

## Light rail stage 2

- 3.1 The Australian Capital Territory (ACT) Government submitted that it is committed to constructing light rail between Gungahlin and Woden via the City, Parkes and Barton, describing it as the ‘backbone of its vision for a city-wide integrated public transport network’.<sup>1</sup>
- 3.2 This chapter will consider the ACT Government’s proposed route alignment against the National Capital Plan (the Plan), examine concerns regarding the proposed route alignment, and explore the alternative routes put forward throughout the inquiry.

### Route

- 3.3 The ACT Government explained that Canberra light rail will be:
- **frequent:** with services operating at least every six minutes in peak periods, every 10 minutes between 7am and 6pm on weekdays, and at least every 15 minutes outside of these periods;
  - **rapid:** connecting Woden to the City in under 30 minutes, and Gungahlin to the City in 24 minutes;
  - **attractive:** with comfortable, state-of-the-art light rail vehicles and free Wi-Fi for passengers on-board and at stops;

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1 ACT Government, *Submission 25*, pp. 5-6.

- **accessible:** with level boarding at all doors, priority seats for mobility-impaired passengers, designated areas for wheelchairs and pushchairs, and room for bikes on-board; and
  - **sustainable:** run entirely on renewable energy.<sup>2</sup>
- 3.4 In May and June 2017, the ACT Government sought feedback from the community on two different route alignment options and stop locations. These route options comprised:
- City to Woden Town Centre via Capital Circle; and
  - City to Woden Town Centre via Parkes and Barton.<sup>3</sup>
- 3.5 The ACT Government advised that 75 per cent of the 4,437 responses it received supported a route alignment that travels through Barton and a preference for more stops in Barton to enable easy access to employment and recreational facilities.<sup>4</sup> The Director-General of Transport Canberra, Ms Emma Thomas, told the committee that:
- ...through the community consultation process that we undertook we found that the overwhelming majority of respondents did not actually favour the more direct route...the overwhelming public sentiment was for the longer route because it actually takes people to places where they might want to go.<sup>5</sup>
- 3.6 Furthermore, she explained that the more direct route raised greater engineering challenges and heritage sensitivities:
- ...the more direct route is not actually the easier or cheaper route, because it goes so close to Parliament House and because there are more bridges involved and there are greater difficulties in providing pedestrian access to the light rail system. We also think that there are perhaps greater heritage sensitivities to having lift wells or whatever may be needed to get people from that system into Parliament House.<sup>6</sup>
- 3.7 In April 2018, the ACT Government announced its preferred route for Stage 2 of the light rail (LRS2) project (see Figure 3.1).<sup>7</sup> The proposed route alignment will:

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2 ACT Government, *Submission 25*, pp. 5-6.

3 ACT Government, *Submission 25*, pp. 17-18.

4 ACT Government, *Submission 25*, p. 18.

5 Ms Emma Thomas, Director-General, Transport Canberra and City Services, ACT Government, *Proof Committee Hansard*, Canberra, 21 June 2018, p. 11.

6 Ms Emma Thomas, Director-General, Transport Canberra and City Services, ACT Government, *Proof Committee Hansard*, Canberra, 21 June 2018, p. 11.

7 The Hon Meegan Fitzharris MLA, Minister for Transport, ACT Government, 'Next steps for light rail stage two from Civic to Woden', *Media Release*, 19 April 2018.

- leave the City via London Circuit West;
- cross Lake Burley Griffin via Commonwealth Avenue on a new bridge, continuing south on Commonwealth Avenue's median;
- traverse the Parliamentary Zone via King George Terrace, Kings Avenue, John McEwen Crescent and Windsor Walk;
- join Capital Circle at Canberra Avenue; and
- continue to Woden Town Centre via Adelaide Avenue, terminating at Callam Street.<sup>8</sup>

3.8 Many submissions to the committee supported the light rail project;<sup>9</sup> some of these expressly supported the proposed route alignment.<sup>10</sup> For example, the Canberra Business Chamber asserted that including Barton in the alignment 'embeds the value of the light rail transport system as more than simply a commuter route'. It explained that:

It reinforces the benefits to the City of tourism, as the cultural institution precinct and hotels in Barton are made accessible through the proposed route, giving visitors to the city enhanced ease and capacity to move across the city. This route also provides greater access for workers to office buildings in Barton – a highly populated workforce area.<sup>11</sup>

3.9 However, many submitters raised concerns regarding the proposed route alignment, in particular that:

- the proposed route alignment may not be consistent with the National Capital Plan;
- the proposed route alignment does not function as a rapid transport spine;
- road capacity on Commonwealth Avenue Bridge may be negatively impacted; and
- traffic congestion may be negatively impacted.

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8 ACT Government, *Submission 25*, p. 8.

9 For example: Planning Institute of Australia, *Submission 24*; Australian Railway Association, *Submission 31*; Canberra Business Chamber, *Submission 32*; Property Council of Australia, *Submission 37*; Mr David Flannery, *Submission 39*; Ms Emma Davidson, *Submission 38*; Public Transport Association of Canberra, *Submission 14*; Mr Lukas Sigut, *Submission 10*; Mr Jim Mitchell, *Submission 20*; Mr Bill Gemmell, *Submission 15*; Mr Damien McGrath, *Submission 11*.

10 For example: Canberra Business Chamber, *Submission 32*; Mr David Flannery, *Submission 39*; Ms Emma Davidson, *Submission 38*.

11 Canberra Business Chamber, *Submission 32*, pp. 3-4.

Figure 3.1 Proposed City to Woden light rail alignment

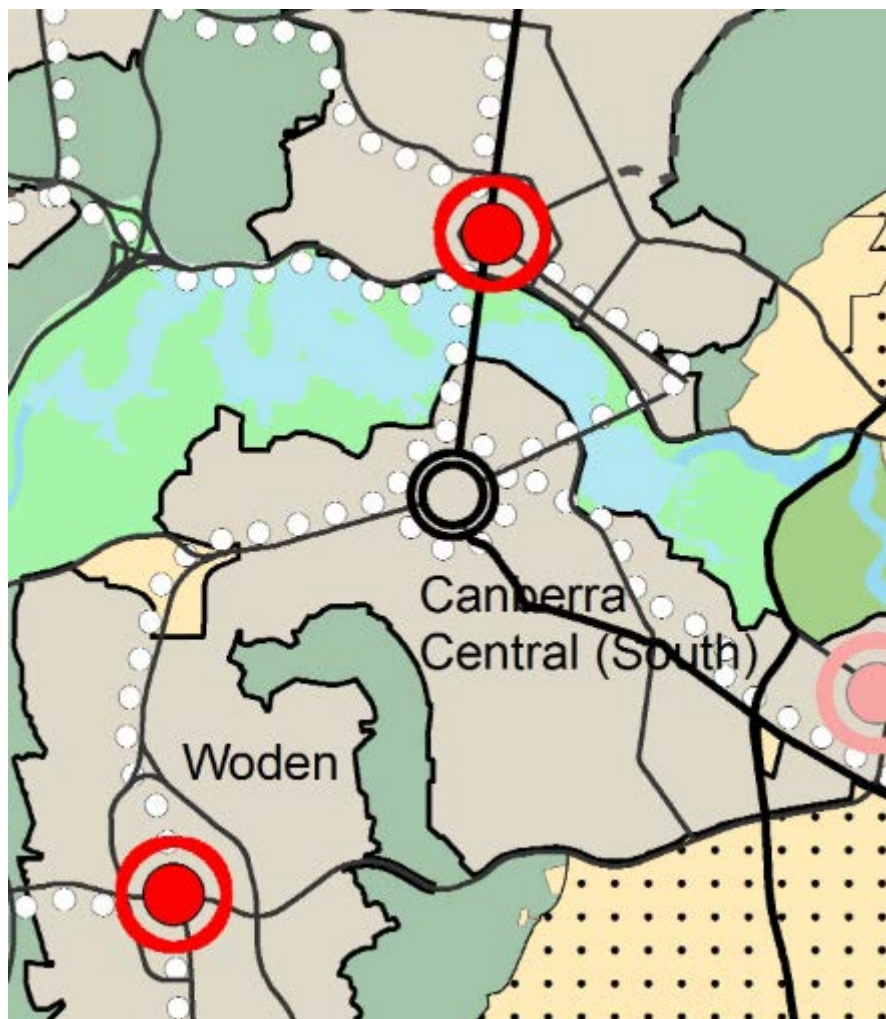


Source ACT Government, Submission 25, p. 17.

## Consistency with the National Capital Plan

3.10 The Plan provides for an inter-town public transport system and sets out the general location for a transit corridor, reserving routes between the city centre, town centres, and major employment nodes.<sup>12</sup> At present, the Plan provides for inter-town public transport routes that traverse Commonwealth, Kings and Constitution Avenues, State Circle, and Adelaide Avenue (see Figure 3.2).

Figure 3.2 National Capital Plan, excerpt showing indicative route for inter-town public transport system relevant to light rail stage 2



Source National Capital Plan, s. 3.1.4

3.11 The National Capital Authority (NCA) stated that it does not support the proposed route alignment's path through the Parliamentary Zone. It advised that the Parliamentary Zone is not identified in the Plan as a route

12 National Capital Authority, *Consolidated National Capital Plan*, s. 3.1.4.

for an inter-town public transport system and, as such, the proposed route alignment is not consistent with the Plan.<sup>13</sup> It explained that:

...the Plan permits further consideration and exploration of a route for an inter-town public transport system along Commonwealth Avenue, Kings Avenue and State Circle. This approach is consistent with the principles provided for in the Griffins' original plan for Canberra. The Plan, however, does not provide for an inter-town public transport system through the Parliamentary Zone.<sup>14</sup>

3.12 The NCA advised that the Plan can be considered 'in principle' approval for light rail routes, as it has been subject to full community consultation and approved by the Commonwealth Parliament. It explained that:

Should the ACT Government elect to follow a route outlined in the Plan, and subject to environmental and heritage approvals and urban design, moral rights, traffic and land tenure matters being resolved, there would appear to be no impediment to the NCA receiving a works approval application for its consideration.<sup>15</sup>

3.13 The NCA cautioned that any further consideration of routes not currently identified in the Plan would 'require information that is much more detailed than that which appears to be currently contemplated by the ACT Government before a decision could be made'. It advised that it would require all environmental and heritage impact approvals, as well as design and safety matters necessary for rail operation to be addressed and documented for assessment prior to its consideration of a route.<sup>16</sup>

3.14 The NCA recommended that the ACT Government conduct an initial rapid heritage impact assessment to assist the ACT Government in determining whether a route not outlined in the Plan is suitable for further consideration.<sup>17</sup>

## Rapid-transport spine

3.15 The ACT Government explained that 'light rail from Gungahlin to Woden will create a north-south public transport spine for Canberra'.<sup>18</sup> While

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13 National Capital Authority, *Supplementary Submission 22.2*, p. [19].

14 National Capital Authority, *Supplementary Submission 22.2*, p. [4].

15 National Capital Authority, *Supplementary Submission 22.2*, p. [4].

16 National Capital Authority, *Supplementary Submission 22.2*, p. [4].

17 National Capital Authority, *Supplementary Submission 22.2*, p. [4].

18 ACT Government, *Submission 25*, p. 5.

many submitters supported this objective, some questioned whether the proposed route alignment best served this goal.<sup>19</sup>

- 3.16 The Planning Institute of Australia (PIA) emphasised the importance of clear and direct planning goals for LRS2. The Principal Policy Officer for New South Wales at PIA, John Brockhoff, told the committee that ‘in the interests of good planning practice, there needs to be clarification of the project objectives’. Mr Brockhoff explained that:

...the project is trying to kick a lot of goals. The corridor south from Capital Hill to Woden is going to serve a role that competes with busways and competes with private car travel ...[However] As you go around Capital Hill and deviate into Barton, it’s going to be slowing down and servicing pick-ups and drop-offs all through the employment precincts in Barton [where] it’ll also serve a place-making role as it slows down...Then, once it’s going over the lake and charging north, it’ll be back into a more rapid-transit role.<sup>20</sup>

- 3.17 PIA cautioned that the proposed alignment ‘removes the route’s effectiveness as a rapid inter-town public transport system’, explaining that:

A diversion from the most direct and legible route at Barton will penalise many kilometres of route beyond Woden Town Centre...a diversion from the primary spine would likely reduce both the incentive and the real-world ability to interchange as future stages of light rail come on-line...this highlights a lack of alignment between strategic planning and infrastructure planning.<sup>21</sup>

- 3.18 The Property Council of Australia submitted that the proposed alignment ‘should not depart from the longer-term ACT Light Rail Network Plan [see Figure 1.1 in Chapter 1] without strong justification and a review of the network’, stating that:

Diverting away from the IPT [inter-town public transport] corridor and the Light Rail Master Plan to service employment at Barton, removes the route’s effectiveness as a rapid inter-town public transport system. For residents of Woden this will be a slower

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19 For example: Planning Institute of Australia, *Submission 24*; Property Council of Australia, *Submission 37*; Farrer Residents Association, *Submission 30*; Dr John Smith, *Submission 8*; Weston Creek Community Council, *Submission 13*; Mr Mark Dando, *Submission 19*; Woden Valley Community Council, *Submission 34*.

20 Mr John Brockhoff, Principal Policy Officer, New South Wales, Planning Institute of Australia, *Proof Committee Hansard*, 28 June 2018, p. 6.

21 Planning Institute of Australia, *Submission 24*, p. 9.

service than the current express bus service currently operating or driving a car. As a result, it is likely that express buses will continue to operate along Adelaide Avenue which will undermine the viability of the light rail.<sup>22</sup>

### Travel times and impact on existing rapid transport

3.19 A number of submitters raised concerns that the rapid transport provided by the light rail will not exceed or even meet current rapid bus transport options, with many expressing concerns that existing rapid bus transport services will be stopped following the opening of the light rail.<sup>23</sup> Dr John Smith, a Canberra resident, explained to the committee that:

...the light rail stage 2 is replacing the only rapid transit element in the entire ACT public transport network – the bus-way route from Woden town centre to Civic. The route of Stage 2 is a milk run deviating through Barton. As a result, commuters between Woden and Civic will have their travel time double from 12 minutes to more than 25 minutes when Stage 2 replaces the existing rapid service.<sup>24</sup>

3.20 However, the Australian Railway Association (ARA) cautioned that ‘light rail and buses should not be viewed as an “either/or” proposition’, noting that:

Arguments pitting buses against light rail are blinkered and detract from the role both technologies can play in reducing car dependence in cities such as Canberra. Integration between transport modes is vital to the success of a public transport system...efforts should be focused on how to make buses and light rail seamless extensions of each mode.<sup>25</sup>

3.21 The ACT Government asserted that the proposed light rail alignment ‘provides very different amenity’ to the current rapid bus services. It explained that the light rail project does not directly compare to either the blue rapid or green rapid bus services between Woden and the City:

[The light rail] provides very different amenity to the current blue rapid bus service that provides only a direct bus service with no stops between Woden and the City...in the same way, it’s not

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22 Property Council of Australia, *Submission 37*, pp. 10-11.

23 For example: Farrer Residents Association, *Submission 30*; Mr Leon Arundell, *Submission 4*; Dr John Smith, *Submission 8*; Smart Canberra Transport, *Submission 5*; Mr Mike Quirk, *Submission 7*; Woden Valley Community Council, *Submission 34*; Western Creek Community Council, *Submission 13*; Mr Kent Fitch, *Submission 27*; Ms Dione Smith, *Submission 29*.

24 Dr John Smith, *Submission 8*, p. 2.

25 Australian Railway Association, *Submission 31*, p. 13.



accurate to compare the project to the 'green' bus rapid route between Woden and the City which operate every 15 minutes and takes between 34 and 49 minutes to travel from Woden to the City depending on the time of day.<sup>26</sup>

- 3.22 The ACT Government confirmed that buses will 'continue to play an important role as part of an integrated public transport network in the future'. It advised the committee that bus network changes, including rapid services, will be developed 'closer to the planned opening date of the extension to Woden' to accurately reflect the public transport needs at the time.<sup>27</sup>

### Commonwealth Avenue Bridge

- 3.23 A number of submissions raised concerns regarding the proposed crossing of Lake Burley Griffin along Commonwealth Avenue, with most submitters opposed to existing traffic lanes on Commonwealth Avenue Bridge being used for the light rail.<sup>28</sup> The Inner South Canberra Community Council advised the committee that a survey conducted by the Deakin Residents Association found that:

A majority of respondents did not support removal of car lanes to accommodate light rail. Over half supported a new bridge over Lake Burley Griffin.<sup>29</sup>

- 3.24 Some submitters were also concerned with the impact of light rail on the heritage and aesthetic appeal of the Bridge.<sup>30</sup> The Lake Burley Griffin Guardians told the committee that it has serious concerns regarding the impact of the light rail crossing the lake, asserting that light rail will 'damag[e] the elegance and form of whatever bridge is used'.<sup>31</sup>
- 3.25 However, the Public Transport Association of Canberra believed that the benefits provided by light rail outweighed any potential impacts to traffic, and that light rail is unlikely to impact heritage or aesthetics:

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26 ACT Government, *Supplementary Submission 25.1*, pp. 26-27.

27 ACT Government, *Supplementary Submission 25.1*, pp. 26-27.

28 For example: Smart Canberra Transport, *Submission 5*; Deakin Residents Association, *Submission 18*; Inner South Canberra Community Council, *Submission 26*; Weston Creek Community Council, *Submission 13*; Farrer Residents Association, *Submission 30*.

29 Inner South Canberra Community Council, *Submission 26*, p. 2; Deakin Residents Association, *Submission 18*, pp. 6-7.

30 For example: Lake Burley Griffin Guardians; Deakin Residents Association, *Submission 18*; Mr Duncan Marshall, *Submission 12*; Mr Jack Kershaw, *Supplementary Submission 3.1*; Mr Kent Fitch, *Submission 27*; Dr John Smith, *Submission 8*.

31 Lake Burley Griffin Guardians, *Supplementary Submission 6.1*, p. 3; Lake Burley Griffin Guardians, *Submission 6*, pp. 3-4.

...the accommodation of light rail is a higher priority than the loss of a traffic lane. We do not believe the heritage values of the bridge or the remainder of Commonwealth Avenue would be negatively impacted. The road surface and bridge have been subjected to numerous upgrades and changes since construction and any changes to accommodate light rail, would provide a significant benefit to all users.<sup>32</sup>

- 3.26 The ACT Government assured the committee that existing road capacity on Commonwealth Avenue will be retained. It explained that an on-road alignment, using existing traffic lanes, was initially contemplated in the early stages of planning. However, it has since amended its design and the proposed alignment now features off-road light rail travelling on the median of Commonwealth Avenue and the construction of a new dedicated bridge to be built between the two existing Commonwealth Avenue bridges.<sup>33</sup>
- 3.27 The National Capital Authority advised that it requires the ACT Government to provide the findings of an independent heritage assessment, by an appropriately qualified heritage practitioner, that demonstrates that the heritage impact can be acceptably mitigated for light rail on Commonwealth Avenue and Commonwealth Avenue Bridge.<sup>34</sup> It explained that the ACT Government will need to provide a bridge design that:
- is of equal quality to that of the existing bridges;
  - has the same column spacing as the existing bridges;
  - does not reduce existing lake to underside of bridge clearances;
  - is slimmer than the existing bridges so as not to visually impact on the existing two bridges; and
  - has no impact on the structural soundness of the existing bridges.<sup>35</sup>

## Impact on traffic congestion

- 3.28 Some submissions, particularly resident associations, raised concerns that the light rail would exacerbate traffic congestion.<sup>36</sup> The NCA noted that,

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32 Public Transport Association of Canberra, *Submission 14*, p. 5.

33 ACT Government, *Submission 25*, p. 23.

34 National Capital Authority, *Supplementary Submission 22.2*, p. [16].

35 National Capital Authority, *Supplementary Submission 22.2*, p. [17].

36 For example: Kingston and Barton Residents Group, *Submission 23*; Lake Burley Griffin Guardians, *Submission 6*; Griffith-Narrabundah Community Association, *Submission 9*; Inner South Canberra Community Council, *Submission 26*; Weston Creek Community Council, *Submission 13*.

when considering earlier designs, it formally advised the ACT Government that it does not support:

- a significant increase in traffic signals;
- the (previously) proposed reduction of lanes on Commonwealth Avenue and associated traffic management implications; or
- changes to the road layout within the Parliamentary Zone.<sup>37</sup>

3.29 The ACT Government assured the committee that it has undertaken substantial traffic modelling and that the 'the introduction of light rail will not worsen traffic delays across the road network as a whole' (see Table 3.1 below).<sup>38</sup>

Table 3.1 Light rail traffic modelling summary (2026, with and without light rail)

Network statistics for all vehicles	2026: No light rail		2026: With light rail (median alignment Commonwealth Avenue)	
	AM peak	PM peak	AM peak	PM peak
Total vehicle travel time through network (h)	15,741	13,814	15,724	14,013
Total delay across network (h)	1,334	1,147	1,317	1,148
Average trip speed (km/h)	37	38	37	38

Source ACT Government, *Submission 25*, p. 24.

## Alternative routes

3.30 A number of alternative route alignments were proposed by submitters, with many focusing on optimising the route alignment for rapid transport.<sup>39</sup> PIA presented three alternative route options that 'deliver an attractive service to the Barton employment precinct while maintaining the integrity of the ACT Light Rail Network Plan'.<sup>40</sup>

3.31 PIA's first alternative comprises a direct route located on the eastern side of Capital Circle with a stop serving both Parliament House and the Barton Office precinct (see Figure 3.3). It notes that this route is 1.32 km shorter than the proposed route alignment.

37 National Capital Authority, *Submission 22*, p. 16.

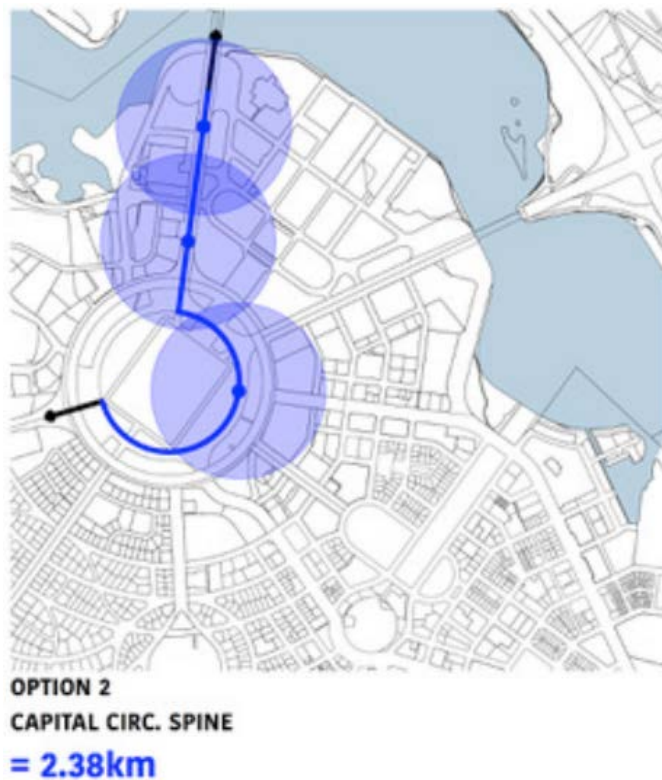
38 ACT Government, *Submission 25*, p. 24.

39 For example: Planning Institute of Australia, *Submission 24*; Mr Mark Dando, *Submission 19*; Ms Dione Smith, *Submission 29*; Australian Railway Association, *Submission 31*; Mr Jack Kershaw, *Submission 3*.

40 Planning Institute of Australia, *Submission 24*, p. 10.

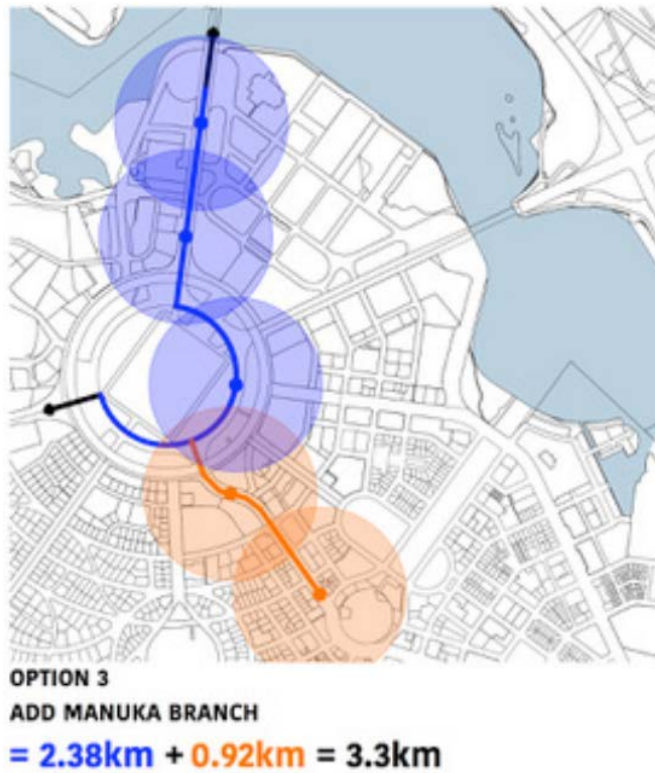
- 3.32 PIA's second alternative comprises a direct route on Capital Circle (the first alternative) with a line running from Capital Circle along Canberra Avenue with stops serving the Barton Office precinct and Manuka Oval (see Figure 3.4). It notes that this route is 0.34km shorter than the proposed route alignment.
- 3.33 PIA's third alternative comprises a direct route on Capital Circle (the first alternative) with a line to Kingston Foreshore and Kingston Railway Station along Wentworth Avenue via Brisbane Avenue and Macquarie Street in Barton connecting to King George Terrace (see Figure 3.5). It notes that this route is 0.9km longer than the proposed route alignment.

Figure 3.3 Direct route via Capital Circle Spine



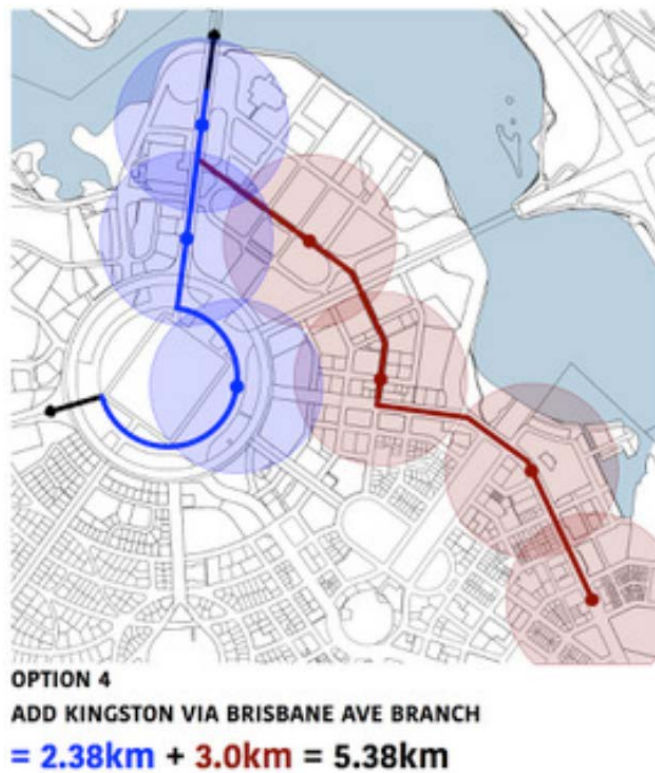
Source *Planning Institute of Australia, Submission 24, p. 16.*

Figure 3.4 Capital Circle Spine + new Canberra Avenue line to Manuka Oval



Source *Planning Institute of Australia, Submission 24, p. 17.*

Figure 3.5 Capital Circle spine + branch line to Kingston



Source *Planning Institute of Australia, Submission 24, p. 17.*

- 3.34 The NCA noted that extending the route along Commonwealth Avenue to State Circle, rather than crossing the Parliamentary Zone, ‘approximates Griffin’s design and may result in improved trip times’. However, it noted that ‘there are challenges in navigating beneath the Australian Parliament House ramp’.<sup>41</sup>
- 3.35 Parliament House Moral Rights Holder, Mr Harold Guida, advised the committee that he had no objection to a route that travelled along State Circle and incorporated a station at the ‘cut-in’ under the ramp, providing vertical access to Federation Mall.<sup>42</sup>

### Constitution Avenue, Russell, Kings Avenue

- 3.36 A number of submissions commented on the importance of the light rail network servicing the employment centre of Russell and the potential for light rail to cross the lake on Kings Avenue Bridge.<sup>43</sup> The NCA outlined two alternative routes that utilised Kings Avenue as a rapid transit corridor, noting that, while preliminary and in need of further development, ‘an acceptable design solution may be able to be found along Kings Avenue’ (see Figure 3.6).<sup>44</sup>
- 3.37 The NCA submitted that ‘there are benefits in redirecting the route to Kings Avenue as per Griffin’s Plan, which avoids the Parliamentary Zone’.<sup>45</sup> It advised the committee that the proposed route alignment sets aside and permanently alters the road geometry established by Griffin for the Parliamentary Zone and that ‘adopting Griffin’s approach of using Kings Avenue would ensure that the three employment centres at the junctions of the National Triangle (Civic, Russell and Parliament House) would be serviced by the light rail network’.<sup>46</sup>
- 3.38 Both PIA and the Property Council of Australia highlighted the role of Constitution and Kings Avenues in the ACT Light Rail Network Plan for the National Triangle (see Figure 1.1 in Chapter 1).<sup>47</sup> PIA explained that the Light Rail Network Plan proposes light rail routes that utilise the broad reserves of Commonwealth, Kings and Constitution Avenues:

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41 National Capital Authority, *Supplementary Submission 22.1*, p. 2.

42 Mr Harold Guida, Parliament House Moral Rights Holder, *Proof Committee Hansard*, Canberra, 16 August 2018, p. 3.

43 For example: National Capital Authority, *Submission 22* and *Supplementary Submission 22.1*; Australian Railway Association, *Submission 31*; Property Council of Australia, *Submission 37*; Lake Burley Griffin Guardians, *Supplementary Submission 6.1*.

44 National Capital Authority, *Submission 22*, pp. 18-19.

45 National Capital Authority, *Supplementary Submission 22.1*, p. 2.

46 National Capital Authority, *Supplementary Submission 22.1*, p. 2.

47 Property Council of Australia, *Submission 37*, pp. 10-11; Planning Institute of Australia, *Submission 24*, pp. 6-7.

[The avenues] provide direct and efficient routes to the City Centre and Russell from the Parliamentary Zone. These avenues connect to the broader network which logically extend outwards to Canberra's town centres and other major destinations such as Canberra International Airport, Fyshwick and potentially Queanbeyan. The route follows Capital Circuit, which then connects to Adelaide Avenue.<sup>48</sup>

- 3.39 ARA outlined the benefits of a route that linked Russell to Civic along Constitution Avenue. It noted that such a route would add employment (Russell), educational (Canberra Institute of Technology) and emerging high-density residential (Reid) patronage to the light rail network, resulting in 'greater all-day bi-directional patronage'.<sup>49</sup> The ARA further noted that a route to Russell could be extended to Canberra Airport, which would 'stimulate additional private sector investment and provide a critical link in Canberra's transport system'.<sup>50</sup>
- 3.40 The ACT Government emphasised the importance of considering LRS2 in the broader context of the light rail network over time. It argued that if the proposed route alignment for LRS2 is required to traverse Constitution Avenue, Russell, and cross the lake at Kings Avenue Bridge, it would be significantly detrimental to the viability of the light rail network as a whole.<sup>51</sup>

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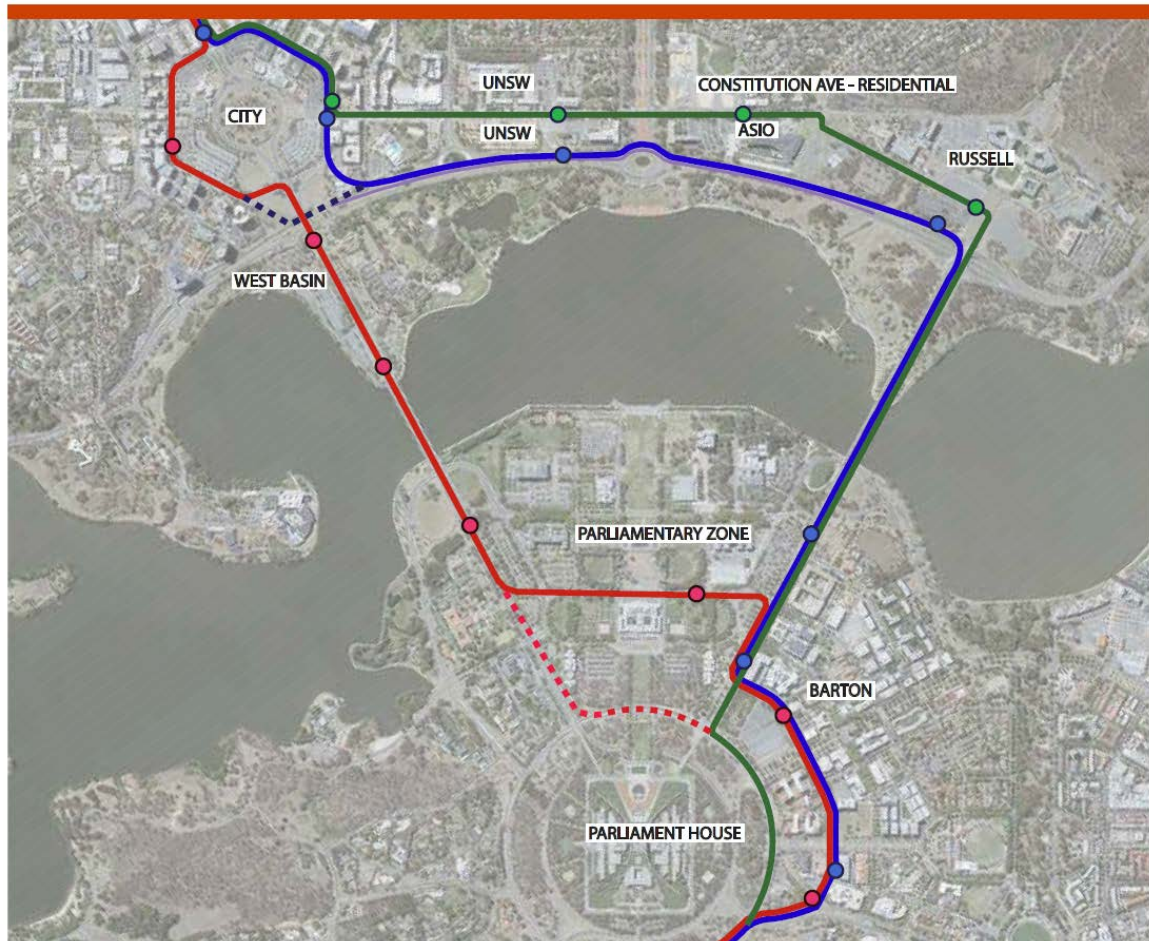
48 Planning Institute of Australia, *Submission 24*, pp. 6-7.

49 Australian Railway Association, *Submission 31*, pp. 11-12.

50 Australian Railway Association, *Submission 31*, pp. 11-12.

51 ACT Government, *Supplementary Submission 25.1*, pp. 4-9.

Figure 3.6 Possible alternative light rail routes



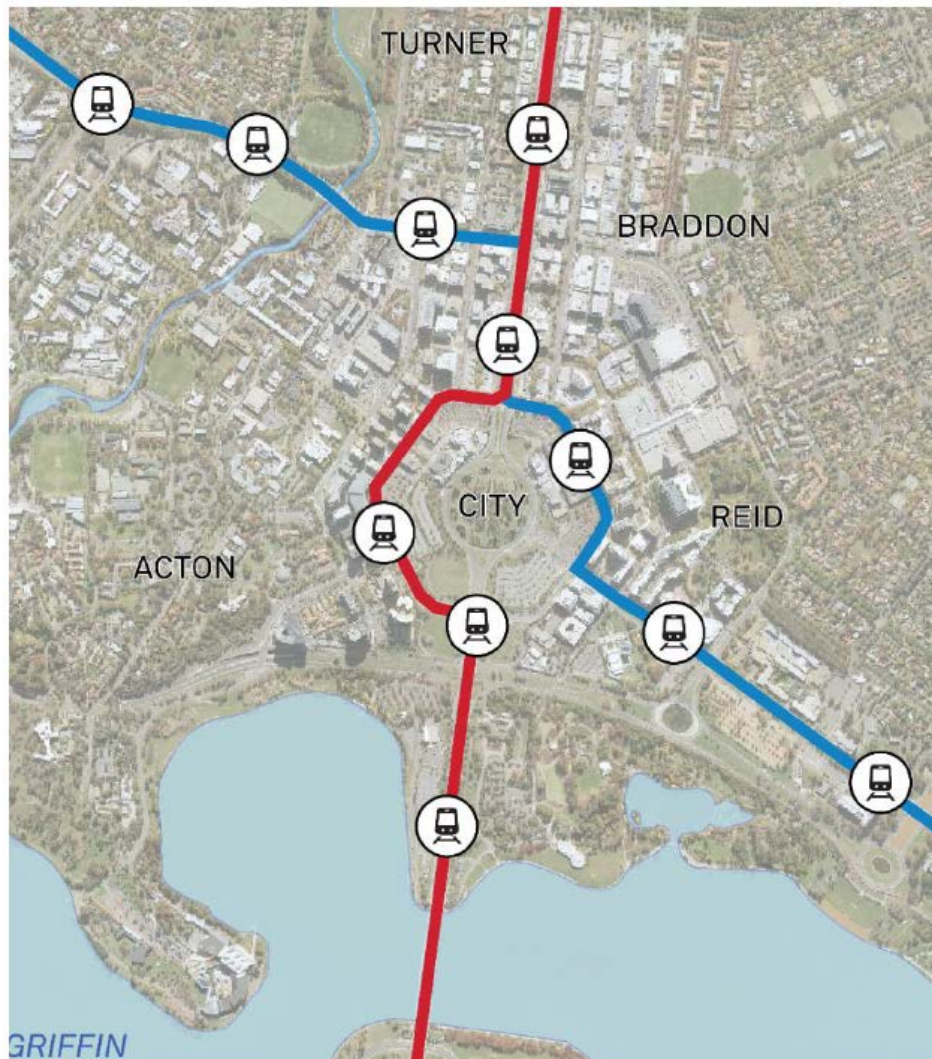
Source *National Capital Authority, Submission 22, p. 19.*

- 3.41 The ACT Government explained that it plans for the light rail network ultimately to comprise two major axes that cross the city centre at London Circuit, around City Hill, which will enable light rail to serve all central areas, including the Parliamentary Zone. The north-south spine (Gungahlin to Woden) will use the alignment along the western side of London Circuit and the east-west spine (Belconnen to Russell and the Canberra International Airport) will use the alignment along the eastern side of London Circuit (see Figure 3.7).<sup>52</sup>

52 ACT Government, *Supplementary Submission 25.1*, p. 4.



Figure 3.7 Light rail network design, showing primary north-south (red) and east-west (blue) spines that intersect around City Hill.



Source ACT Government, *Supplementary Submission 25.1*, p. 5.

- 3.42 The ACT Government advised the committee that if both the north-south and east-west spines were to use Constitution Avenue it would limit coverage and significantly disrupt both capacity in the light rail network and traffic in the city (See Figure 3.8). This would result in:
- western areas in the City, including the Australian National University, never being serviced by light rail and the high demand for stops on the western side of the City (estimated to be approximately 1,200 people alighting at the City West stop and 500 alighting at West Basin during the morning peak by 2036) not being met;

- a reduction in the overall capacity of the transport network, as both major lines will overlap on Constitution Avenue, (which is insufficiently wide to completely segregate light rail and road vehicles), and both major lines would be disrupted by a private vehicle breakdown on Constitution Avenue;
  - the potential for the intersection of Constitution Avenue and Coranderrk street to fail if services were doubled, exposing the city road network to unacceptable delays; and
  - the limitation of future expansion and flexibility for the network.<sup>53</sup>
- 3.43 It explained that it estimates that a Kings Avenue alignment for LRS2 will have poorer outcomes than the proposed route alignment, including:
- lower patronage numbers (39,000 projected daily patronage in 2041 for proposed alignment compared to 31,200 for Kings Avenue alignment);
  - longer journey times (25-30 minutes for proposed alignment compared to 35-39 minutes for Kings Avenue alignment);
  - greater cost (\$1.3-1.6 billion for proposed alignment compared to \$1.53-1.9 billion for Kings Avenue alignment); and
  - more original Charles Weston plantings being impacted (28 trees for proposed alignment and 40 trees for Kings Avenue alignment).<sup>54</sup>
- 3.44 The ACT Government advised the committee that it is 'unlikely to invest in the project' if there was a requirement to cross the Lake at Kings Avenue, 'given the lasting, sub-optimal outcomes that this would produce for Canberra'. It explained that:
- The ACT Government is firmly of the view that Canberra is best served by the north-south light rail alignment crossing the Lake at Commonwealth Avenue – it will provide better light rail coverage through the City and Parliamentary area, achieve more appropriate travel times and cost outcomes, result in higher patronage, require the removal of fewer significant trees, and result in more appropriate network operations.<sup>55</sup>

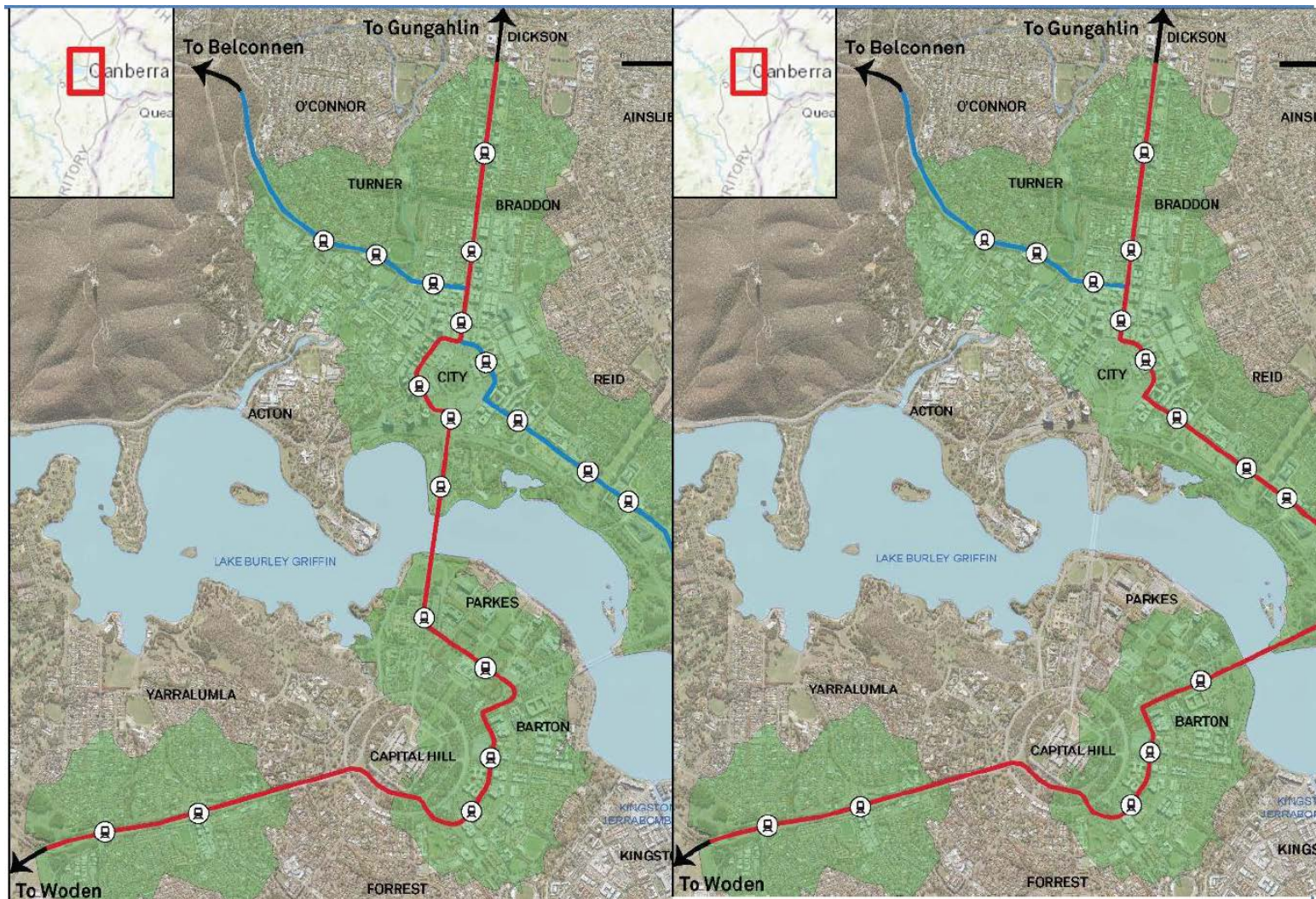
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53 ACT Government, *Supplementary Submission 25.1*, pp. 4-9.

54 ACT Government, *Supplementary Submission 25.1*, pp. 4-9.

55 ACT Government, *Supplementary Submission 25.1*, p. 9.

Figure 3.8 Comparison of Stage 2 Commonwealth Avenue Lake Crossing and Kings Avenue Lake Crossing



Source ACT Government, Supplementary Submission 25.1, p. 9.

## Committee comment

- 3.45 The National Capital Plan sets out in law the strategy and blueprint that articulates the Commonwealth's interests and intentions for planning, designing and developing Canberra and the Territory. As such, the route alignment for the LRS2 project must be consistent with the Plan in order to receive Parliamentary, and, ultimately, Works Approval by the National Capital Authority.
- 3.46 The committee wants to facilitate and ensure the simplest possible Commonwealth approval process for the light rail project. It is not the committee's intention to slow or hinder the approvals process, but rather to provide certainty for the ACT Government and the people of Canberra, and to ensure that time and money is not wasted pursuing a route that is not endorsed by the Commonwealth and therefore not feasible.
- 3.47 The NCA's advice makes clear that, if the ACT Government were to pursue a route that is consistent with the National Capital Plan, it could do so with the confidence that the route has already been considered by the Commonwealth, and given its in-principle approval, in the Plan. This would allow the ACT Government to quickly and easily move forward with the Commonwealth approvals process.
- 3.48 However, if the ACT Government decides to proceed with a route alignment that is only partially consistent with the National Capital Plan, this will unavoidably add further complexity, time, and cost to the approval processes and the overall light rail project.
- 3.49 If the ACT Government remains committed to its choice of route alignment, the committee believes that there should be a two-stage Commonwealth approval process. The first stage would comprise working with the NCA and other relevant Commonwealth agencies to definitively determine whether the proposed route is feasible. The NCA has advised that this would require the ACT Government to provide the results of an initial rapid heritage assessment. The committee is of the view that the first stage would also be best completed by seeking an amendment to the National Capital Plan.
- 3.50 It is only after these matters have been addressed and the proposed route has the approval of the Commonwealth, that the second stage should commence. The second stage would comprise the Works Approval and other Commonwealth approvals processes outlined in Chapter 2 of this report.

- 3.51 The committee is concerned that if the ACT Government chose to invest in the development of detailed designs, heritage assessments, and an Environmental Impact Statement without prior Commonwealth approval of its proposed route alignment, there is a significant risk that this investment could be wasted. A two-stage process would ensure that this did not occur.
- 3.52 The committee commends the ACT Government for its proactive approach in seeking guidance and advice, from both pre-application discussions with the NCA and throughout this inquiry process. It is important to ensure that this cooperation continues in the most effective way – not to slow down the project, but to ensure that it can proceed lawfully and effectively.

## **Recommendation 2**

- 3.53 **In the event that the ACT Government chooses to pursue a route alignment that is only partially consistent with the National Capital Plan, the committee recommends that there be a two-stage process for seeking Commonwealth approval:**
- **Stage 1: the ACT Government works with the National Capital Authority to ensure Commonwealth approval of the route alignment, by way of amendment to the National Capital Plan; and**
  - **Stage 2: completion of Works Approval application and other Commonwealth approval processes.**

- 3.54 The committee is conscious of the importance of heritage considerations in designing a light rail crossing for Lake Burley Griffin. The committee agrees that the National Capital Authority must be provided with the findings of an independent heritage assessment, by an appropriately qualified heritage practitioner, that demonstrates that the heritage impact can be acceptably mitigated for light rail to use either the Commonwealth Avenue or Kings Avenue bridges.

### **Recommendation 3**

- 3.55 **The committee recommends that the National Capital Authority require any light rail bridge design on either the Commonwealth or Kings Avenue bridges to:**
- **be of equal quality to that of the existing bridges;**
  - **have the same column spacing as the existing bridges;**
  - **not reduce existing lake to underside of bridge clearances;**
  - **be slimmer than the existing bridges so as not to visually impact on the existing two bridges; and**
  - **have no impact on the structural soundness of the existing bridges.**