



**Legislative Assembly for the
Australian Capital Territory**

Standing Committee on Public Accounts

Inquiry into Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis

Legislative Assembly for the Australian Capital Territory
Standing Committee on Public Accounts

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About the committee

Establishing resolution

The Assembly established the Standing Committee on Public Accounts on 2 December 2020.

The Committee is responsible for the following areas:

- ACT Auditor-General
- Office of the Legislative Assembly
- Accounts of the receipts and expenditure of the ACT and its authorities
- All reports of the Auditor-General which have been presented to the Assembly
- Treasury including taxation and revenue.

You can read the full establishing resolution [on our website](#).

Committee members

Mrs Elizabeth Kikkert MLA, Chair

Mr Michael Pettersson MLA, Deputy Chair

Mr Andrew Braddock MLA

Secretariat

Ms Sophie Milne (from 21 November 2022)

Ms Joanne Cullen, Committee Secretary (9 September – 18 November 2022)

Mr Samuel Thompson, Committee Secretary (to 9 September 2022)

Ms Miona Ikeda, Assistant Secretary

Mr Nick Byrne, Assistant Secretary

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About this inquiry

Under its resolution of establishment, the Standing Committee on Public Accounts examines all reports of the Auditor-General which have been presented to the Legislative Assembly. Specifically, the resolution requires the Committee to inquire into and report on reports of the Auditor-General which have been presented to the Assembly.

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Acronyms

Acronym	Long form
ACT	Australian Capital Territory
Audit Report	Auditor-General's Report No. 8 of 2021: Light Rail Stage 2A Economic Analysis
ANU	Australian National University
ATAG	Australian Transport and Assessment Guidelines
BCR	Benefit Cost Ratio
Committee	Standing Committee on Public Accounts
EY	Ernst & Young
MLA	Member of the Legislative Assembly
MPC	Major Projects Canberra
NPV	Net Present Value
UC	University of Canberra
WEBs	Wider economic benefits

Recommendations

Recommendation 1

The Committee recommends that the ACT Government agree to all of the Auditor-General's recommendations.

Recommendation 2

The Committee recommends that the ACT Government proceed with construction of the Light Rail Stage 2A.

Recommendation 3

The Committee recommends that the ACT Government provide an explanation of the methodology, and explicit definitions of costs and benefits included in the light rail stage 2A economic analysis and make all non-commercially sensitive information publicly available.

Recommendation 4

The Committee recommends that the ACT Government ensures that an economic analysis of a city-wide network be provided alongside any single stage analysis for the light rail project.

Recommendation 5

The Committee recommends that the ACT Government reduce its reliance on external consultants by developing more specialist in-house capacity.

Recommendation 6

The Committee recommends that the ACT Government undertake a review into whether the Infrastructure Australia discount rate guidance is appropriate for evaluating future stages of Light Rail.

Recommendation 7

The Committee recommends that the ACT Government apply sensitivity analyses for a range of discount rates presented in business cases for future large, long term projects of a similar nature of Light Rail Stage 2A.

Recommendation 8

The Committee recommends that the ACT Government publish a benefits realisation plan for Light Rail stage 2A as soon as possible.

1. Introduction

Preliminary

- 1.1. Reports of the Auditor-General form a significant part of the Committee's work. The Committee has an important role to follow-up on the reports and recommendations of the Auditor-General.
- 1.2. Where the Committee determines a report of the Auditor-General requires further examination by the Committee, it may conduct a formal inquiry into the matter. This may include calling for written submissions, hearing from witnesses, and preparing a written report for presentation to the Legislative Assembly.

Acknowledgements

- 1.3. The Committee acknowledges those who contributed to its inquiry, including the Auditor-General and staff from the ACT Audit Office, Major Projects Canberra, the City Renewal Authority and academics from the Australian National University (ANU) and University of Canberra (UC).

2. Conduct of Inquiry

Referral and decision to inquire

- 2.1. Auditor-General's Report No. 8 of 2021: *Canberra Light Rail Stage 2A: Economic Analysis* (the Audit Report) was presented to the Legislative Assembly on 6 October 2021.¹
- 2.2. The Audit Report reviewed the effectiveness of the economic analysis for the Light Rail Stage 2A Business case.²
- 2.3. At its meeting on Thursday, 7 October 2021, the Assembly debated a motion proposing the establishment of a Select Committee to 'consider and report on any matter relating to the Light Rail Stage 2 Project'. The Special Minister of State, Mr Chris Steel MLA moved an amendment to the motion requesting that the Standing Committee on Public Accounts 'consider and report on the Light Rail Stage 2 Project with a particular view to reporting on issues raised by the ACT Auditor-General'. The amended motion was passed by the Assembly.³
- 2.4. In accordance with the resolution of establishment of the Standing Committee on Public Accounts, the Audit report was referred to the Committee for examination. Specifically, the Committee was requested to 'consider and report on the Light Rail Stage 2 Project with a particular view to reporting on issues raised by the ACT Auditor-General'.⁴
- 2.5. On 14 October 2021 the Committee resolved to establish an inquiry into the Audit Report.
- 2.6. The Government Response to the Audit report was presented to the Assembly on 2 December 2021.

Conduct of inquiry

- 2.7. On 14 October 2021, the Committee received a briefing from the Auditor-General in relation to the Audit Report, prior to its decision to undertake an inquiry into the matter.
- 2.8. At a public hearing held on 12 May 2022, the Committee heard evidence from Academics from the Australian National University and University of Canberra, officials from Major Projects Canberra and the City Renewal Authority, the ACT Auditor-General and his staff.
- 2.9. On 7 December 2022 the Committee met to consider the Chair's draft report on its inquiry.
- 2.10. On 7 December 2022 the Committee adopted the report on its inquiry for presentation to the Legislative Assembly.

¹ Legislative Assembly for the ACT, *Minutes of Proceedings No 25*, 6 October 2021, p 300.

² ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 1.

³ Legislative Assembly for the ACT, *Minutes of Proceedings No 26*, 7 October 2021, pp 313–315.

⁴ Legislative Assembly for the ACT, *Minutes of Proceedings No 26*, 7 October 2021, p 315.

3. Audit background and outcomes

- 3.1. This chapter presents an overview of the Audit Report including its findings and recommendations.

Audit background

- 3.2. The purpose of the audit was to 'review the effectiveness of the economic analysis for the Light Rail Stage 2A'.⁵
- 3.3. Since the ACT Government's decision to proceed with the development of Light Rail Stage 1, which involved the design, construction, and operation of a 12-kilometre light rail route from the Central Business District to Gungahlin, the Government has indicated its intention to extend the network to Woden as part of Stage 2.⁶
- 3.4. This stage was split by the ACT Government in September 2019 into two components:
- a) Stage 2A – a 1.7-kilometre extension of the existing City-Gungahlin route from the City to Commonwealth Park via London Circuit (West) and Commonwealth Avenue; and
 - b) Stage 2b – a 9-kilometre route from Commonwealth park to Woden via State Circle (East).⁷
- 3.5. A redacted version of the Stage 2A business case was released to the public on 10 September 2019. It provided 'details for the design and construction of light rail between the City and Commonwealth Park and the ongoing operation and maintenance of that component of the light rail system'.⁸
- 3.6. The Stage 2A business case also included information associated with the economic analysis for Light Rail Stage 2A.⁹

Audit conclusions

Project cost estimates

- 3.7. In relation to the cost estimates for the Light Rail Stage 2A project, the Audit Report stated that for the purpose of economic appraisal the September 2019 Stage 2A Business Case identified a present value figure of:

\$162 million (2019, discounted at 7 percent) for capital costs associated with the construction of Light Rail Stage 2A. However, the capital cost of Light Rail Stage 2A is expected to be higher than what was estimated in the Stage 2A Business Case.¹⁰

⁵ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 1.

⁶ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 1.

⁷ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 1.

⁸ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 1.

⁹ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 1.

¹⁰ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 1.

\$23 million (2019, discounted at 7 percent) for development costs associated with the accelerated development of the Acton Waterfront.¹¹

- 3.8. The Audit Report stated that the costs associated with retrofitting the existing light rail vehicle fleet with wire-free technology, estimated at approximately 17 percent, were not included in the capital cost estimates in the Stage 2A Business Case. The Audit Report also noted that wire-free light rail was a requirement of Commonwealth approval for Light Rail Stage 2A and that:

At the time of the preparation of the Stage 2A Business Case there was a very strong likelihood that wire-free technology would be required for any extensions towards and through the Parliamentary Zone but this cost, and other costs associated with urban design finishes, were not explicitly included in the capital cost estimate for Light Rail Stage 2A.¹²

- 3.9. The Audit Report concluded that the expected costs of Light Rail Stage 2A should be updated and made publicly available.¹³

Project benefit estimates

- 3.10. In relation to the Light Rail Stage 2A Business Case, the Audit Report stated that for the purpose of economic appraisal, the identified present value figure was:

\$150 million (2019, discounted at 7 percent) in benefits associated with Light Rail Stage 2A. This compared with a present value figure of \$268 million (2019, discounted at 7 percent) of estimated costs for the project.¹⁴

- 3.11. The Audit Report also stated that the benefits identified are related to the 'acceleration of development of the Acton Waterfront' project, however evidence on how this 'accelerated development' would occur is not provided in either the business case or economic appraisal report. There is a risk to the expected benefits not being realised for Light Rail Stage 2A if this 'accelerated development' is not realised.¹⁵

Benefits management

- 3.12. In relation to benefits management:

The Stage 2A Business Case identified a commitment to the development of a Benefits Realisation Plan for Light Rail Stage 2A. This has not occurred. Benefits management activities should be undertaken at the earliest possible stages of a project to 'ensure that a mindset of accountability and structured approach towards achieving set benefits is embedded from the early stages of planning'.¹⁶

¹¹ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 2.

¹² ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 1.

¹³ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 2.

¹⁴ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 2.

¹⁵ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 2.

¹⁶ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 2.

Audit Recommendations

- 3.13. The Audit Report made three recommendations, provided in the table below. The right column of the table indicates the position the ACT Government adopted for the relevant recommendation in its response to the Audit Report.

Audit Report Recommendation ¹⁷	Government Position ¹⁸
<p>R1—Major Projects Canberra should review and update the economic analysis associated with Light Rail Stage 2A. In doing so, Major Projects Canberra should:</p> <ul style="list-style-type: none"> a) review the assumptions underpinning the economic analysis, including the identified costs and benefits associated with Light Rail Stage 2A, since the publication of the redacted Stage 2A Business Case in September 2019; and b) make publicly available the revised and updated economic analysis in an updated Stage 2A Business Case. 	<ul style="list-style-type: none"> a) Agreed in principle. b) Not agreed.
<p>R2—As part of the revised and updated and publicly available economic analysis for Light Rail Stage 2A, Major Projects Canberra should explicitly identify the nature of the development costs and benefits associated with the project. This should include detailed identification of:</p> <ul style="list-style-type: none"> a) the different components of the development costs and their timing, the methodology for qualification and the assumption underpinning the calculation; and b) the different components of the land use and city shaping benefits to be derived from Light Rail Stage 2A and their relationship to the development of the Acton Waterfront. 	<ul style="list-style-type: none"> a) Agreed in principle. b) Agreed in principle.
<p>R3—The Chief Minister, Treasury and Economic Development Directorate (ACT Treasury), in cooperation with Major Projects Canberra and the Transport Canberra and City Services Directorate, should develop a Benefits Realisation Plan for Light Rail Stage 2A.</p>	<p>Agreed</p>

¹⁷ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 8.

¹⁸ *Government response to the ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, tabled 2 December 2021, [pp 3–5].

4. Committee comment

4.1. The Auditor-General stated that:

the purpose of this particular audit was to review the effectiveness of the economic analysis for the light rail stage 2A business case, so it was a very specifically targeted audit in relation to that economic analysis.¹⁹

4.2. The committee notes that the Government has not agreed to all the recommendations made in the audit report.

Recommendation 1

The Committee recommends that the ACT Government agree to all of the Auditor-General's recommendations.

Recommendation 2

The Committee recommends that the ACT Government proceed with construction of the Light Rail Stage 2A.

Economic analysis

4.3. The audit report noted that the Stage 2A Business Case provided:

- an overview, including proposed route and stops;
- the identified key problems, solutions and project benefits;
- capital delivery costs;
- cost-benefit analysis;
- delivery model analysis; and
- project governance.²⁰

4.4. Assumptions made in the Business Case were that:

- light rail will be delivered between the City and Woden;
- Commonwealth planning approval processes would be required for the project; and
- Stage 2A, while still subject to these Commonwealth approvals, is less complex than Stage 2b, and even if Stage 2b did not proceed, stands on its own merits representing an important expansion of the light rail network.²¹

¹⁹ Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, p 1.

²⁰ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 15.

²¹ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 15.

4.5. The Business Case breakdown of costs and benefits are shown in table 1:

Table 1: Light Rail Stage 2A costs and benefits²²

Item	Stage 2A (\$million)	Stage 2A and 2b combined (\$million)
Light Rail Stage 2A costs (present value 2019, discounted 7%)		
Capital cost	162	960
Operation and maintenance costs	82	190
Development costs	23	23
Total project cost	268	1,173
Light Rail Stage 2A benefits (present value 2019, discounted 7%)		
Transport benefits	55	349
City shaping benefits	47	402
Wider economic benefits (WEBs)	48	466
Total project benefit	150	1,217
Benefit Cost Ratio (BCR)		
Benefit Cost Ratio (excluding WEBs)	0.4	0.6
Benefit Cost Ratio (including WEBs)	0.6	1.0

4.6. In evidence provided to the Committee, the Auditor-General stated that:

A fundamental part of economic analysis and major projects of this sort, and the capital framework, is not only to provide information to decision-makers but also to provide information to the community on the way their money is being spent on major capital projects.²³

4.7. The Auditor-General highlighted the areas of concern identified by the audit in relation cost estimates being underestimated, including the:

- potential foreseen costs for wire-free technology for stage 2A not being included in the analysis,²⁴ this was a mandatory recommendation of the 2018 report by the Joint Standing Committee on the National Capital and External Territories;^{25,26} and

²² ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 17, sourced from *City to Woden Light Rail: Stage 2A City to Commonwealth Park Business Case*, p 21.

²³ Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, p 5.

²⁴ Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, pp 1–2.

²⁵ Joint Standing Committee on National and Capital External Territories, *Commonwealth approvals for ACT light rail: Commonwealth and Parliamentary approvals for the proposed Stage 2 of the Australian Capital Territory light rail project*, October 2018.

²⁶ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 28.

- present value of \$162 million—part of this figure includes the Acton Waterfront development which had a present value of \$23 million and there was inadequate information on what methodology and assumptions underpinned this estimate. Since the business case, it has become clear that the cost of the Acton waterfront development is approaching \$50 million and will potentially cost between \$80 and \$100 million.²⁷
- 4.8. Conversely in relation to the estimate of benefits, the Auditor-General stated that these were overestimated and rely heavily on the ‘accelerated development of the Acton Waterfront’. However evidence on how Light Rail Stage 2A would achieve this was inadequate in both the business case and economic analysis.²⁸ He also noted the high ratio of benefit to cost for the project, with present value of \$150 million for benefits against \$268 million for costs.²⁹
- 4.9. The lack of adequate documentation supporting the economic analysis was highlighted by Mr Brett Stanton, Assistant Auditor-General, Performance Audits, ACT Audit Office who stated that:
- we drew a comparison with the earlier audit that we did in relation to light rail stage 1. For the purposes of that audit, we were provided with an Excel workbook, which was quite detailed and had multiple worksheets attached to it. It had a front-facing summary sheet that showed the benefits, the costs and the like. This was supported by multiple worksheets after that. We did have questions in relation to some of the detail of the methodology in that first audit, and the assumptions underpinning the calculations, but those worksheets were certainly there, and they went out many years in advance, according to the availability partnership that was in play at the time. That was not here; that was not available. We asked for that. That was not available for light rail stage 2A.³⁰
- 4.10. In his submission, Dr Leo Dobes, Honorary Associate Professor, Crawford School of Public Policy, Australian National University stated also noted the difficulties in assessing the business case due to the ‘redacted and opaque presentation of information’.³¹

²⁷ Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, pp 1–2.

²⁸ Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, p 2.

²⁹ Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, p 2.

³⁰ Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, p 2.

³¹ Dr Leo Dobes, Honorary Associate Professor, Crawford School of Public Policy, Australian National University, *Submission 2*, p 1.

- 4.11. The Government stated in its response to the audit report that the Light Rail Stage 2A economic analysis was prepared as a point-in-time undertaking,³² and 'was developed to inform an investment decision, it is not intended to be a living document that is constantly updated'.³³ The Government response also stated that they would not be re-doing the business case, they are now moving forward with the procurement and delivery of the project.³⁴
- 4.12. The Government highlighted its commitment to transparency by releasing the business case for Stage 2A and stated that redactions were made in the publicly release documents 'to protect the commercial interests of taxpayers as procurement activities had not yet commenced'.³⁵
- 4.13. The ACT Government advised it will provide updated information on the project's costs as procurement and contract decision are concluded through established reporting, procurement and public disclosure channels.³⁶
- 4.14. The Auditor-General stated in evidence that:

If this information, which is readily available, is not made available to the public, you are not being transparent with the public in relation to information on major capital projects which are ongoing capital projects. Stage 2A is a very minor part of the overall cost that will be spent on light rail, however far it goes. In terms of what has already been built, it is a much smaller part than the first stage. Nevertheless it is building upon a larger network, which will be a significant amount of money. If the public cannot have faith in and do not have access to reasonable information in relation to this stage, it brings into question the veracity of information that is put out into the public domain for future stages.³⁷

- 4.15. During the Committee hearing, the Auditor-General also noted in relation to the economic analysis that:

...the complexities of the interactions between Acton waterfront, light rail, the variations to the road network and a variety of other things go all the way back, probably, to the city to the lake exercise. [...]

For transparency purposes and for clarity purposes, it is about having a piece of economic analysis that actually incorporated all of those components in one place, so that you could see precisely where the interactions were and what each of the costs and benefits actually was. Now that we have relative clarity on the components of those projects, I think it would be a timely exercise to undertake.³⁸

³² *Government response to the ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, tabled 2 December 2021, [pp 3–4].

³³ ACT Government, *Submission 1*, p 4.

³⁴ *Government response to the ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, tabled 2 December 2021, [pp 3–4].

³⁵ ACT Government, *Submission 1*, p 4.

³⁶ ACT Government, *Submission 1*, p 4.

³⁷ Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, p 5.

³⁸ Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, p 8

Committee Comment

- 4.16. The Committee is of the view that the business plan released in 2019 on the costs and benefits of the Light Rail Stage 2A lacked clarity.

Recommendation 3

The Committee recommends that the ACT Government provide an explanation of the methodology, and explicit definitions of costs and benefits included in the light rail stage 2A economic analysis and make all non-commercially sensitive information publicly available.

- 4.17. The Committee questioned witnesses about the purpose of the economic analysis of a single stage of a project that is part of a wider infrastructure network.
- 4.18. Dr John Hawkins, Senior Lecturer in economics and behavioural science, University of Canberra told the Committee that the main benefit from stage 2A is that it is the first part of stage 2, so even if Stage 2A does not have a positive Benefit Cost Ratio (BCR), if the whole of stage 2 has a positive BCR then you would proceed with Stage 2A.³⁹
- 4.19. In evidence provided to the Committee, Mr Duncan Edghill, Chief Projects Officer, Major Projects Canberra (MPC) reinforced this point, stating that stage 2A 'is a modest extension to stage 1 but a necessary precursor to the delivery of stage 2b'.⁴⁰ He also noted that:

Without wanting to underplay the importance of it—obviously, it is self-evident—the economic analysis performs a fairly limited function in terms of the overall decision making framework for a project like this. It paints a picture—perhaps an imperfect picture—of what the project will potentially do from an economic perspective.⁴¹

- 4.20. The Auditor-General observed in evidence to the Committee that an economic analysis is a tool used by decision-makers to assess the overall economic benefit of a project, and adhering to a strict economic basis, projects would only proceed if they had a positive BCR. However, projects with lower BCRs are undertaken for a variety of policy and community reasons, and it is government's job to make an assessment about where that line lies.

For that reason—not alone, but largely for that reason—I would argue that the concept of wider economic benefit has been introduced into economic analysis to take account of slightly more esoteric, perhaps, benefits to the community which are the responsibility of government and not strict commercial objectives.⁴²

³⁹ Dr John Hawkins, Senior Lecturer in economics and behavioural science, University of Canberra, *Committee Hansard*, 12 May 2022, p 18.

⁴⁰ Mr Duncan Edghill, Chief Projects Officer, MPC, *Committee Hansard*, 12 May 2022, p 23.

⁴¹ Mr Duncan Edghill, Chief Projects Officer, MPC, *Committee Hansard*, 12 May 2022, p 23.

⁴² Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, p 8.

- 4.21. The committee is of the view that future stages of the light project would benefit from a wider economic analysis to include both the single stage under consideration and an update to the costs and benefits to the ACT of building the whole network.

Recommendation 4

The Committee recommends that the ACT Government ensures that an economic analysis of a city-wide network be provided alongside any single stage analysis for the light rail project.

- 4.22. In evidence to the Committee, the Auditor-General noted that if subject matter experts are engaged to provide professional and technical advice, they are selected on the basis that they have the right expertise to provide that advice. It is incumbent of the Government to question the material provided, including the underlying assumptions, to ensure that the information is ‘supported by defensible and reasonable professional information’.⁴³ He also told the Committee that:

We did not find any particular strenuous questioning of the methodology behind the generation of that front [summary] page. I would have expected a government agency to have embarked upon some form of questioning of their consultants and at least have had available to them the data behind, which generated the front page.⁴⁴

- 4.23. Dr Leo Dobes also supported the view that the Government needs in-house experts, stating that ‘if you do not have experts in the government itself, you will go for a fall. You really need to have someone to double-check things’.⁴⁵
- 4.24. Mr Edghill disagreed with the premise that the Government did not have any involvement with the work done by consultants Ernst & Young (EY), stating the company undertook the economic analysis consistent with nationally accepted principles, were familiar with the project having been involved with Stage 1, and received multiple inputs from MPC staff as part of the process. The consultants were tasked with providing an economic analysis report for Stage 2A and that is what they delivered to the Government.⁴⁶

Committee Comment (heading)

- 4.25. The Committee is of the view that the Government needs to ensure there is sufficient in-house expertise to develop business cases for large scale infrastructure projects in the ACT.

⁴³ Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, pp 4–5.

⁴⁴ Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, p 4.

⁴⁵ Dr Leo Dobes, Honorary Associate Professor, Crawford School of Public Policy, Australian National University, *Committee Hansard*, 12 May 2022, p 14.

⁴⁶ Mr Duncan Edghill, Chief Projects Officer, MPC, *Committee Hansard*, 12 May 2022, p 22.

Recommendation 5

The Committee recommends that the ACT Government reduce its reliance on external consultants by developing more specialist in-house capacity.

Discount rate

4.26. The Committee noted that the discount rate used in the Stage 2A business case is seven percent. The audit report noted that this is in line with guidance from Infrastructure Australia, and is consistent with practice in Australia for over two decades.⁴⁷

4.27. The audit report stated that ‘the discount rate recognises the well-established preference for present consumption as opposed to future consumption. As such, costs and benefits are discounted to attach less weight to them the later the year in which they accrue’.⁴⁸ Paragraph 2.12 of the audit report also stated that:

Douglas Economics advised that the discount rate was ‘high by international standards’. All things being equal the higher the discount rate, the lower the Benefit Cost Ratio.⁴⁹

4.28. In a submission to the inquiry, Dr Hawkins observed that:

- an excessively high discount rate means costs are concentrated in the early years and therefore the benefits of long-term projects are understated; and
- a lower discount rate would mean that benefits accruing after 30 years would be more important in the calculations.⁵⁰

4.29. Dr Hawkins also observed in his submission that governments need to take a longer view on discount rates to take into consideration the interests of future generations,⁵¹ stage 2A may have a $BCR < 1$, however it is an essential component to realise the benefits of the completed stage 2 light rail to Woden ($BCR > 1$).⁵²

4.30. In evidence provided during the public hearing, Dr Hawkins reinforced this view to the committee that:

...this report understates the benefits likely from the tram, because I think it uses a discount rate that is too high – the seven per cent discount rate. That might be an appropriate rate to use for a company with a limited life or a CEO who will only be in the job for five years, but I think government should be looking not just at this generation but at future generations, and a lower discount rate is

⁴⁷ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 25.

⁴⁸ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 24.

⁴⁹ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 25.

⁵⁰ Dr John Hawkins, Senior Lecturer in economics and behavioural science, University of Canberra, *Submission 3*, p 1.

⁵¹ Dr John Hawkins, Senior Lecturer in economics and behavioural science, University of Canberra, *Submission 3*, p 1.

⁵² Dr John Hawkins, Senior Lecturer in economics and behavioural science, University of Canberra, *Submission 3*, p 2.

appropriate. The discounted future value of the benefits would be greater than the calculations presented.⁵³

- 4.31. Dr Hawkins recommended a lower rate discount rate somewhere between 1 to 3 percent, that should be determined by applying a sensitivity analysis.⁵⁴
- 4.32. The Committee is of the view that light rail is a project with expected benefits likely to extend many decades into the future, therefore consideration be given to the appropriate discount rate that should be applied to this project in future stages.

Recommendation 6

The Committee recommends that the ACT Government undertake a review into whether the Infrastructure Australia discount rate guidance is appropriate for evaluating future stages of Light Rail.

- 4.33. In his submission, Dr Leo Dobes stated that:

The purpose of sensitivity analysis is to determine whether Net Present Value (NPV) changes significantly when relatively small changes are made to individual variables used to calculate the NPV. If NPV is significantly changed by a relatively small change (e.g. 5 per cent) in a particular variable, it is considered to be sensitive to the estimated value of that variable. This provides a signal to the analyst to check the robustness of the estimates being used for that specific variable. An NPV value may be sensitive to more than one variable, so sensitivity analysis should be applied reasonably broadly. In the context of Stage 2A, for example, it is likely that NPV will be particularly sensitive to estimates of passenger numbers, the cost of raising London Circuit, and the cost of congestion to cars and trucks.⁵⁵

- 4.34. The audit report noted that a:

sensitivity analysis was also applied to the economic appraisal results in the Economic Appraisal Report 'to test their robustness to key assumptions and inputs'. Sensitivities that were applied to each scenario included:

- a change in the discount rate to 4 percent and 10 percent (from 7 percent);
- a change to the project costs (+/- 20 percent); and
- a change to the project benefits (+/- 20 percent).⁵⁶

⁵³ Dr John Hawkins, *Committee Hansard*, 12 May 2022, p 17.

⁵⁴ Dr John Hawkins, *Committee Hansard*, 12 May 2022, p 18.

⁵⁵ Dr Leo Dobes, Honorary Associate Professor, Crawford School of Public Policy, Australian National University, *Submission 2*, pp 11–12.

⁵⁶ ACT Audit Office, *ACT Auditor-General's Report No. 8 of 2021: Canberra Light Rail Stage 2A: Economic Analysis*, p 54.

- 4.35. Dr Dobes also noted 'sensitivity analysis can be useful in identifying potential optimism bias',⁵⁷ however using a change to the total project costs and benefits of 20 percent simply increases the BCR by the same proportion and therefore provides no useful information when applying this as part of a sensitivity analysis for the project.⁵⁸
- 4.36. The Committee is of the view that the Government applies a sensitivity analysis to all infrastructure project with benefits that are expected to extend decades into the future.

Recommendation 7

The Committee recommends that the ACT Government apply sensitivity analyses for a range of discount rates presented in business cases for future large, long term projects of a similar nature of Light Rail Stage 2A.

Benefits realisation plan

- 4.37. During the hearings the Auditor-General observed that the business case included a commitment to developing a benefits realisation plan for Light Rail Stage 2A, this commitment is still be completed.⁵⁹
- 4.38. Mr Damon Hall, Executive Group Manager, Project Development and Support Group, MPC highlighted that the Australian Transport and Assessment Guidelines (ATAG) references benefits management as opposed to benefits realisation planning, however these are different things:
- benefits management requires the identification and analysis of benefits, this is done within the business case; and
 - benefits realisation planning is not required under the capital framework, nor under ATAG. The ACT government developed a benefits realisation plan for stage 1 and will also do one for stage 2:

In terms of realising those benefits, those benefits come across a 30-year period and most of them kick in post construction. We are talking about things like travel time savings for passengers on light rail vis-a-vis buses, and indeed other land use and planning changes in shaping benefits which do come predominantly post construction. The realisation of those benefits will be some time down the track, so the benefits realisation plan itself is appropriately developed through the delivery period and agreed at that time.⁶⁰

⁵⁷ Dr Leo Dobes, Honorary Associate Professor, Crawford School of Public Policy, Australian National University, *Submission 2*, p 9.

⁵⁸ Dr Leo Dobes, Honorary Associate Professor, Crawford School of Public Policy, Australian National University, *Submission 2*, p 12.

⁵⁹ Mr Michael Harris, Auditor-General, *Committee Hansard*, 12 May 2022, p 2.

⁶⁰ Mr Damon Hall, Executive Group Manager, project Development and Support Group, MPC, *Committee Hansard*, 12 May 2022, p 24.

- 4.39. In evidence to the Committee, Mr Edghill also observed that the ACT Government had committed to undertaking a benefits realisation plan but also stated that while the project is still being procured it is too early to undertake this.⁶¹ He also noted that, most of those benefits are not deliverable under a contract but actually flow from the project having been implemented as a whole'.⁶²
- 4.40. The committee is of the view that a benefits realisation plan is an important component of this project and is vital for informing the community on the how the construction of the light rail network benefits the ACT in areas where it operates.

Recommendation 8

The Committee recommends that the ACT Government publish a benefits realisation plan for Light Rail stage 2A as soon as possible.

⁶¹ Mr Duncan Edghill, Chief Projects Officer, MPC, *Committee Hansard*, 12 May 2022, pp 23–24.

⁶² Mr Duncan Edghill, Chief Projects Officer, MPC, *Committee Hansard*, 12 May 2022, p 24.

5. Conclusion

- 5.1. The Committee is of the view that the Auditor-General's audit report into *Canberra Light Rail Stage 2A: Economic Analysis* was important in identifying gaps in the Business Case for the project. The Committee particularly notes the Business Case released to the community was incomplete as it contained redactions making a comprehensive assessment of stage 2A difficult. The recommendations made in this report are aimed at providing the community with more information to be able to more accurately assess the business case for Light Rail Stage 2A.
- 5.2. The Committee endorses all three of the Auditor-General's recommendations.
- 5.3. The Committee has made eight recommendations in relation to its inquiry into the Auditor-General's Report No. 8 of 2021.

Mrs Elizabeth Kikkert MLA
Chair, Standing Committee on Public Accounts
March 2023

Appendix A: Submissions

No.	Submission by	Received	Published
1	ACT Government	20/04/2022	27/04/2022
2	Dr Leo Dobes	22/04/2022	27/04/2022
3	Dr John Hawkins	23/04/2022	27/04/2022

Appendix B: Witnesses

12 May 2022

Dr Leo Dobes, Honorary Associate Professor, Crawford School of Public Policy, Australian National University

Dr John Hawkins, Senior Lecturer, University of Canberra

ACT Audit Office

- **Mr Michael Harris**, Auditor-General
- **Mr Brett Stanton**, Assistant Auditor-General, Performance Audits
- **Ms Laura Thomas**, Senior Director, Performance Audits

Chief Minister, Treasury and Economic Development Directorate

- **Mr Hamish Stephens**, A/g Executive Branch Manager, Infrastructure Finance and Reform

City Renewal Authority

- **Mr Malcolm Snow**, Chief Executive Officer

Major Projects Canberra

- **Mr Duncan Edghill**, Chief Projects Officer
- **Mr Damon Hall**, Executive Group Manager, Project Development and Support Group
- **Mr David Doctor**, Executive Branch Manager Technical Development, Light Rail Stage 2 to Woden
- **Mr Jeff Hart**, Senior Director, Project Development, Project Development and Support

Appendix C: Question taken on notice

Question taken on notice

No.	Date	Asked of	Subject	Response received
1	12/05/22	Mr Edghill	Ernst & Young contract	24/05/22