



**LEGISLATIVE ASSEMBLY FOR THE AUSTRALIAN CAPITAL  
TERRITORY**

**STANDING COMMITTEE ON PUBLIC ACCOUNTS**

(Reference: [Inquiry into Auditor-General's Report: 8/2021 – Canberra Light  
Rail Stage 2A: Economic Analysis](#))

**Members:**

**MRS E KIKKERT (Chair)  
MR M PETERSSON (Deputy Chair)  
MR A BRADDOCK**

**TRANSCRIPT OF EVIDENCE**

**CANBERRA**

**THURSDAY, 12 MAY 2022**

**Secretary to the committee:  
Mr S Thompson (Ph: 620 50435)**

**By authority of the Legislative Assembly for the Australian Capital Territory**

Submissions, answers to questions on notice and other documents, including requests for clarification of the transcript of evidence, relevant to this inquiry that have been authorised for publication by the committee may be obtained from the Legislative Assembly website.

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## **Privilege statement**

The Assembly has authorised the recording, broadcasting and re-broadcasting of these proceedings.

All witnesses making submissions or giving evidence to committees of the Legislative Assembly for the ACT are protected by parliamentary privilege.

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*Amended 20 May 2013*

**The committee met at 10.15 am.**

**HARRIS, MR MICHAEL**, Auditor-General, ACT Audit Office

**STANTON, MR BRETT**, Assistant Auditor-General, Performance Audits, ACT Audit Office

**THOMAS, MS LAURA**, Senior Director, Performance Audits, ACT Audit Office

**THE CHAIR:** Welcome to the public hearing of the Standing Committee on Public Accounts inquiry into Auditor-General's report No 8 of 2021—*Canberra light rail stage 2A: economic analysis*. Today the committee will be hearing evidence from the ACT Audit Office, Dr Leo Dobes, Dr John Hawkins, Transport Canberra and City Services, Treasury and the City Renewal Authority.

On behalf of the committee I would like to acknowledge that we meet today on the land of the Ngunnawal people. We respect their continuing culture and the contribution they make to the life of this city and this region.

Please be aware that the proceedings today are being recorded and transcribed by Hansard, and will be published. The proceedings are also being broadcast and webstreamed live. When taking a question on notice, it would be useful if witnesses used these words, "I will take that as a question taken on notice." This will help the committee and witnesses to confirm questions taken on notice from the transcript.

In this session we will hear from the ACT Audit Office. I would like to remind witnesses of the protections and obligations afforded by parliamentary privilege, and draw your attention to the privilege statement. Could you confirm that you understand the privilege implications of the statement?

**Mr Harris:** I have read the privilege statement and I understand it.

**Mr Stanton:** I have read the statement and I understand it.

**Ms Thomas:** I have read and understand the privilege statement.

**THE CHAIR:** Thank you. Would you like to make a brief opening statement?

**Mr Harris:** Thank you, Chair. I reiterate 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.

In that regard we made conclusions in three areas that I would like to touch on briefly. The first area is in cost estimates for the project, where we have been critical of those cost estimates to the extent that, in our view, they were understated. In a number of areas in particular, there were costs that were not included which, in our view, could have been reasonably foreseen—in particular, in relation to wire-free technology. Our criticism in particular relates to the lack of options provided, more precisely. In our view, in a cost estimate or an economic analysis, the known options should be assessed, and information provided to decision-makers. In this case, it appears that

that was not the case.

We also believe that the present value figure of \$162 million was understated, for a variety of other reasons. One of those, in particular, relates to the numbers included in relation to what is described as the accelerated development of the Acton waterfront. The business case identified a present value figure of \$23 million associated with that development. No nominal figure was included in the business case, and there was inadequate information provided in the business case in relation to development costs, the methodology for quantification and the assumptions underpinning the estimate. To that point we now know that the cost of development of the Acton waterfront, as a minimum, would be approaching \$50 million and, in all likelihood, will probably be somewhere between \$80 million and \$100 million.

As far as those costs are concerned, in our view, as we said in our conclusion and as we said in our recommendations, the expected costs associated with light rail stage 2A, including costs associated with Acton waterfront, should be updated and revised in publicly available documents.

The second area where we had concerns relates to the estimate of benefits in the economic analysis. This is the obverse of the cost estimates; whereas they were underestimated, in our view, the benefit estimates are probably overestimated. There is a present value figure of \$150 million included in the economic analysis as far as benefits associated with the light rail stage 2A are concerned, compared with a present value figure of \$268 million of estimated costs for the project. That is an extremely high ratio of benefit to cost.

Again, a significant amount of those benefits is predicated on the project being a catalyst for the acceleration of development on the Acton waterfront. Neither the stage 2A business case nor the economic appraisal provides information or evidence on how light rail stage 2 is expected to accelerate development at that site. In the event that that development does not occur as fast as is hoped, the timing and the quantification of those expected benefits are severely at risk. There are a number of recent developments which might make that statement something of a forewarning.

There are a number of other projects described as transformational projects associated with light rail stage 2, such as the raising of London Circuit, work that the National Capital Authority has signalled in relation to Commonwealth Avenue, and a number of other areas of project development that involve approvals from the NCA, apart from anything else. These are all assumptions built into the cost and benefit estimates, particularly the benefit estimates, and any failure to implement those projects on a timely basis will have a commensurate negative impact on the expected benefits.

The third area where we are critical relates to benefits management. In this particular case, the stage 2A business case identified a commitment to the development of a benefits realisation plan for light rail stage 2A, which is part of the capital framework and a normal part of the analysis of major capital projects. In this case this has not occurred. It had not occurred at the time of the report and, to the best of my knowledge, it still has not occurred.

Benefits management activities should be undertaken at the earliest possible stage in

these projects; otherwise they do not get quantified, they do not get assessed, they do not get delivered and they do not get reported upon, which makes a mockery of the policy for including them in economic analyses for decision-makers in the first place. Perhaps I will leave it there and open it up for questions.

**THE CHAIR:** Thank you, Mr Harris. Mr Harris, during the conduct of your report, how transparent was the government with you in providing documents?

**Mr Harris:** We did not have any particular difficulty accessing documents that I am aware of. Mr Stanton might have a little more detail in relation to that. I am not aware of an instance where a document that we wanted access to was not provided to us.

**Mr Stanton:** Yes, that is right. We followed the normal audit process. We sought documentation. There might have been some delays here and there; there might have been some misunderstandings as to what we were after and what they were providing. But we certainly followed through and asked for relevant documentation. What we received, we used for the purpose of the audit and the analysis we did.

**Mr Harris:** There were a number of instances where cabinet and cabinet-related documents were requested. There is a process attached, naturally, to gaining access to those documents. But we did not have a difficulty once we had gone through the process.

**THE CHAIR:** In your report you mentioned that there was a lack of spreadsheets and process documents for the economic analysis. Where do you believe the failure for the MPC occurred that resulted in them not having these documents?

**Mr Stanton:** It is difficult to say. In making that comment, 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—

**Mr Harris:** Summary sheet.

**Mr Stanton:** 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. It is difficult to answer the question as to where that failure might lie.

**THE CHAIR:** Did they give a reason as to why they do not have it? Also, do you think this is a significant issue—that lack of documents?

**Mr Stanton:** The issue is that it makes it difficult for us, as an auditor, but it also makes it difficult for the agency, should it wish to do so, to question and go back to that analysis, tweak that analysis and update it with revisions and amendments, as the case might be. It makes it difficult to do that without having to go back to the

consultant that provided it in the first instance.

That information should reside with and should be in the hands of the ACT government, and the ACT government agency, as a matter of principle, good practice and good government. That would help an auditor to come along and see what the methodology and the assumptions were that were underpinning that. Broadly speaking, there was a summary sheet and a front-facing document. There was an economic appraisal report. We took those, but we were looking for more.

**THE CHAIR:** Did they give you a reason as to why they did not have more?

**Mr Stanton:** I cannot recall off the top of my head.

**Ms Thomas:** They had a subject matter expert complete those documents, and they were confident that the work that they had done in that space covered off what they were looking for. But there was no assurance process in place for checking what was produced.

**THE CHAIR:** Did they give you a name for who this subject matter expert was?

**Ms Thomas:** Yes.

**Mr Harris:** KPMG.

**Mr Stanton:** No, it was EY.

**Mr Harris:** Sorry, EY.

**MR PETTERSSON:** Following up on that, when government engages consultants to provide them with expertise, should the government also have to pay to check the expertise that they have paid consultants to provide to them?

**Mr Harris:** It is not the checking that we consider to be inappropriate; it is the fact that there was a summary sheet, like that page. That is backed up, presumably, in Ernst & Young's modelling, by multiple pages behind which generate the numbers that come onto the front page. We did not find any particular strenuous questioning of the methodology behind the generation of that front 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.

Of course, if you pay, as we do, subject matter experts to provide you with professional advice, and technical advice in particular, you do so on the basis that you have selected somebody who has the right expertise to provide that advice. You, by definition, trust that advice. That does not mean you do not question the material that they provide to you, and it does not mean you do not test the assumptions that underlie the summary page that they have given you, which is what we would do.

We found no evidence that the agency had available to them the myriad of assumptions and documentation that sit behind the summary page that generated an

answer of 12. We are not saying they have to pay somebody else to validate the information that Ernst & Young gave them; we are saying that it is incumbent upon them to do their own questioning of their own consultant to make sure that, in their minds, the number 12 is supported by defensible and reasonably professional information.

**MR PETTERSSON:** Could you speculate on the reasons that they did not? Is it a lack of internal expertise? Is it a lack of capacity to go through and check that work—oversight?

**Mr Stanton:** I do not know.

**Mr Harris:** Unlikely. To be clear, I have no doubt they had, within the organisation, sufficient expertise to question the documentation.

**MR BRADDOCK:** Going to recommendation 1(b), the government, in its response, said “not agreed”. To summarise their argument, they said that it was a point-in-time analysis to support the decision at that time, and there was no point in relitigating the question. Do you have a perspective on the government’s argument there?

**Mr Harris:** Yes, I do. It should have been made available at the time to decision-makers so that the decision-makers were adequately informed. That is the first point. All economic analysis of this type is conducted at a point in time. Assumptions change; circumstances change. Light rail is an ongoing project with more stages envisaged.

We were critical in our first report of the economic analysis and the way in which it was developed. We are similarly critical of this economic analysis and the way it has been developed and used. 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.

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.

In my view, with respect to this information, it is readily available; it could be updated like that, or even quicker than that, if the agency actually had ownership of what they had paid for in terms of the proprietary spreadsheet that they have.

**MR PARTON:** Mr Harris, in the report, and certainly even more so in your opening statement today, you seem to assert that the underestimation of cost and the overestimation of benefits was wilful—that it was not accidental; it was not by

negligence. Are you in a position, as Auditor-General, to suggest that the government wilfully underestimated the cost of stage 2A and overestimated the benefits, or do you not see yourself in that role as making that assertion?

**Mr Harris:** I am not making that assertion; that is the first point. I think that insufficient attention was paid to the economic analysis in this particular case by those who undertook the economic analysis. In my opinion, it would appear to me that this was considered to be a small piece of a much larger puzzle. Certainly, in some of the responses that we got from the agency, when we questioned why benefits management, for example, was not undertaken in the way it should be, the answer was, “It’s not particularly necessary for this particular project because of the small scale of it.” I am not asserting that there was a wilful attempt to hide information. I am suggesting that there was a lack of attention paid to the analysis itself.

**MR PARTON:** I accept that as a response. Mr Harris, with that lack of attention, do you consider it a coincidence that it resulted in an underestimation of costs but that that lack of attention resulted in the exact opposite in regard to the overestimation of benefits? I think that people watching at home—and when I say watching at home, I do not necessarily mean watching this video; I mean those who follow this process, those that have read the report and those that have seen responses—would be questioning exactly what is going on here, and I think they have a right to be questioning it.

**Mr Harris:** In my view, it was a lack of professionalism on the part of the people who put together the economic analysis.

**THE CHAIR:** The National Capital Authority has long called for wireless light rail towards Commonwealth, from the city to Commonwealth.

**Mr Harris:** Yes.

**THE CHAIR:** Obviously, the light rail from Gungahlin to city has to be retrofitted so that it becomes wireless; correct? Was that taken into—

**Mr Harris:** That may be correct, if you want to run trams seamlessly from Gungahlin to Commonwealth Bridge and beyond.

**THE CHAIR:** It could just stay as it is but stop in Civic, then you would jump onto another tram line, completely separate?

**Mr Harris:** Yes, which would require two different types of trams and would require an interchange process, which is a completely inefficient way of running a public transport network of that type. You would want all of your trams to be able to run the full distance for efficiency purposes. The assumption is that all trams would have to be capable of running both Gungahlin to Civic and Gungahlin to Commonwealth Avenue and beyond. That would mean all existing trams would have to be retrofitted.

**THE CHAIR:** Why would it be inefficient?

**Mr Harris:** From a network operating point of view, it would be inefficient because

you would only be able to run some of your trams from Gungahlin to Civic and back. If you look at the longer network, from Gungahlin to Woden, efficiency of network demands that you would be able to run your trams the full length of the network. From a patronage perspective, public transport patronage is severely impacted if people have to interchange. It reduces the efficiency of the network. If you wanted to travel past Civic, you would have to get off, if the trams were not capable of running further, and get onto another tram. That adds time to your journey and makes public transport less efficient, as far as commuters are concerned.

**THE CHAIR:** Was that taken into consideration when you looked into this report?

**Mr Harris:** We did not look at those aspects. We did not look at network planning or efficiency considerations; we looked only at the cost-benefit analysis, or the economic analysis. We are saying that the inclusion of retrofitting is something that could have been foreseen and should have foreseen. It was known. My simple point is that a properly constructed piece of economic analysis would have provided decision-makers with information on both options and not ignored one of those options.

**THE CHAIR:** None of the documents that you saw had any of the alternatives—

**Mr Stanton:** What was in the documentation was an acknowledgement that the cost of retrofitting the existing trams would be X amount of dollars. In our report we talk about 17 per cent of the capital cost. That might be a figure of \$23 million. That was acknowledged in the documentation but that figure was not put into that cost-benefit analysis.

**THE CHAIR:** I remember now; thank you.

**MR PARTON:** Mrs Kikkert raised the wire-free technology. Mr Stanton, you brought up the exclusion of the cost of wire-free technology in the business case. Additionally, of course, we saw the exclusion of disruption costs and the exclusion of the raising of London Circuit. When you consider all of those three exclusions, does that present a major issue to the business case as a whole and the bottom lines that are portrayed?

**Mr Stanton:** You have to be careful about what the parameter of the business case is; that is where it is incumbent on the agency, and the organisation, to be very clear about what the parameters of the business case are, what is in and what is out, and be very clear about that.

In terms of the disruption costs, we certainly felt that it was appropriate to talk about the exclusion of the retrofitting of the light rail vehicles. In our view that was something that could very well be, and should very well have been, included in that cost-benefit analysis. With respect to the disruption costs and the raising of London Circuit, we acknowledged and put that into the report, but we certainly did not make the same and similar comment as we did in relation to retrofitting the vehicles.

**MR PARTON:** Additionally, would you consider the inclusion of a blend of BCRs, the wider economic benefits, the economic benefits from the development of the

Acton waterfront, to be major issues, with the business case, obviously, on a completely different front on the benefits case?

**Mr Harris:** If there is an issue of obfuscation here, it is that there is not one piece of economic analysis that encompasses all of those projects. There is a case to be made that there ought to be one piece of economic analysis that covers all of those projects, because in one way or another each of those components is being included in an economic analysis of some sort, in some places.

A concern that I would have is whether or not components are being counted in multiple places or, indeed, different parameters are being used for components in different pieces of economic analysis. I am not saying that it does not exist, but I have not seen—nor have I asked for, I have to say—a piece of economic analysis that covers all of the development that is occurring in this part of town.

I would follow that up by saying 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. I do not intend to revisit that, but it has been the subject of a number of reports of various sorts and continues to be so.

From my point of view, 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.

**MR PETTERSSON:** What is the value of economic analysis of a single part of a wider piece of public transport infrastructure?

**Mr Harris:** It is a tool available to provide decision-makers with at least some form of estimate of the overall economic benefit of a project. If you were adhering to a strict, economic-only appraisal, you would only ever undertake a project that had a positive ratio. That is what the economic theory tells you.

Many projects that, on a strict economic basis, have less than zero are undertaken for a variety of policy and community reasons, most of which have validity. 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.

This sort of economic analysis is a very important tool for making such assessments. The other benefit of this sort of economic analysis is that it translates all figures into present-day figures, so that you know when you are looking at numbers, you are looking at like for like, and a dollar is a dollar is a dollar, as opposed to the economic impact of a dollar on a dollar now, as opposed to a dollar in 50 years time or 40 years time, which is where the discount rate comes in.

**THE CHAIR:** Ms Thomas, what was the name of the subject matter expert that you mentioned earlier?

**Ms Thomas:** EY, Ernst & Young.

**THE CHAIR:** Thank you. On behalf of the committee, I thank the ACT Audit Office for their attendance today. If witnesses have taken any questions on notice, could you please provide answers to the committee secretary within five working days? We will have a brief suspension.

**Short suspension.**

**DOBES, DR LEO**, Honorary Associate Professor, Crawford School of Public Policy,  
Australian National University

**THE CHAIR:** In this session we will hear from Dr Leo Dobes. I would like to remind witnesses of the protections and obligations afforded by parliamentary privilege and draw your attention to the privilege statement. Could you confirm for the record that you understand the privilege implications of the statement?

**Dr Dobes:** I have read the privilege statement; thank you.

**THE CHAIR:** Would you like to make a brief statement?

**Dr Dobes:** Yes, if I may. Perhaps I could start with potential conflicts of interest, in case they are such. I have explained that I am at the Australian National University. I am also a member of the Griffith Narrabundah Community Association. Following on from the discussion that has just occurred, I did work for Ernst & Young on secondment for one year, but that was a very long time ago.

In terms of the statement, I do not propose to go through, point by point, what I have already written to the committee, but I would like to raise a separate issue, or at least a related issue—that is, the consideration of alternative options. The major option which I think has not been considered—and I am not a proponent; I am neither for nor against it, without a proper business case—is an O-Bahn, which is an omnibus “bahn”, using the German term for it, which is a bus which travels along a concrete slab which has sides, so that you do not need to steer the bus; it is guided by itself. It is very much like a tram. It goes smoothly, without steering, but it has the advantage of being able to come off that concrete ramp at any time and become a regular bus running along a normal route. That, Mrs Kikkert, addresses your issue of people having to change from one transport mode to another transport mode.

If, for example, the government were to revise its opinion and move to an O-Bahn system, there would be no need to raise London Circuit; you could run these buses from Woden, Tuggeranong or wherever, all the way to Gungahlin, and they could also divert off so that people would not lose their existing bus routes. The cost is obviously much less than for light rail.

Let me give one example of the advantage of this. This is where you get into economic options analysis. In Essen, as I understand it—I have not actually been there to see it—there is a tunnel which needs to be used both by light rail and by the O-Bahn, the buses. They both use the same track, because there is only one tunnel which gives access to that part of the city.

This gives you an option. You can either use one form or the other, or both. This is very important in economics, because options are valuable, and that adds to the benefits of the cost-benefit analysis. I will not get into the technical side of that, because it is not worth doing so here, but I wanted to make that point.

From the government’s perspective, there are a couple of other advantages, as I understand it. One is that these buses can be driven using electric power, which is said

to be a great advantage of the tram at the moment. It gives a smooth ride, because it is on concrete, which again is touted as being the major advantage of a tram, and it would encourage increased density of housing around that route because it is a permanent concrete way; it is not just a bus service which can be redirected or rerouted.

Taking all of those things together, including the much lower cost of this particular system, to me, that is the Achilles heel of the business case, the economic analysis and so on. That is all I wanted to say, by way of an introduction. It is really just a broader view than the detailed material I have provided.

**THE CHAIR:** Thank you for that. Dr Dobes, having regard to your background and your expert advice, how important is it to have an alternative or an option when you are presenting a business case to the government in regard to economic analysis of a major project such as light rail?

**Dr Dobes:** It is essential. I can say quite strongly that no student would have ever passed an exam without pointing out that there are alternatives to be considered. One partial alternative is the status quo; in other words, leaving things as they are. But there are always alternatives to any particular system. If you do not consider them, you cannot give a complete answer as to what is best for society, so you need to look at all of the social costs and all of the social benefits, from a social perspective. I am happy to talk about that. But it is only if you have a complete analysis, as the last question, I think, from Mr Pettersson implied, with all of the possible alternatives that you can really make an informed decision.

**THE CHAIR:** For the ACT government to make their so-called informed decision on one case scenario, their economic analysis, what does that say about the ACT government just accepting one business case that only has one way of dealing with the second stage of light rail?

**Dr Dobes:** The Auditor-General was very circumspect, and I guess that fits his role. I do not need to be as circumspect, but I would prefer to be. I cannot comment on the government, but I do believe that it is a misguided decision. The real question becomes: can it revise its decision? If you are doing a genuine, robust analysis, even of just stage 2A, you would need to ask yourself a question. There is a sunk cost of stage 1. We are looking to the future now. We should do a proper analysis of the future of the Canberra transport system from Gungahlin to Woden or wherever—whatever you choose.

To be an informed decision, the government should look at all of it. Coming from the Crawford school, I can comment on the public policy aspect as well; that is, if you want support from the community, being transparent about things is usually a good idea. It does not mean that the government has to do what protesters want it to do or whatever else, but you get more trust, you get more buy-in from the community, if you do put everything on the table. That is my personal opinion. It is not necessarily everyone else's opinion at the ANU.

**THE CHAIR:** In terms of the O-Bahn, was that an idea that was put forward in the federal government inquiry into stage 2 light rail?

**Dr Dobes:** I am not familiar with what was given to the federal government. Certainly, there was a study done in 2012 or 2014—I cannot remember the exact date—commissioned by the ACT government. It compared the possibility of light rail with a rapid bus transit system. I think at that stage it was just Gungahlin to Civic. The cost-benefit analysis came back very strongly in favour of the bus transport system, but I am pretty sure that it did not refer to O-Bahn or anything like that. It was just a rapid bus transport system.

**THE CHAIR:** How popular is the discussion around your circle of expert colleagues about having O-Bahn instead of the light rail?

**Dr Dobes:** I have not raised it with anyone, but I should say that Adelaide has an O-Bahn system. I think Dr Hawkins mentioned, in a radio interview today, which we shared, that it is surprising that it has not been taken up anywhere else. I personally put it down to ideological preference for trams. People think trams are terrific. You see them going by. I spent a lot of my time as a student at Melbourne university using trams, so I have a soft spot for them, but I do not believe it is the way for a government to take a decision.

**MR PETTERSSON:** Reflecting on your term “ideological preference for a tram”, could you potentially expand on the idea of how a government should weigh up economic analysis of projects and the will of voters who vote for a piece of infrastructure that may not be as economically beneficial as an alternative?

**Dr Dobes:** It is entirely up to the government. I think everyone accepts that. In a democratic system, it is the government’s call, and no-one questions that—certainly not me. What I do query is: has the government genuinely worked out what people want? You can run the sorts of surveys which have become very commonplace in the ACT, where leading questions and certain ways of formulating questions cannot really give you a proper answer.

I can see that you are doubting what I say, so perhaps let me explain a little bit further. There is something called choice modelling. It is one of a series of stated preference methods for determining economic value. A stated preference survey, a choice modelling survey, will not ask people, “Do you want a tram?” because it does not cost them anything; they can just say yes or no, depending on what their ideology, for want of a better word, leads them to say. What you need to do is to give them an informed analysis of the context. They need to know how much it is going to cost them, not just in the fares but in terms of extra taxes that they will have to pay down the track, that will eventually happen in Canberra.

They need to know what sort of trams they are. Are they going to be red trams or blue trams or whatever else? You ask these questions not as single questions but as packages, and people choose between these packages. One package might be a very expensive option but give a terrifically smooth ride. Another one might be cheaper and have gold painting on the tram or something, which attracts people.

Only in this way can you find out what voters really think, because voters change their minds, as you well know. They might say today, “Yes, I would love a tram. I

definitely want a tram.” Tomorrow, when they find out the cost, they might change their minds. I think it is a protection for government as much as economic analysis. I am not trying to push a political line here.

There is something that the Auditor-General did not comment on. There is one very large part of the economic analysis of cost which is missing. Something which is directly attributable to a tram or whatever transport system you take—O-Bahn or anything—is the cost of it and the taxes which are imposed to pay for it. It is not so much the taxes; it is the negative effect on the economy of the ACT where businesses might close because they have to pay higher rates to pay for their business location and so on. This is what is called “dead weight loss” in economics or “marginal excess tax burden”.

That has not been taken into account anywhere in the business case. On the other hand they are touting in the business case, or the economic analysis, wider economic benefits. A lot of those benefits, if they exist, will be reduced drastically by this dead weight loss. Usually, in economic analysis in Australia, one adds about 15 per cent to 20 per cent extra to the capital costs and the operating costs to account for this dead weight loss.

This is a contention issue, just like all of economics, but I think it is something which should be taken into account. It is another failure of what I consider a very poor economic analysis.

**MR BRADDOCK:** Going back to the analysis of the alternative, does the analysis of the alternative need to incorporate what would be the transition costs in going from one set of technology to another?

**Dr Dobes:** Absolutely. Yes, you are quite right. It would have to do that. The question then becomes: how much of it is a sunk cost? You could argue that it is all a sunk cost, but that would be wrong, because bits of it are retrievable. You cannot retrieve the wages, for example, but you might be able to make use of the concrete which is already there, to put an O-Bahn on, and you could sell the rails. Or you might keep the rails, as they did in Sydney; you just cover them over with bitumen or whatever else. There are various issues that you should be able to look at, but you definitely should include the cost and the benefit of keeping what you already have. The sale of the existing tram vehicles would obviously give you some sort of revenue.

**MR PETERSSON:** The business case utilises wider economic benefits in its justification. How should those be calculated or considered?

**Dr Dobes:** They already have been considered. The question is about how you do it in practice. I do not have access to the information, but I think what has happened here is that they have probably taken a figure which was developed for a large city like London, which is where most of this comes from, anyway, and they have simply used it as a plug-in value.

If you use a bit of common sense and look at the whole picture, you have patronage based on the Gold Coast, Melbourne, Sydney or somewhere else; so already that is not very kosher. You then come to wider economic benefits, and if you apply those

from a city like London to a short section of tram from Civic to Commonwealth Park, I think that starts to stretch credulity. I cannot put it simpler than that.

There is one other issue which has not been raised by the Auditor-General, as much as I admire what they have done; that is, one of the components of wider economic benefits usually is the increase in GDP, regional product or whatever you want to call it for the ACT. If you have this increase in production, because everything is growing because of the tram, it will generate taxes which can be used for other things like health or education. That is all fine for London or for unitary government, but in Australia it is the federal government that gets income tax, not the ACT. If that has not been adjusted in these wider economic benefits, that is just an obvious bias.

My issue is not just with Ernst & Young for what they have written; it is with the public servants who presumably ran their eye over this and did not question the most basic bits of the information that are in there. I apologise for attacking public servants. I know they are subject to other pressures, but at least they should have raised some of these questions before the report was finalised. Footnotes can often overcome that sort of bias.

**MR PETTERSSON:** Should public servants have an expectation that the reports they receive from consultants, and that they pay a lot of money for, are correct?

**Dr Dobes:** No. It is like buying a house. Would you trust what the agent told you? No. With respect to your question before, speaking of houses, they are a very good example at the moment. Would you base your decision on buying a house by just looking at a cost-benefit analysis of the garage down at the back? No, you would not. You would need to look at the whole picture. There are a lot of things I could say, but 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.

**MR BRADDOCK:** I have a couple of questions on how things should be treated under the economic analysis. Firstly, the federal government announced, post the business case, that it would put, I think, \$135 million towards this project. If the business case were to be reanalysed, how would that be treated?

**Dr Dobes:** That is a very good question, because it depends on what perspective you take first. Are we looking at this from a purely ACT perspective or from a national perspective? If it is a national perspective, there is basically no effect, because it is a transfer payment. One section of the community pays the tax and the other section of the community gets the same benefit, so the net effect is zero.

If we are looking at it from a Canberra-only perspective then it is a gift; it is great. But it is up to the analysts to determine that. People in Queanbeyan would be paying the cost by paying taxes—or in Yass or wherever—but the ACT residents who use the tram would be getting the benefit. What you have raised is a very valid point, and very important. It is one of the initial parts of a cost-benefit analysis where not only do you set the base case but you determine from whose perspective, whose costs and whose benefits you will count it, and how you will do it.

**MR BRADDOCK:** By that, also whose taxes will count?

**Dr Dobes:** Absolutely.

**MR BRADDOCK:** In terms of disruption to business, like the retail offerings that might be impacted from the construction phase, how is that counted where it might be a case of someone simply deciding to go elsewhere for dinner? Should that still be counted as a cost?

**Dr Dobes:** With respect to John Hawkins, who is sitting there listening to my answer—

**MR BRADDOCK:** Be careful!

**Dr Dobes:** John is half-right. If you make the assumption that goods and services are homogenous, and if I cannot get it from one shop, I can go to another because they are homogenous, but if they are even slightly different then I am going to lose something by not being able to go to that particular shop. But it is not just the shopkeeper who loses; it is also me, because I used to buy my goods and services in Gungahlin and now the only other shop which provides precisely the same good or service is in Tuggeranong, so I will have to incur the additional cost of going down there. I think that is the bit that John has not included in his submission.

**MR BRADDOCK:** How would you have calculated that cost as part of an analysis?

**Dr Dobes:** If it is a material, if you have identified it and if it is going to be important, you simply have to do the calculation. In the example that I have just given, the additional costs to the consumer of going from Gungahlin to Tuggeranong could be, for example, the petrol that was used, plus the time that they have used to travel, plus any other inconvenience that you can actually quantify and monetise. All of this is modelling, as you know, and you simply have to use a little bit of imagination when you are doing it.

**MR PARTON:** Dr Dobes, when you were endeavouring to sell us on the O-Bahn, I travelled on the O-Bahn a bit; I lived in Adelaide.

**Dr Dobes:** Good; tell me.

**MR PARTON:** Pretty cool. But when you were attempting to sell us on that, you suggested that if indeed the government did make a U-turn and decided to make this change, you said, “There would be no need to raise London Circuit.” You have asserted, Dr Dobes, that the only reason the government is raising London Circuit is to accommodate the light rail line. Do you believe that is the case, because the government does not? As you know, the government has not included the costs of the raising of London Circuit. Is it your belief that the only reason that we are raising London Circuit is to accommodate the light rail line?

**Dr Dobes:** Let me perhaps start by saying that I neither propose nor anything else the O-Bahn. I am raising it as something which should be considered; that is all. I do not have any information; the government has given me no information on why they are raising London Circuit. I have not seen it anywhere in the media or anywhere else. I

can only assume that it is directly attributable—the main reason—to allowing a tram to get up a steep gradient. That is my assumption.

**MR PARTON:** When Mr Harris was with us, he was hesitant to make the assertion that the underestimation of costs and the overestimation of benefits was done wilfully by the government. Do you think it was?

**Dr Dobes:** Again, I am being circumspect here. I would put it down to incompetence by persons unknown. I am sorry; I would never venture the opinion that someone has done something wilfully without evidence. I have none.

**MR PARTON:** That is a good answer; thank you.

**MR PETTERSSON:** The economic analysis of this project is 30 years. Is that an appropriate time frame to consider the benefits of this project?

**Dr Dobes:** This is another point which Dr Hawkins has raised in his submission. Again, it is not quite accurate. I had to go through it about three times before I came across it. Somewhere in the business case or the economic analysis part there is reference to a residual, a rise in value or whatever else you want to call it. It is sometimes called “scrap value”.

Again, because of a lack of information, I think what has happened is that they have gone to 30 years, which seems to be standard for consultants, even though it is not correct. They go for 30 years, but what you do is simply extend your spreadsheet and go out to 50, 100 or whatever other number of years you want. You discount it back to year 30 and you call that the residual value.

That can be a scrap value, because they are replacing the old trams or whatever else they are doing, or it can be an estimate of future revenues from year 30-plus, or whatever else. But that is the way you get around it; otherwise you have one long spreadsheet out to 100 years, and it is hard to manage.

**MR PETTERSSON:** Fair enough.

**THE CHAIR:** On behalf of the committee, I thank Dr Leo Dobes for his attendance today. If witnesses have taken any questions on notice, could you please provide answers to the committee secretary within five working days? Thank you.

**Short suspension.**

**HAWKINS, DR JOHN**, Senior Lecturer, University of Canberra

**THE CHAIR:** In this session we will hear from Dr John Hawkins. I would like to remind witnesses of the protections and obligations afforded by parliamentary privilege and draw your attention to the privilege statement. Could you confirm for the record that you understand the privilege implications of the statement?

**Dr Hawkins:** I am a senior lecturer at the University of Canberra, but I am appearing here in a personal capacity, not as a representative of the university. I have read and understand the privilege statement. Thank you for the invitation to make a submission and appear today. I used to be a Senate committee secretary, so I am very sympathetic to the problems you sometimes have in attracting witnesses to hearings, and I am happy to help.

**THE CHAIR:** Thank you. Would you like to make a brief opening statement, Dr Hawkins?

**Dr Hawkins:** Yes. I made a brief submission. The main point I made in the submission is that I feel 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 appropriate. The discounted future value of the benefits would be greater than the calculations presented. That is the main point I wanted to make.

**THE CHAIR:** Dr Hawkins, in your submission you said the government should be taking into account the interests of future generations and should be taking a much longer term view on issues than individuals and companies do. Could you elaborate on that a bit more?

**Dr Hawkins:** Yes. Sometimes people, in deciding what is an appropriate discount rate, will say, “What do large companies use?” A company probably is not going to last forever. Certainly, from the perspective of the CEO, the average tenure of a CEO is only about five years, so they will have a much more short-run focus. They want to see a return generated in a much shorter period of time than a government would, when they are talking about a project that will last not just years but decades or even longer. Parts of the London underground, for example, were built in the 19th century and are still being used, so we are looking at a project with a very long life span.

**THE CHAIR:** What would you say of a government who did not have that future-look regarding their projects?

**Dr Hawkins:** I would think they were being unduly short-sighted, if they were only looking at a short period of time. Using Leo’s example of the spreadsheet, the spreadsheet should have more columns, to go out 100 years.

**MR PETTERSSON:** What is the discount rate used by other Australian jurisdictions when it comes to infrastructure projects?

**Dr Hawkins:** The seven per cent is used in other cases, but I think that is wrong, too. It does not make as much difference, if you are talking about a project that is only going to operate over a small number of years. It is when you have a project that goes for decades that it certainly makes a difference. Paragraph 2.12 of the report stated that another group of experts, Douglas Economics, felt that the discount rate was high by international standards.

**MR BRADDOCK:** I understand that this is contentious, but what rate would you recommend?

**Dr Hawkins:** If we look at the real interest rate on long-term government bonds at the moment, it is more like about one per cent. You might think that is going too far—maybe two or three per cent. I think you should do a sensitivity analysis. You should present the calculations on a few different assumptions; then people who have different views can look at a report and say, “If it’s seven per cent, these are the numbers, but if I think it’s one per cent, these are the numbers, and if I think it’s three per cent, these would be the numbers.”

**MR BRADDOCK:** Essentially, you are making a decision about the future value you would place on those benefits down the track, or costs down the track as well?

**Dr Hawkins:** Yes. Also it has an intergenerational, ethical aspect about how important you think future generations are, relative to the current generation.

**MR PETTERSSON:** This analysis is of light rail stage 2A. What weight should be placed on the economic analysis of a single part of a wider infrastructure network?

**Dr Hawkins:** To me, the main benefit from stage 2A is probably that it is the first part of stage 2. Even if stage 2A in itself did not stack up under the cost-benefit analysis, it is the first bit you have to do at stage 2, so if the whole of stage 2 made sense then you would start with 2A.

**MR BRADDOCK:** I would like to give you the opportunity to respond to what Dr Dobes said in the previous session. We were talking in terms of the business disruption potentially involving expenditure relocating to a different location. Could you please expand on your view on that?

**Dr Hawkins:** Yes. He said I was half-wrong.

**MR PARTON:** No, he said half-right.

**Dr Hawkins:** Half-right. Maybe I am 95 per cent right. If a firm says that, as a result of the disruption caused by building the tram, they lost \$20,000 worth of revenue, I think it would be a mistake to count that \$20,000 as an overall cost. If a company in the next suburb gained \$19,000 then I think the loss is really only \$1,000. It would be a mistake to count all of the loss that any company suffered as a result of disruption if some of it is made up by other companies. Some of it would just be a transfer.

**MR PARTON:** Dr Hawkins, I could not help thinking, when I was going through

your submission, that it is as much a submission about the business of presenting business cases as it is about this particular business case. The things that you have raised are not just specific to this business case at all, and it is a call for governments to reconsider and reframe how they present business cases, particularly with a view to how long the infrastructure will be in place. How would you respond to that assessment of mine?

**Dr Hawkins:** I think it is a fair comment. The things I talked about do have a broader application to other projects that are very long term. It is not so much an issue with something that is a short-term project.

**MR PARTON:** The London underground example that you give is an exceptional example, isn't it? I am not sure that I have any other questions for you on the basis of this, but I found your submission a very interesting read, albeit a short one. I thought it was really interesting to take that on board and perhaps consider how we go about that process.

**THE CHAIR:** In terms of not presenting an alternative for transportation, and the government just being presented with light rail, what are your thoughts on that?

**Dr Hawkins:** In a sense, I suppose the alternative implicitly is doing nothing, and just having increased congestion on the roads. I agree with Leo; if there are other alternatives then, by all means, they should be evaluated as well. I have not been to Essen. I have taken a ride on the O-Bahn in Adelaide, and it seemed that it works fine. The fact that I am only aware of two examples of where an O-Bahn has been adopted means maybe they are not a better solution than trams, for whatever reason. Maybe there is just a failure of imagination everywhere else; I do not know. I certainly would not reject the idea of looking at alternatives like that.

**THE CHAIR:** Dr Dobes basically raised it as a point of principle—not so much campaigning for an O-Bahn, but the principle of just having one mode of transportation in their business case. Is it normal to present a business case to the government where you just have one scenario?

**Dr Hawkins:** It probably would depend on whether you thought there was an obvious alternative. In some cases there may not be an obvious alternative. It would be quite useful if they looked at some alternatives.

**THE CHAIR:** Are there any final thoughts that you would like to share with us, Dr Hawkins?

**Dr Hawkins:** Yes. I am favourably disposed towards trams, because I used to live in the Swiss city of Basel, and it is a comparable size to Canberra. It, along with some other Swiss cities in the 1970s, reached a stage where they thought congestion was becoming a problem and it was going to change the lifestyle in the city. They said, "Do we start building a lot more roads or do we put money into public transport?" They did lots of inquiries and they decided to go down the public transport route, and they installed a tram system.

I was struck by the fact that never, in the time I was living in Basel, did I hear

anybody criticise that decision and say, “It would have been better to build more roads” or “We should have just done nothing.”

It seemed that the tram system worked well. A lot of people who were quite affluent did not bother owning a car because they thought they could get where they wanted to go on the tram or the train. That might be an experience that is worth looking at in evaluating tram systems—the experience of a city like Basel. As Leo mentioned, London probably is not a great comparator, but somewhere like Basel would be.

**THE CHAIR:** On behalf of the committee, I thank Dr John Hawkins for his attendance today. If witnesses have taken any questions on notice, could you please provide answers to the committee secretary within five working days?

**Dr Hawkins:** Thank you.

**Hearing suspended from 11.28 to 11.45 am.**

**EDGHILL, MR DUNCAN**, Chief Projects Officer, Major Projects Canberra  
**HALL, MR DAMON**, Executive Group Manager, Project Development and Support  
Group, Major Projects Canberra  
**SNOW, MR MALCOLM**, Chief Executive Officer, City Renewal Authority

**THE CHAIR:** In this session we will hear from Transport Canberra and City Services, treasury and the City Renewal Authority. I would like to remind witnesses of the protections and obligations afforded by parliamentary privilege and draw your attention to the privilege statement. Could you confirm that you understand the privilege implications of the statement.

**Mr Edghill:** I have read and understood the privilege statement.

**Mr Hall:** I have also read and acknowledge the privilege statement.

**THE CHAIR:** Would you like to make a brief opening statement?

**Mr Edghill:** I am happy to go straight to questions.

**THE CHAIR:** On page 6 of the Auditor-General's report he said:

The lack of documented methodology and processes for quality assurance of the Cost Benefit Analysis, combined with the absence of spreadsheets demonstrating the calculations or an economic model, impairs Major Projects Canberra's ability to demonstrate the accuracy and appropriateness of the economic appraisal of Light Rail Stage 2a.

Given the finding of a clear lack of methodology and any calculations or economic model, how can you in any way be confident in the business case and its findings?

**Mr Edghill:** Thank you for the question. I should note at the outset that we hold a different view to the Auditor-General in this respect. If I were to take a step back, the economic appraisal is one component of the business case. There are many different elements that feed into the business case. With respect to the economic analysis, we engaged a reputable national firm, EY, who have done this on many projects across Australia—in fact, on light rail stage 1. EY conducted their economic analysis in accordance with nationally accepted principles for developing—

**THE CHAIR:** Can you just clarify who EY is?

**Mr Edghill:** EY is a large accounting and advisory firm.

**THE CHAIR:** Short for?

**Mr Edghill:** Ernst & Young. They are sometimes referred to as one of the big four, the big four firms in this field being PwC, KPMG, Deloitte and Ernst & Young, or EY. In terms of the appropriateness of the economic appraisal, the ACT government engaged a recognised large specialist provider who had an existing understanding through the work on stage 1 of light rail in Canberra. They undertook their economic analysis consistent with nationally accepted principles for undertaking such measures.

That is the first point.

The second point is that it is not correct to portray that Major Projects staff did not have any involvement with EY in that process on the way through. There is no one spreadsheet that sits behind the work that EY did. There are multiple inputs that all feed into the economic analysis, from transport modelling to the concept design itself, as well as quantity surveyor reports and so forth. At each point along the line, in terms of inputs coming from both other specialists and from the territory in to EY, and in turn reviewing the outputs of EY's economic report, a lot of time was spent by Major Projects Canberra staff through that entire process.

Ultimately, the ACT government, for this one narrow part of the business case, engaged EY to produce an economic appraisal report, and that is what we got. We have no reason to believe that the report that has been generated from EY is in any way inappropriate. In fact I think that the processes we have been through to engage a large firm who does this every day of the week gives us every comfort that we have chosen the right specialist to do this work.

**THE CHAIR:** How much did you pay them to do this economic appraisal?

**Mr Edghill:** I would have to take that on notice, but it would be a matter on the public record, on the notifiable contracts register, and indeed on the invoices register. I am happy to take that on notice.

**THE CHAIR:** Thank you. Did the government specifically ask EY to just focus on the light rail economic appraisal rather than having an alternative form of transportation?

**Mr Edghill:** There are two elements to the response to that. The first and most basic one is that we were asked to develop a business case for stage 2A, and that is what we did. That was the task given to Ernst & Young—developing an economical appraisal for the stage 2A project.

In undertaking the stage 2A project, the way that they do it is effectively to measure a project case versus a base case. They run two sets of analyses and then measure the difference between the two. The base case analysis is effectively the status quo in Canberra—the way people move around in buses and so forth in that area. The project case then incorporates the assumptions around light rail.

I would note in this respect that a business case is not just about doing an economic analysis, with the economic analysis giving you a magic number and that is what you base your decision on. In fact, it is very different to that. The economic analysis is one input, particularly for a project of this nature, which is a modest expansion to the existing stage 1 system. There are a whole heap of other considerations that need to be taken into account when making a business decision. The business case, for example, also touches on very important features for decision-makers, such as: what is the potential program? What are the construction risks associated with the project? What are the planning risks associated with the project? What are the potential costs associated with the project? There are a whole heap of other features.

**THE CHAIR:** But there was no alternative.

**Mr Edghill:** Very clearly, our job was to produce a business case on light rail stage 2A. That was the government's commitment, and that is what we did.

**MR PETTERSSON:** What is the purpose of economic analysis of a single stage of a wider infrastructure network?

**Mr Edghill:** Thank you for the question. For light rail stage 2A in particular, the nature of the extension is obviously one where it is a modest extension to stage 1 but a necessary precursor to the delivery of stage 2B. In that respect the broader context here is that this is a physical necessity. You cannot build 2B without having done 2A first.

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.

Again I would note that it is actually one of the reasons why, when you look at the business case, there are multiple BCRs in there. There is no one magic number when you undertake an economic analysis. The ultimate number is very much dependent upon some of the assumptions that are made on the way through—everything from traffic assumptions through to discount rate assumptions, and changes in any variable can change what the BCR is. It is for that reason that in the business case multiple BCRs were presented, including sensitivity analysis around discount rates.

**THE CHAIR:** What is BCR?

**Mr Edghill:** Benefit-cost ratio.

**MR BRADDOCK:** The Auditor-General this morning quite strongly recommended the utilisation of the Australian Transport Assessment and Planning Guidelines, where they talk about benefits management going from end to end of the project, in terms of making sure that, at an early stage, we capture and identify how we will manage those benefits, instead of waiting until what seems to be the practice here in the ACT of waiting for signature of the major contract before you actually finalise the benefits plan. Why are you doing it that way around and not doing it earlier for the project?

**Mr Edghill:** I will pass to my colleague Damon Hall in a moment. I think that the ACT government, if you look at what we have done with light rail stage 1, for example, has been quite forward leading in terms of the benefit realisation tracking that has been undertaken. In fact in the post-implementation review of light rail stage 1, for example, that revealed that the economic analysis, if anything, might have been a little on the conservative side, particularly when you look at all of the activity which is happening on the verges of Northbourne.

The benefits realisation plan is something that the ACT government has undertaken to do. Practically, where we stand with the project at the moment is that it is still being procured; it is still being designed. The view of the ACT government is perhaps

slightly different to that of the Auditor-General, in that it is maybe a little too early to be spending a lot of time on that at the moment. But practice with light rail stage 1, for example, is that the benefit realisation plan has picked up, once you have actually moved through the construction phase of the project. I will ask my colleague whether he has any further thoughts.

**Mr Hall:** The Auditor-General, I understand, referred to the ATAG, the Australian Transport and Assessment Guidelines, which reference benefits management as opposed to benefits realisation planning. It is important that we distinguish between those. The benefits management requires the identification and analysis of benefits. Certainly, there is a section within the business case that does that. Benefits realisation planning is not required under the capital framework, nor under the ATAG guidelines. However, as Mr Edghill mentioned, the ACT government has developed a benefits realisation plan for stage 1 and will do so for stage 2 as well.

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.

**MR BRADDOCK:** There are benefits management processes happening before you actually go out to contract or procure for a major contract; is that correct?

**Mr Hall:** That is correct. That is identified in the business case, Mr Braddock. Indeed the capital framework guidelines, which are a policy of the ACT government, describe that process and describe the post-implementation review period as well, where the merits of the project, including benefits, are assessed. What we have done over the top of that, in terms of stage 1, and we will do it for stage 2A, is develop a benefits realisation plan, to look at each of those benefits and how they would be realised over the life of the project.

**MR BRADDOCK:** How do you tie those benefits that you have identified at the start into the major procurement contract that you then enter?

**Mr Edghill:** Some of those benefits, in fact probably most of those benefits, are not deliverable under a contract but actually flow from the project having been implemented as a whole. Of course, there is some crossover. For example, Mr Hall mentioned travel time; that is a contracted feature in our light rail contract. On the stage 1 contract, for example, under the payment mechanism in that contract one of the features is that the contractor has agreed to what the travel time between Gungahlin and the city would be. That is how we have confidence that that is what the travel time will be in that analysis. Under the terms of that contract, if travel times vary, tram availability varies or service availability varies outside a band, there are financial implications under that contract.

That is one example where there is crossover. For example, where benefits flow from land use changes or differences from the timing of developments, obviously, that is

not something that gets captured under the contract. That flows as a result of the project itself having been delivered.

**MR PARTON:** Mr Edghill, the costs of wire-free operation, which, as we know, is an NCA requirement, were excluded from the capital costs expenditure. The Auditor-General's report suggests that this would increase the capital cost of stage 2A by approximately 17 per cent. Why weren't those costs included? Why were they not factored in?

**Mr Edghill:** Respectfully, the estimated costs at the time were disclosed in the business cases, in section 1.8.2 on page 18.

**MR PARTON:** The Auditor-General did make mention of that, but did also go to the fact that they were not factored in to the bottom lines, to the BCRs.

**Mr Edghill:** Yes. In the economic analysis, it is all predicated upon assumptions, and we were very clear and transparent in the business case as to what the assumptions were that sat behind that economic analysis. We clearly disclosed—perhaps, because it was not a definitive requirement at the time that it would have to be, remembering this was a business case drafted in 2019 and at that point in time it was not a definitive requirement of the commonwealth that it would be wire free—on that basis the economic analysis was prepared very clearly on the assumption that there would be wires. However, to be fully transparent, on multiple occasions through the business case we did make very clear and disclose that it was a project risk, and if that project risk eventuated there would be an additional cost associated with that.

**MR PARTON:** That, of course, would change the BCR, wouldn't it?

**Mr Edghill:** Potentially. Subsequently, also, there was a commonwealth commitment of \$132½ million, which we also did not include. It is very much a point-in-time analysis.

**MR PARTON:** London Circuit also needs to be raised to enable stage 2A, and those costs were not included in expenditure for stage 2A. Wouldn't that change the BCR dramatically if they were?

**Mr Edghill:** Without having done the analysis, I could not proffer an opinion. The raising of London Circuit was the subject of a separate business case approved by cabinet. Again we were very clear around the assumptions. If we were to include the costs of raising London Circuit then, by right, we should also be including the benefits of raising London Circuit.

**MR PARTON:** The Auditor-General seems to assert—although when he was questioned on it directly he would not actually put his name to this assertion—that there was a wilful underestimation of costs and overestimation of benefits. He certainly would not put his name to that suggestion today, but when you read the report and everything associated with it, it is very difficult not to arrive at that conclusion, Mr Edghill.

**Mr Edghill:** I would respectfully challenge that, utterly and completely. In fairness to

the Auditor-General, as you have noted, he did not make that assertion. If anyone were to make that assertion, it would be one that I would protest. When you look at the business case for stage 1, stage 2A or for whatever else that we do, we try to present to government our best estimate at that point in time as to what all of the features of the business case would be.

In terms of things like cost analysis, we have specialist advisers that we use sitting behind us to help us to generate those cost estimates. It is not simply a matter of Damon and I coming up with those cost estimates. We use external experts to do that. Indeed the team that produced the stage 2A economic analysis and business case was essentially the same team that produced the stage 1 business case. It does feel in some respects that there is a bit of *Groundhog Day* here. If anything, when you look back at the stage 1 business case, you could frame an argument that that was actually on the conservative side.

In terms of the team who has done this work and their track record, I think they have a very solid track record. I am very proud of them. The team and I, at any point in time, produce to government what our best estimate is. When you look at the BCRs that were produced in the report, under one, for example, there are BCRs in there; there are BCRs in there over one, depending upon which assumptions you use. When you go to the fundamental of the results that have been calculated, it would be hard for anyone to assert that we have done anything other than—both the team and I—put forward what we think is an honest appraisal of the costs and benefits of light rail at that point in time.

**THE CHAIR:** Mr Edghill, you said that there was a separate business case for the raising of London Circuit. Why was that?

**Mr Edghill:** It is a project with separate benefits, drivers and costs. It has the benefit, of course, when you raise London Circuit, that that is how you can get the tram up from London Circuit to Commonwealth Avenue. There are different ways that you can bridge that grade separation. But the raising of London Circuit has its own urban realm and other benefits on the subject to a separate business case.

**THE CHAIR:** Raising London Circuit was specifically for stage 2A?

**Mr Edghill:** No. The raising of London Circuit was specifically for the raising of London Circuit. It is an activity which stands by itself.

**THE CHAIR:** Why is it raised then? Isn't it for the light rail?

**Mr Edghill:** It has the benefit of facilitating light rail; absolutely. But even without light rail, the raising of London Circuit has its own benefits in terms of pedestrian and other connectivity between the city and down to the lake. It also has other benefits associated with the removal of the north-west and the south-west cloverleaf and the opportunities that that brings for urban regeneration in the city.

**THE CHAIR:** Can light rail from Civic to Commonwealth function without raising London Circuit?

**Mr Edghill:** It can. The alternative way would be to take it up—it is hard to describe because it is going the opposite way—the south-west clover leaf. Rather than raising all of London Circuit, an alternative—and this is the alternative that was assumed in the stage 2A business case—would effectively involve the light rail vehicles going up that off-ramp that exists at the moment—not exactly, but in that vicinity.

**THE CHAIR:** The light rail will use the raising of the London Circuit for its benefit, to make it run more effectively?

**Mr Edghill:** With the raising of London Circuit, one of the side benefits of that project is that it then facilitates light rail stage 2A vehicles going from London Circuit up onto Commonwealth Avenue. Once London Circuit is raised, the obvious place to put light rail then is in the median and keep it in the median from London Circuit onto Commonwealth Avenue. But if that did not happen, the alternative would be to effectively take the light rail vehicles up from where the existing cloverleaf off-ramp is at the moment.

**THE CHAIR:** If raising London Circuit was considered to be used for light rail, why wasn't it used for the first business case? Was that an oversight?

**Mr Edghill:** For light rail stage 1? Simply because of—

**THE CHAIR:** No, for the first business case. You have two business cases here. One is for light rail stage 2A and there is a separate business case for the raising of London Circuit.

**Mr Edghill:** Yes.

**THE CHAIR:** Did you discover the raising of London Circuit after you had done the business case?

**Mr Edghill:** Purely timing.

**THE CHAIR:** Timing?

**Mr Edghill:** Yes. That decision had not been made at the time. I am happy to double-check it, but that decision had not been definitively made. If that decision had already been made, then that would have shaped the assumptions that we put into the light rail stage 2A business case. By definition, we made that assumption because that decision had not been made at that point in time. It was still an open question as to what would happen with the raising of London Circuit.

**THE CHAIR:** But it was considered by this specialist analysis. Was it considered or not considered during the first business case?

**Mr Edghill:** In the business case we clearly articulated that the assumption was that in the cost analysis and in the economic analysis we had not assumed raising London Circuit had been made because that investment decision had not been made at the time of drafting the light rail stage 2A business case.

**MR PARTON:** There are no plans to raise the entire Tuggeranong Valley for stage 3, are there? I am just asking!

**Mr Edghill:** The short answer to your question is that it is a matter of timing. If we had known that an investment decision had been made before drafting the light rail stage 2A business case, of course, we would have taken that into account. But as that investment decision had not been made, we needed to make some assumption. The assumption that we made was about that alternative way of bridging the grade separation, but we did clearly disclose in the business case that that was the assumption.

**THE CHAIR:** In the business case for raising London Circuit, does it say how much it will cost?

**Mr Hall:** The business case, in accordance with the capital framework, would outline the objectives for the project, the strategic intent, the costs, the benefits, the governance structure program, how it would be procured and delivered, and the risks associated with the project. That is standard under the capital framework. I would expect—although Major Projects Canberra commenced on 1 July 2019—that the business case for that project would include those elements.

**THE CHAIR:** How much does it cost? Do you know, off the top of your head?

**Mr Edghill:** We are moving through the procurement process for raising London Circuit at the moment. Unfortunately, it is probably a little premature for us to provide costs guidance. It is a procurement process that we are moving through and coming towards the end of, so I would expect that in the not-too-distant future the government would be in a position to provide the community with an update as to the costs associated with the raising of London Circuit.

**THE CHAIR:** When was the construction meant to be?

**Mr Edghill:** The raising of London Circuit, in broad-brush terms, is from later this year, and the public guidance which has been provided previously is for approximately a two-year construction process.

**THE CHAIR:** For raising London Circuit?

**Mr Edghill:** For the raising of London Circuit.

**THE CHAIR:** Two-year?

**Mr Edghill:** Yes. That is the guidance which has been provided previously. Of course, you need to raise both sides of London Circuit, and there are early utility works which are underway at present. In that area some of the construction works that you may have seen are early utility works to move some of the utilities out of the way to facilitate the construction of the raising of London Circuit.

**THE CHAIR:** I have a question about the Acton waterfront. Much of the BCR for stage 2A is derived from the supposed contribution to the development of the Acton

waterfront. The Auditor-General noted that where these benefits are excluded, the BCR, even when included with a WEB, drops to an incredibly low 0.21. Plans for the development of the West Basin and Acton waterfront go as far back as 2006, in the ACT government's city to the lake project. Mr Edghill, in what way is the Acton waterfront contingent on the development of stage 2A, given it has been planned for well before the current light rail project was conceived?

**Mr Edghill:** I am happy to invite Malcolm Snow to comment, if I may. I will make a few introductory comments. It is almost a mathematical axiom. Yes, if you remove those benefits, the BCR drops. The flip side to that is if that you were to enhance your assumptions around how quickly that development may occur, it would increase the BCR. It is just how the mathematics of it works.

From our perspective we had assumed, adopted and disclosed what we think are reasonably conservative assumptions around the timing of development. The issue at play is not whether the development happens or not. For the purposes of the stage 2A economic analysis it is around the timing of development. The lived experience here in Canberra—this is probably where we were more conservative than we could have been on the stage 1 economic analysis—is that if you look at what is happening on Northbourne Avenue at the moment, there is a lot of development activity which is happening in the verges. The real-life experience is that it has been prompted and accelerated by the delivery of light rail.

It is not to say that it would not have happened without light rail, but light rail helps to facilitate a pattern more quickly. The practical manifestation of that is, for example, if you read the *Fin Review* and look at the commercial properties for sale on Northbourne; they will use the fact that light rail is out the front as a selling point for development or for property sales on the commercial front, on the retail front.

From our perspective, a modest assumption that delivering light rail would help to facilitate the development of the Acton waterfront is entirely appropriate; in fact, it is entirely consistent with what we have seen on stage 1. It is not a matter of either/or; it is a matter of timing and the economic analysis.

**Mr Snow:** I have read the privilege statement. I would answer the question by saying that development at Acton waterfront is already well underway. With respect to Henry Rolland Park, we have just completed the extension of the boardwalk, so there is substantial public infrastructure already at Acton waterfront.

I think the question you are asking relates to building development, and that building development time frame is already well publicised, documented and sitting in the public domain in the form of the Indicative Land Release Program, which obliges us as an authority to be offering the very first super blocks, if that is the way we go, to the market in financial year 2024-25. All of that has been known for quite some time, as has the development of Acton waterfront itself, which in fact goes back even to 2002. If you want to go even further back—

**THE CHAIR:** By all means.

**Mr Snow:** you can refer to the 1915 Griffin Plan, which proposed waterfront

development on the lake as part of his fantastic plan. Having said that, we as an authority are really looking forward to stage 2A. It will enhance and strengthen some of the principles that we are certainly adopting in relation to the project, which is to allow visitors, residents and workers in that new precinct to have access to public transport and greater connectivity to the rest of Canberra. Undoubtedly, light rail has enormous benefits for the project. Our plan for the site has reflected that opportunity.

**THE CHAIR:** Will Canberrans benefit from having a continual line of the light rail from Gungahlin to Woden, which means that the Gungahlin tram line would have to be retrofitted?

**Mr Edghill:** There are two parts to the response there. Yes, commuters and others will benefit as the network expands. In terms—

**THE CHAIR:** Will it continue?

**Mr Edghill:** The current planning is assuming a single-seat journey from Gungahlin to Woden. We are not contemplating an interchange at the existing Alinga Street terminal, for example.

**THE CHAIR:** Would you retrofit it?

**Mr Edghill:** In terms of the retrofitting, we are talking about the onboard energy storage system. Because it is a one-seat journey, and particularly for stage 2A, it would not make much sense to make commuters get off at Alinga Street and get onto a different tram; that is clearly not really sensible. With the subsequent commonwealth confirmation of the NCA's requirement for wire-free running in the stage 2 alignment and in that footprint, it means that you will have light rail vehicles starting from Gungahlin and going all the way to Commonwealth Park, which means that there is that 2A section there which will be wire free, which means that you do need to retrofit all of the light rail vehicles—not just the new vehicles that you buy to cater for the expanded services through to stage 2A, but we would need to retrofit the existing 14 LRVs, light rail vehicles, and put the onboard energy storage system on there.

When we procured the light rail vehicles for stage 1, we foresaw that at some point, and somewhere in the system, wire-free running may be a requirement. Obviously, you cannot see it from the ground, but if you ever have the opportunity to look at the vehicles from above, you can see that there is a big gap on the roof, effectively, and that is the space which has been allowed, through the manufacturer of the LRVs, for the retrofitting of battery technology.

**THE CHAIR:** It will go on the roof?

**Mr Edghill:** It will go on the roof.

**THE CHAIR:** How much will it cost?

**Mr Edghill:** That is something that we are working through at the moment. Again, it is a little premature to give figures.

**THE CHAIR:** That will be done in two years time?

**Mr Edghill:** That is one of the processes that we are working through at the moment. If we are retrofitting the LRVs, from a technical perspective, it is probably one of the first elements that we would progress with on stage 2A. Again, tech and commercial details are being worked through now.

**MR PARTON:** Chair, I am not quite sure that the officials have sufficiently answered your question regarding the inclusion of the benefits of the development of Acton waterfront. I know that Mr Snow is excited about the Acton waterfront, because it is an exciting project. But he has gone back as far as 1915 in terms of when this was envisaged, and also indicated that it is in the Indicative Land Release Program. I think it is absurd to believe that somehow if light rail was not going down this route at this time that the Acton waterfront would not proceed.

**Mr Edghill:** Respectfully, if I may, Mr Parton, no officials are suggesting that Acton waterfront would not proceed.

**MR PARTON:** You are, by including it in the benefits of the program.

**Mr Edghill:** The assumption that sites behind the Acton waterfront is that light rail facilitates development. That is, to use an example in practice, what we are seeing has occurred on light rail stage 1. No-one ever, for example, would suggest that there would be no buildings on Northbourne Avenue; but, clearly, once you have that investment in public transport infrastructure out the front door, it does help to accelerate the realisation of those benefits. I know that it is a fine point of distinction, but in the economic analysis, that is what it is doing. We are not at all suggesting Acton waterfront does not happen without light rail; we are saying in the economic analysis that the investment in light rail helps to realise the benefits of the Acton waterfront.

**MR PARTON:** The Auditor-General clearly thinks that that is somewhat tenuous in terms of the inclusion of that in the business case, and I would agree with the Auditor-General.

**Mr Edghill:** Again, respectfully, I would very much disagree. I think we only have to look at light rail stage 1 on Northbourne Avenue to show that the real-life example is that this is what happens. Indeed, for any transport project, I could not point to many urban rail transports around Australia that do not assume some sort of land use benefit from the investment in the real estate, because in real, human, practical terms, people are attracted by the convenience of having light rail out the front door and there is value in that.

**MR PARTON:** Is that what this project is about, Mr Edghill? Is it about real estate much more than transport?

**Mr Edghill:** The ACT government has been very clear, right from 2014 and the outset of the stage 1 business case, that, with light rail, yes, it is about transport, but it is also about a lot more than transport. Urban regeneration and land use benefits are

certainly a key benefit of light rail.

**MR PETTERSSON:** The economic analysis for the business case is undertaken over a 30-year time period. Why 30 years?

**Mr Edghill:** I am happy to defer to Mr Hall, but I think that is generally accepted practice.

**Mr Hall:** Generally, yes. Thirty years is commonly accepted under the national guidelines and the capital framework. It tends to cover the asset development life and a degree of certainty. Here, we recognise that light rail will extend beyond 30 years, but the way that we account for that is that, at year 30, we calculate a residual value of the benefits and costs associated with that project.

Once you get beyond 30 years, it is very hard to undertake assumptions and modelling. With that 30-year period, you have a greater degree of certainty around the planning framework, whether that be out to 2050, for example, which most strategic land use plans go to, and indeed, the capital and life cycle upgrade costs of the system that you have invested in. That is the intention with the 30 years.

Those costs and benefits are then discounted back to present-day dollars. I know there is a lot of conjecture around the appropriate rate at which those monetised costs and benefits are discounted at. The current guidance is at seven per cent, nationally and in the ACT, but we present various discount rates at four per cent and 10 per cent, for presentational purposes and decision-making.

**MR BRADDOCK:** I realise the issue of discount rates can be a fraught one, but why is seven per cent the most appropriate discount rate to be chosen for a project like this one, with decades-long implications?

**Mr Edghill:** That is a great question. We use seven per cent because of guidance provided from Infrastructure Australia, and past habit has been that we use seven per cent. Certainly, from my perspective, there is an argument that the discount rate should not be seven per cent; it should be something lower than that.

I apologise if I am getting into technicalities. Effectively, you can think of a discount rate as being the reverse of an interest rate, in very simple terms. The higher the discount rate, the more that you are undervaluing or disregarding future benefits. The higher the discount rate that you use, the lower the BCR for projects. That becomes challenging when you have projects with a very long life ahead of them. If you are talking about urban rail, for example, and you look at Melbourne, these are assets that last for a very long time. I do not think anyone expects the economic payback to be two years or five years. It is an investment that you are making for generations in the city.

That is why, in the business case, we do sensitivity analysis. It is one of the reasons for that. I think we use 10 per cent and four per cent for that sensitivity analysis. Certainly, from my perspective, and given, for many years, the actual cost of funds and so forth, I personally think that there would be a stronger argument for using a discount rate which was less than seven per cent. But we use seven per cent because

that is what IA and the market generally use.

**MR BRADDOCK:** For future projects, though, are we going to keep following the IA guidance or will we seek to utilise a different discount rate?

**Mr Edghill:** Generally, when we are preparing these—and this goes back to when we engage firms like EY and the methodology that they use—they use generally accepted methodology. Again, for projects of this nature, I would expect that in future business cases we would undertake that sensitivity analysis so that decision-makers are seeing what the BCR is—not that the BCR is the most important thing in making a decision—at seven per cent, what it is at four per cent and what it is at 10 per cent.

**MR PARTON:** The government did not agree with recommendation 1(b), and that was about making publicly available a new business case. One of the justifications given is that the government will not re-equip the business case or economic analysis because the project had moved beyond this point. Does this mean that the government has proceeded with a project that ultimately does not have a sound economic backing?

The Auditor-General, in his various statements today, reflected upon how the public would consider the transparency of the entire project on the basis of this business case, which, according to him, has these flaws. I am a little perplexed that the government did not agree to making publicly available a new business case.

**Mr Edghill:** The government has noted that it does not plan to redo another business case, and that is the case with any infrastructure project. When you move from the business case phase to the procurement phase and the design phase, across any project, we do not redo another business case. The business case is a point-in-time document that helps guide decision-making. Indeed, as I noted before in terms of the economic analysis, and particularly given the physical nature of this project, it is only one of many factors that goes into the decision-making process.

In terms, though, of transparency and costs—particularly compared with other jurisdictions around Australia—there has been exceptional transparency in terms of the release of business cases, the release of post-implementation reviews, the release of contract documentation, and putting every invoice up on the internet. There is a tremendous amount of transparency there. As we move through the procurement process and as we sign contracts and so forth, the ACT government will do what it does for all of its projects and what we are required to do, which is to make those cost figures publicly available as contracts go onto contract registers and invoices go onto the payable invoices register.

**THE CHAIR:** We will close this session. On behalf of the committee, I thank all witnesses for their attendance today. If witnesses have taken any questions on notice, could you please provide answers to the committee secretary within five working days? The committee's hearing for today is now adjourned.

**The committee adjourned at 12.31 pm.**