Parliament Drive. A band of landscaped land between Parliament Drive and State Circle provide a dark band of trees (predominantly eucalypts) which partially screen views to built form within State Circle and Lake Burley Griffin. The mix of dark, evergreen trees with deciduous canopy scattered throughout is characteristic of Canberra. Glimpses of Lake Burley Griffin can be seen just above and between small gaps in the canopy of trees, particularly to the west (left of frame) of Commonwealth Avenue. The water jet can be clearly seen to the east (right) of Commonwealth Avenue, marking the position of the lake within the vista. In the background both Black Mountain and Mount Ainslie can be seen against the horizon, although Black Mountain is partially screened by taller trees in the foreground. The city is seen in the middle ground, with some of the taller buildings seen against the sky as they rise above the horizon beyond. The view along Commonwealth Avenue is visually prominent within the view. The view corridor is clear, with the exception of a patch of evergreen trees planted in the central median of the road at its lowest point to the south of the Commonwealth Bridge over Lake Burley Griffin. City Hill is seen clearly as the focal point within the road corridor, with its central flagpole and dark, fastigiate trees seen clearly against the pale green turf within City Hill Park. While not clear, the view continues past City Hill along Northbourne Street until distance makes it impossible to see the termination of the corridor.

Sensitivity		Y	N	Comments
Susceptibility	Does the occupation / activity of the visual receptor add to their sensitivity to the view?	●		This viewpoint would be a popular tourist destination whose attention would be focussed on the landscape at this location. The quality of the view is paramount to the tourist experience.
	Would visual receptors be focussed on the view?	●		Yes. The view is very important from this location and the visitor to this point within the Parliament House grounds would be specifically enjoy the view along Commonwealth Avenue to City Hill.
	Are receptors likely to see views for long periods of time?		●	Most visitors are likely to pause to reflect on the view before moving on to experience the view from another part of the site, however, it is unlikely to be for a long period of time.

Figure 89 Existing view from Viewpoint 13 looking north along Commonwealth Avenue

Figure 90 Detail of **Figure 89** showing the existing view from Viewpoint 13 north along Commonwealth Avenue

Table 24 continued

Criteria		Response				
Value	Is the view from this viewpoint listed as important in the NCP or Territory Plan?	●				Yes, the view is listed as a key view corridor in the NCP and City Plan.
	Are there other planning or heritage assets attached to the view?	●				This location is important both in its heritage context and from a planning perspective as described in the viewpoint rationale. The view also includes the Parliament House Vista, which is listed in the CHL. National Land Roads include Commonwealth Avenue and are listed in CHL.
	Are there other indicators of value attached to the view?		●			There are no signs or other indicators of value at the location.
Overall sensitivity rating		**H**	**M**	**L**	**Neg**	The sensitivity to change of Viewpoint 13 is considered to be High. The viewpoint is positioned within an important area from a heritage and planning perspective.
CONSTRUCTION						
Anticipated change in view		While the viewing distance between the viewpoint and the Project is almost 2.5 kms, it is likely that construction activity would be seen from this location. While the detail of the construction would not be seen (i.e. it would be unlikely to be able to identify what was happening on the Project site), the construction would result in the visual shortening of the elongated view along Commonwealth Avenue. The Commonwealth Avenue Pavement is viewed as a pale, vertical extrusion from Parliament House, punctuated by the dark trees in the median to the south of Lake Burley Griffin. It is likely that the construction activity would create a dark patch of 'activity' seen beyond this band of central trees, visually linking the dark patch of vegetation with City Hill and resulting in the visual termination of the avenue south of Lake Burley Griffin.				

Table 24 continued

Criteria		Response				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?	●		The Project would result in the construction activity being seen as a darker 'blob' on Commonwealth Avenue south of City Hill.		
	Would the change result in a high degree of contrast to the existing situation?		●	No, due to the distance of viewing.		
	Is the change prominent within the view?		●	No, also due to the distance of viewing.		
Extent	What is the angle of the view in relation to the receptor?			The change in the view would be seen within the centre of the view and within a focal point.		
	Is the viewpoint close to the Project?		●	No, the Project would be seen from 2.4 km away.		
	Does the change encompass a large extent of the view?		●	The changes would only be seen within a very small proportion of the overall view.		
Duration	Would the changes be seen over the long term?		●	The changes would be seen over the short term (up to 2 years).		
	Would the change be permanent?		●	The changes would be temporary.		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint during construction is considered to be Moderate. While no construction activity is likely to be seen in enough detail to discern what was happening, the activity is likely to result in the visual shortening of the view along Commonwealth Avenue.
Significance of visual impacts during construction						
Overall impact rating		**High to Moderate**		The overall impact of the Project during construction on the view from this viewpoint is considered to be High to Moderate. This rating stems primarily from the high sensitivity of the visual receptors than from the magnitude of change, as the change would only affect a very small proportion of the overall view during construction. The changes would only be temporary and seen over a short term.		
Qualitative rating		**Adverse**		The Project would result in an adverse effect on the view from this location during construction, with a visual shortening of the view along Commonwealth Avenue.		
OPERATION						
Anticipated change in view		At completion, while the Project may be seen, it is unlikely that it would be noticeable as a change within the landscape due to the considerable distance of viewing.				

Table 24 continued

Criteria		Response				
Magnitude		**Y**	**N**	**Comments**		
Size / scale	Would the Project result in the addition or removal of elements within the view?		●	It is unlikely that the Project would be seen as an additional element within the view, nor the removal of the bridge over London Circuit would be seen to have been removed.		
	Would the change result in a high degree of contrast to the existing situation?		●	No, due to the distance of viewing and the similarity of the proposed changes to the existing landscape within the Project site.		
	Is the change prominent within the view?		●	No, as above.		
Extent	What is the angle of the view in relation to the receptor?			The change in the view would be seen within the centre of the view and within a focal point.		
	Is the viewpoint close to the Project?		●	No, the Project would be seen from 2.4 km away.		
	Does the change encompass a large extent of the view?		●	The changes would only be seen within a very small proportion of the overall view.		
Duration	Would the changes be seen over the long term?	●		The changes would be seen over the long term.		
	Would the change be permanent?	●		The changes would be permanent with no chance of reversibility		
Overall magnitude rating		**H**	**M**	**L**	**Neg**	The magnitude of change experienced at this viewpoint during operation is considered to be Negligible. The Project at operation would be less visually prominent than that experienced during construction and difficult to see from this viewpoint.
Significance of visual impacts at operation						
Overall impact rating		**Negligible**		The overall visual impact of the Project at operation is Negligible. The Project is unlikely to be seen from this location due to the considerable viewing distance.		
Qualitative rating		**Neutral**		The quality of the view would therefore not be affected by the Project.		

7.3 Mitigation and assessment of residual risk

The following mitigation measures attempt to address visual impact due to the Project at viewpoints that have returned a High or High to Moderate overall impact rating. One construction recommendation and two operational recommendations have been made (refer to **Table 25**).

4 viewpoints returned a rating of High or High to Moderate (refer to **Table 26**). Of these, all High or High to Moderate ratings during construction returned an Adverse qualitative rating, while the remaining High to Moderate ratings were Beneficial and occurred at Operation. No mitigation measures are required for a beneficial change to the views from these locations. After recommendations responding to adverse visual impacts outlined in **Table 25** have been assumed to have been adopted, the visual impact at each of these locations were reconsidered.

Only one viewpoint resulted in a slightly lowered visual impact rating due to mitigation measures - Viewpoint 2 during construction. There would be a lowered magnitude of impact if visually recessive hoarding was used to screen views to construction from within City Hill Park.

While none of the ratings listed below were reduced to below High to Moderate, two of the viewpoints received a beneficial impact to the visual amenity, while the remaining adverse visual impacts all occurred during the construction period, which is a temporary change within the view. All construction activity would be removed from the view after construction has ended, thereby removing adverse elements and activity from the views.

Table 25: Mitigation measures

Ref	Issue / observation	Recommendation
C1	Hoarding around works is recommended, particularly where views are important (e.g. from city hill park looking south).	Hoarding should be used to reduce the visual prominence of the works seen from important locations (e.g. from City Hill Park looking south along Commonwealth Avenue). The design of the hoarding should consider visually recessive, natural colours and images rather than advertising material (including logos and brightly coloured text). Potential ideas include the use artwork or natural pattern that screen portions of the construction, while the height of the hoarding still allows views over the top to key features such as City Hill.
O2	Views along Main Avenues are important. Visual clutter that threatens to impact those views should be kept to a minimum, including infrastructure elements that 'lean' into the corridors. These include traffic lights, street lighting and electricity poles and wires.	Ensure the palette of taller infrastructure items are as visually unobtrusive as possible, particularly along Commonwealth Avenue.
O3	Retaining walls on London Circuit may be visually prominent due to their height and position. The materiality of these structures has not been determined.	Materiality of retaining walls is recommended to include a texture or pattern to reduce the visual solidity of the surface of the wall, or provision of planting between the retaining wall and the adjacent paving or ground surface to reduce the visual prominence of the walls from the surrounding area. Of the options being considered, the wall clad in *Wee Jasper Stone* is preferable over the in-situ concrete alternative.

Table 26: Assessment of residual risk for viewpoints with High or High to Moderate impact ratings

Viewpoint	Construction / Operation	Sensitivity	Unmitigated impact		Mitigated (residual) impact		Qualitative rating
			Magnitude	Overall rating	Magnitude	Overall rating	
Viewpoint 2: City Hill South	C	High	High	High	Moderate	High to Moderate	Adverse
	O		Moderate	High to Moderate	Moderate	High to Moderate	Beneficial
Viewpoint 4: 1 London Circuit	O	Moderate	High	High to Moderate	High	High to Moderate	Beneficial
Viewpoint 7: Commonwealth Avenue	C	Moderate	High	High to Moderate	High	High to Moderate	Adverse
Viewpoint 13: Parliament House	C	High	Moderate	High to Moderate	Moderate	High to Moderate	Adverse

8.0 Conclusion

8.1 Summary of impacts

Impact on landscape character

Of the five LCZs identified within the study area, only two returned a magnitude of impact, due to the Project, greater than Negligible (refer **Table 27**). These were LCZ 2: Major Avenues and Axes, and LCZ 4: London Circuit. These were the two LCZs within which a majority of the Project lies. This result is due to the low visual prominence of the Project at completion, with landscaping (particularly street trees) the most visually prominent elements. While the raising of the London Circuit road corridor is the largest structural change, it is supported within the strategic planning documents and Griffin Plan, and any change in character would be considered acceptable within that context.

Table 27: Summary of impact of the Project on landscape character within LCZs

Landscape Character Zone	Sensitivity	Unmitigated impact		Mitigated (residual) impact		Qualitative rating
		Magnitude	Overall rating	Magnitude	Overall rating	
LCZ 1: Parliamentary Zone and Cultural Triangle	Moderate	Negligible	Negligible	N/A	N/A	Neutral
LCZ 2: Major Avenues and Axes	Moderate	Low	Moderate to Low	N/A	N/A	Beneficial
LCZ 3: Lake Burley Griffin and Foreshores	Moderate	Negligible	Negligible	N/A	N/A	Neutral
LCZ 4: London Circuit	Moderate	Moderate	Moderate	N/A	N/A	Beneficial
LCZ 5: Parkes Way	Low	Negligible	Negligible	N/A	N/A	Neutral

Impact on views

The visual impact on views from surrounding viewpoints range from Negligible to High (refer to **Table 28** and **Table 29**), with the highest ratings experienced from viewpoints close to the Project with direct views to the changes.

During construction, three viewpoints returned a High or High to Moderate impact rating. These viewpoints were all either positioned close to the changes and / or had high sensitivities due to heritage or cultural aspects of the viewpoints. Construction activity resulted in adverse affect on the quality of the views from the viewpoints, however, construction activity is a temporary change within the landscape.

At operation, the Project resulted in a High to Moderate impact rating from two viewpoints and a Moderate or Moderate to Low rating from four viewpoints. Most of these viewpoints would receive an increase in visual amenity due to the Project, returning a beneficial qualitative rating. One viewpoint returned an adverse qualitative rating (Viewpoint 5: London Circuit South West), which was due to the close proximity of the viewpoint to a proposed retaining wall.

Table 28: Summary of impact of the Project on views from viewpoints during construction

Viewpoint	Sensitivity	Unmitigated impact		Mitigated (residual) impact		Qualitative rating
		Magnitude	Overall rating	Magnitude	Overall rating	
Viewpoint 1: City Hill West	High	Low	Moderate	N/A	N/A	Adverse
Viewpoint 2: City Hill South	High	High	High	Moderate	High to Moderate	Adverse
Viewpoint 3: 7 London Circuit	Moderate	Low	Moderate to Low	N/A	N/A	Adverse
Viewpoint 4: 1 London Circuit	Moderate	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 5: London Circuit South West	Low	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 6: London Circuit South East	Low	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 7: Commonwealth Avenue	Moderate	High	High to Moderate	High	High to Moderate	Adverse
Viewpoint 8: Parkes Way Overpass	Negligible	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 9: Archbishops Residence	Low	Low	Low	N/A	N/A	Neutral
Viewpoint 10: Lake Burley Griffin / Land Axis	Negligible	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 11: Black Mountain	High	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 12: Mount Ainslie	High	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 13: Parliament House	High	Moderate	High to Moderate	Moderate	High to Moderate	Adverse

Table 29: Summary of impact of the Project on views from viewpoints at operation

Viewpoint	Sensitivity	Unmitigated impact		Mitigated (residual) impact		Qualitative rating
		Magnitude	Overall rating	Magnitude	Overall rating	
Viewpoint 1: City Hill West	High	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 2: City Hill South	High	Moderate	High to Moderate	Moderate	High to Moderate	Beneficial
Viewpoint 3: 7 London Circuit	Moderate	Low	Moderate to Low	N/A	N/A	Neutral
Viewpoint 4: 1 London Circuit	Moderate	High	High to Moderate	High	High to Moderate	Beneficial
Viewpoint 5: London Circuit South West	Low	Moderate	Moderate to Low	N/A	N/A	Adverse
Viewpoint 6: London Circuit South East	Low	High	Moderate	N/A	N/A	Beneficial
Viewpoint 7: Commonwealth Avenue	Moderate	Moderate	Moderate	N/A	N/A	Beneficial
Viewpoint 8: Parkes Way Overpass	Negligible	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 9: Archbishops Residence	Low	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 10: Lake Burley Griffin / Land Axis	Negligible	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 11: Black Mountain	High	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 12: Mount Ainslie	High	Negligible	Negligible	N/A	N/A	Neutral
Viewpoint 13: Parliament House	High	Negligible	Negligible	N/A	N/A	Neutral

8.2 Conclusion

While many LCZs have a heightened sensitivity due to cultural or heritage importance, particularly related to the location within the Nation's capital, the susceptibility of these areas to the Project is relatively low, effectively lowering the overall sensitivity of these LCZs to the Project. The magnitude of change was assessed at operation and was typically found to be low, predominantly due to the Project being in keeping with the character of the LCZs within which it lies. Overall, the highest impact rating returned for landscape character was Moderate Beneficial, which occurred within LCZ 4: London Circuit.

Overall, the Project is considered to have a Moderate to Low impact on local landscape character (i.e. the character of the landscape directly surrounding the Project). There would be no impact on the greater landscape character of the area due to the Project. The Project, while comprising a series of changes within the existing landscape, fits within the surrounding existing and proposed landscape character as described by strategic planning documents.

The visual impact of the Project was considered during construction and at operation.

During construction, the Project typically impacted views close to the construction activity, including views seen on Commonwealth Avenue and within City Hill Park. One more distant viewpoint was found to be impacted during construction: Viewpoint 13: Parliament House. The High to Moderate rating returned from this viewpoint was more dependent on the high sensitivity of visual receptors at that location rather than the magnitude of change seen, as construction activity would be viewed from a considerable distance.

During construction, changes to views from surrounding areas due to the Project is considered acceptable due to the temporary nature of the changes and the anticipated ongoing development of the surrounding area as described by strategic planning documents.

At operation, changes due to the Project would only impact views close to the Project. Distant viewpoints would not be impacted either due to the distance of viewing, screening by landform, vegetation and built form, or the low visual prominence of the operational changes.

The Project is considered to have a positive influence on visual amenity. The proposed street trees and planted median strips are considered a beneficial addition to views from surrounding areas. The raising of London Circuit, while seen as a considerable change from the existing situation, is considered visually acceptable within the context of the overall development of the area as outlined in strategic planning documents.

Overall, the Project is considered to have a Moderate beneficial effect on views from close to the Project, and a Negligible impact on more distant views.

Changes to landscape character and views due to the Project are considered acceptable within the context described in this report.

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Appendix A

Sustainability

The Infrastructure Sustainability Council (ISC) Infrastructure Sustainability (IS) rating scheme is Australia's only comprehensive rating scheme for evaluating sustainability for infrastructure. The RLC and Light Rail to Woden projects are seeking to achieve 'Leading' Design and As-Built IS ratings. As part of this process, alignment with the urban design credits Urb-1 and Urb-2 are required. This LVIA seeks to align with the IS criteria and additional guidance where relevant to the scope of this report, notably the additional guidance relating to site context and analysis in Urb-1.

Table iv outlines specific requirements as part of Urb-1 to demonstrate achievement of the required target levels and where these are addressed in this report.

Table iv: ISC requirements

ISC rating	Requirement	Where addressed in this report
Urb 1 Level 1	An urban and landscape design plan is developed and installed that includes the following: • Site analysis • Visions and objectives for the infrastructure • Site planning Strategies that respond to: • The relevant people and place principles outlined in the Australian Urban Design Protocol (AUDP) or • Other ISC approved guidelines	Site analysis has been outlined in **Chapter 5.0** of this report. Visions and objectives for infrastructure have been outlined in a review of background documents in **Chapter 3.0** of this report. Mitigation measures outlined in **Section 7.3**, to be applied during detailed design, construction or operational phases.
Urb 1 Level 2	The urban and landscape design plan has been internally reviewed	A summary and analysis of urban design and landscaping plans in **Section 2.1.2** of this report.