

REVIEW OF AUDITOR-GENERAL'S REPORT NO. 6 OF 2015:
BULK WATER ALLIANCE

STANDING COMMITTEE ON PUBLIC ACCOUNTS

JULY 2016

REPORT 32

COMMITTEE MEMBERSHIP

Current Members

Ms Nicole Lawder MLA	Chair from 18 July 2016 Member from 8 August 2013 to 18 July 2016
Ms Joy Burch MLA	Deputy Chair from 23 February 2016 Member from 21 January 2016 to 23 February 2016
Mr Jayson Hinder MLA	Member from 15 March 2016
Mr Alistair Coe MLA	Member from 18 July 2016 Member from 6 June to 8 August 2013

Former Members

Mr Brendan Smyth MLA	Chair to 15 July 2016 Member to 6 June 2013
Ms Mary Porter AM MLA	Deputy Chair to 19 February 2016
Ms Meegan Fitzharris MLA	Member from 10 February 2015 to 21 January 2016
Ms Yvette Berry MLA	Member from 5 August 2014 to 10 February 2015
Dr Chris Bourke MLA	Member to 5 August 2014
Mr Zed Seselja MLA	Chair to 6 June 2013

SECRETARIAT

Dr Andréa Cullen AGIA ACIS	Secretary
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RESOLUTION OF APPOINTMENT

The Legislative Assembly for the ACT appointed the Standing Committee on Public Accounts on 27 November 2012.

Specifically the resolution of 27 November 2012 establishing the Standing Committees of the 8th Assembly, as it relates to the Public Accounts Committee states:

(1) The following general purpose standing committees be established and each committee inquire into and report on matters referred to it by the Assembly or matters that are considered by the committee to be of concern to the community:

(a) a Standing Committee on Public Accounts to:

(i) examine:

(A) the accounts of the receipts and expenditure of the Australian Capital Territory and its authorities; and

(B) all reports of the Auditor-General which have been presented to the Assembly;

(ii) report to the Assembly any items or matters in those accounts, statements and reports, or any circumstances connected with them, to which the Committee is of the opinion that the attention of the Assembly should be directed;

(iii) inquire into any question in connection with the public accounts which is referred to it by the Assembly and to report to the Assembly on that question; and

(iv) examine matters relating to economic and business development, small business, tourism, market and regulatory reform, public sector management, taxation and revenue;¹

TERMS OF REFERENCE

The Committee's terms of reference were to examine the Audit report and report to the Legislative Assembly.

¹ ACT Legislative Assembly, *Minutes of Proceedings*, No. 2, 27 November 2012, pp. 24–27.

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RECOMMENDATIONS

RECOMMENDATION 1

7.19 The Committee recommends that the ACT Government ensure that appropriate records are retained about the scoping of infrastructure projects and decisions made in relation to their design, delivery and procurement methods to ensure that all key project management decisions are evidenced and justified.

RECOMMENDATION 2

7.41 The Committee recommends that the ACT Government take appropriate steps to ensure that a communication strategy is developed for all major infrastructure projects to ensure that all stakeholders, the Legislative Assembly and the community receive timely information about the budget allocated for projects, the purpose and design of projects, any significant increases in project costs that occur, as well as the emergence of factors that may contribute to delay in project completion.

RECOMMENDATION 3

7.48 The Committee recommends that the ACT Government develop guidelines for the procurement of major public infrastructure when using alliancing contracting arrangements. This information should be presented in a format for future reference and be publicly available.

RECOMMENDATION 4

7.50 The Committee recommends that the responsible Minister inform the ACT Legislative Assembly about how Icon Water has applied the lessons learned from the Bulk Water Alliance to its alliance arrangement for the delivery of capital works at the Lower Molonglo Water Quality Control Treatment Centre (at the completion of the Project).

1 INTRODUCTION AND CONDUCT OF INQUIRY

1.1 Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance* (the Audit report) was presented to the Legislative Assembly on 24 June 2015.

1.2 In accordance with the resolution of appointment of the Standing Committee on Public Accounts (the Committee), the Audit report was referred to the Committee for examination.

1.3 The Audit report presented the results of a performance audit that focused on:

...ACTEW's activities in participating in the Bulk Water Alliance for the delivery of the three major water infrastructure projects:

- the Enlarged Cotter Dam;
- the Murrumbidgee to Googong Pipeline; and
- the Googong Dam Spillway.²

1.4 According to the Audit report:

The scope of the audit included consideration of ACTEW's activities to manage and establish the alliance contracting arrangement, to manage costs and its communication with key stakeholders....

The audit did not include consideration of the appropriateness or otherwise of ACTEW, or ACT Government, decisions to proceed with the water infrastructure projects.³

TERMS OF REFERENCE

1.5 The Committee's terms of reference were to examine the Audit report and report to the Legislative Assembly.

CONDUCT OF INQUIRY

1.6 The Government tabled its response to the Audit report on 15 September 2015.

1.7 On 15 October 2015, the Committee received a briefing from the Auditor-General on the Audit report.

² ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 29.

³ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 29.

- 1.8 As noted earlier, under its resolution of appointment, the Committee examines all reports of the Auditor-General which have been presented to the Legislative Assembly. Specifically, its resolution of appointment requires the Committee to ‘inquire into and report’ on all reports of the Auditor-General which have been presented to the Assembly.
- 1.9 The Committee has established procedures for its examination of these reports pursuant to the Assembly resolution.⁴ In accordance with these procedures, the Committee resolved on 10 November 2015 to inquire further into the Audit report.

SUBMISSIONS

- 1.10 The Committee invited written submissions by advertising in the *Canberra Times*, placing a notice on the ACT Legislative Assembly website and by writing to the responsible Minister(s) and other stakeholders, including the Bulk Water Alliance partners⁵. The individuals and organisations who lodged written submission are listed at **Appendix A**. Copies of published submissions can be accessed and downloaded from the Committee’s website.⁶
- 1.11 A submission lodged to the Inquiry requested confidentiality and, in accordance with this request, the Committee received the submission in-confidence. The submitter requested to appear *in-camera* which was duly considered by the Committee. As noted in the Assembly’s guide to *Making a Submission or appearing before a Committee of the Legislative Assembly for the ACT*⁷, not everyone who makes a submission to a committee inquiry will be invited to appear to give further evidence. Decisions to hear evidence *in-camera* rest with the Committee and any such decision is treated very carefully and in a most rigorous and considered way.⁸

PUBLIC HEARINGS

- 1.12 Public hearings were held on 31 March 2016 and 19 April 2016. Witnesses who appeared before the Committee are listed at **Appendix B**. Transcripts of these hearings can be accessed and downloaded from the Committee’s inquiry homepage.⁹

⁴ http://www.parliament.act.gov.au/in-committees/standing_committees/Public-Accounts/pac/referral

⁵ Private sector alliance partners—GHD, the project designer, and contractors Abigroup (now Lend Lease) and John Holland Group.

⁶ http://www.parliament.act.gov.au/in-committees/standing_committees/Public-Accounts/review-of-auditor-general-report-no.-3-of-2015-restoration-of-the-lower-cotter-catchment?inquiry=796126

⁷ Refer page 7, ACT Legislative Assembly, guide to *Making a Submission or appearing before a Committee of the Legislative Assembly for the ACT*. Available at: http://www.parliament.act.gov.au/_data/assets/word_doc/0006/431286/Witness-guide-2013-05-31-rev-final.doc].

⁸ The Committee did not invite the submitter to appear *in-camera*.

⁹ http://www.parliament.act.gov.au/in-committees/standing_committees/Public-Accounts/review-of-auditor-general-report-no.-3-of-2015-restoration-of-the-lower-cotter-catchment?inquiry=796126

- 1.13 The Committee met on 26 July 2016 to discuss the Chair's draft report which was adopted on 26 July 2016.

STRUCTURE OF THE REPORT

- 1.14 The Committee's report is divided into four parts, comprising eight chapters:

Part 1—Context to the Inquiry

- Chapter 1—Introduction and conduct of inquiry
- Chapter 2—Audit background and findings
- Chapter 3—Project alliancing/alliance delivery

Part 2—Views from the Auditor-General

- Chapter 4—The Auditor-General

Part 3—Views of Key stakeholders

- Chapter 5—The Treasurer
- Chapter 6—Icon Water Limited

Part 3—Views of the Committee

- Chapter 7—Committee comment
- Chapter 8—Conclusion

ACKNOWLEDGEMENTS

- 1.15 The Committee thanks all those who contributed to its inquiry by making a submission, providing additional information or appearing before it to give evidence.

2 AUDIT BACKGROUND AND FINDINGS

2.1 This chapter presents an overview of the background to, and key findings of, the Audit.

AUDIT BACKGROUND AND OBJECTIVES

2.2 The objective of the Audit was to provide:

...an independent opinion to the Legislative Assembly on the effectiveness of ACTEW's management of its Bulk Water Alliance and the delivery of its associated infrastructure projects. This includes consideration of whether the governance and administrative arrangements of the Bulk Water Alliance have been appropriate and effective in assisting ACTEW to manage its financial and performance risks in the delivery of the Bulk Water Alliance projects.¹⁰

2.3 The objective and scope of the Audit were developed from late 2013 through 2014. An audit of ACTEW's management of capital works and infrastructure had been included in the Audit Office's 2013–14 Draft Performance Audit Program. However, a Public Interest Disclosure (PID) was referred to the Audit office in August 2013. The entity making the PID made comments concerning ACTEW and ACTEW Voting Shareholders regarding the Enlarged Cotter Dam (ECD) as well as communication regarding this project. The Auditor-General's view was that a performance audit was the most appropriate way to respond to the issues raised.¹¹

AUDIT CONCLUSIONS

2.4 The overarching conclusion of the Audit was:

The Bulk Water Alliance delivered the Enlarged Cotter Dam, Murrumbidgee to Googong Pipeline and the Googong Dam Spillway. However, the Enlarged Cotter Dam's final cost of \$410.5 million exceeded its final estimated cost of \$363.0 million (Bulk Water Alliance's Final Target Outturn Cost of \$299.0 million and ACTEW's costs of \$64.0 million), as approved on 1 September 2009, and was overdue by 20 months. An earlier pre-Bulk Water Alliance estimate of \$145.0 million, developed by ACTEW and presented to the ACT Government in 2007, was preliminary and did not include all of the anticipated costs. The Murrumbidgee to Googong Pipeline cost \$140.5 million, less than the final estimated cost of \$154.5 million and was overdue by 3 months. The

¹⁰ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 28.

¹¹ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, pp. 27–28.

Googong Dam Spillway cost \$54.0 million, less than the final estimated cost of \$56.0 million and was overdue by 8 months. The three project's combined cost of \$605.0 million is an increase of 5.5 percent over the combined final budgeted costs.

Despite the cost overrun for the Enlarged Cotter Dam and all three projects being overdue, ACTEW's use of an alliance to deliver it and the Murrumbidgee to Googong Pipeline project was appropriate and effective, although some aspects could have been improved. The merits of including the Googong Dam Spillway project in the alliance have not been evidenced.

While an Enlarged Cotter Dam 'lean' Target Outturn Cost was designed to encourage better performance and minimise overall costs it proved to be too 'lean' as some costs were based on unrealistic construction schedules. Unforeseeable events, including the 1:100 year flood, while impacting on schedule and cost do not fully account for the extent of the overrun.

While there were delays in providing cost information about the Enlarged Cotter Dam to the public there is no documented evidence that ACTEW or the ACT Government sought to deliberately mislead or deceive the public.¹²

- 2.5 The Auditor-General made a number of specific conclusions with regard to each of the Audit themes—planning for the Bulk Water Alliance; establishment and management of the Alliance; ECD project timing and budget; and communication. These are outlined below.

PLANNING FOR THE BULK WATER ALLIANCE

- 2.6 In relation to planning for the Bulk Water Alliance, the Audit concluded that 'an alliance was an effective procurement model and means to manage the construction of the Enlarged Cotter Dam as it was a high value, complex, long term project with a number of unknown factors (prior to construction).' The Audit also concluded that the decision to proceed with an alliance for this project was consistent with the *National Alliance Contracting Guidelines: Guide to Alliance Contracting*.¹³
- 2.7 Further, the Audit concluded that while an alliance model was also appropriate for the Murrumbidgee to Googong Pipeline given the risks involved, the appropriateness of including the Googong Dam Spillway in the Alliance was not able to be determined.¹⁴
- 2.8 As to the selection of Bulk Water Alliance Non-Owner Participants, the Audit concluded that this accorded with better practice elements of the *Project Alliancing Practitioners' Guide*.¹⁵

¹² ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 2.

¹³ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 2.

¹⁴ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 2.

¹⁵ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, pp. 2–3.

ESTABLISHMENT AND MANAGEMENT OF THE ALLIANCE

- 2.9 With regard to establishment and management of the Alliance, the Audit concluded that:
- The Final Target Outturn Cost for the ECD—which was \$299.0 million at 1 September 2009—‘was based on optimistic and ambitious production targets, resulting in unrealistic expectations for the cost and timeliness of the project.’¹⁶
 - The risk allocation (contingency sum) that was built into the Final Target Outturn Cost—\$22.0 million or 7.3 per cent—was low given the size and complexity of the ECD project.¹⁷
 - The ‘process for identifying and assigning a dollar value for the contingency’ was inadequate as it did not take into account the interdependency of various production components and risks associated with the ECD.¹⁸
 - ACTEW had negotiated the Final Outturn Cost of \$299.0 million down from a Pre-Final Target Outturn Cost figure of \$310.9 million. However, during negotiations ACTEW ‘agreed to a revised gain-share/pain-share mechanism for the project’ which ‘was commercially advantageous to the Non-Owner Participants.’¹⁹
 - The ‘direct costs associated with the project...exceeded Final target Outturn Cost estimates by \$81.8 million (31.0 percent)’ and this additional cost was shared between Bulk Water Alliance participants.²⁰
 - ‘ACTEW’s management of the Bulk Water Alliance was effective with respect to governance...; administrative arrangements...; systems and processes; and the monitoring and reporting of the implementation of the projects.’²¹

ENLARGED COTTER DAM PROJECT TIMING AND BUDGET

- 2.10 The Audit concluded that a number of factors contributed to increased time and costs of the ECD project. These included:
- a previously undetected geological fault at the base of the abutment of the dam (not a reasonably foreseeable risk);
 - a slower than forecast rate of progress in excavating and cleaning up the foundations of the dam (a foreseeable risk);
 - slower than anticipated placement of roller compacted concrete in the dam wall (a foreseeable risk); and

¹⁶ ACT Auditor-General’s Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 3.

¹⁷ ACT Auditor-General’s Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 3.

¹⁸ ACT Auditor-General’s Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 3.

¹⁹ ACT Auditor-General’s Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 3.

²⁰ ACT Auditor-General’s Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 3.

²¹ ACT Auditor-General’s Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 3.

- additional work undertaken to prepare for, and mitigate, flood events at the site (some of which were not foreseeable risks).²²

2.11 According to the Audit:

While a decision was made comparatively early in the construction phase of the project to change the scope of the project and increase the project's flood mitigation diversion capacity, the diversion was ultimately inadequate in dealing with the February/March 2012 flood event.²³

COMMUNICATION

2.12 With regard to communication, the Audit report concluded that information on expected cost increases were provided to the Chief Minister, Deputy Chief Minister and the Legislative Assembly.²⁴

2.13 The Audit also concluded that there were 'two instances where more care could have been taken' to check the accuracy of information provided to the community and to the Legislative Assembly about the reasons for the increase in the cost of the ECD project.²⁵

AUDIT FINDINGS

2.14 The Audit made a number of specific findings with regard to each of the four audit themes—planning for the Bulk Water Alliance; establishment and management of the Alliance; ECD project timing and budget; and communication—to support its conclusions. Further detail on these can be accessed from the Audit report.

AUDIT RECOMMENDATIONS

2.15 The Audit report did not make any recommendations.

²² ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, pp. 3–4.

²³ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 4.

²⁴ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 4.

²⁵ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 4.

AUDITEE(S) RESPONSE(S)

PRIVATE SECTOR ALLIANCE PARTNERS

2.16 The Audit report points out that:

Icon Water Limited (formerly ACTEW Corporation Limited); Chief Minister, Treasury and Economic Development Directorate; and the Chief Minister (ACTEW Voting Shareholder) were provided with:

- a draft proposed report for comment. Comments received were considered and required changes were included in the final proposed report; and
- a final proposed report for further comment.

Sections of the draft and proposed final report were sent to other relevant entities as was considered appropriate.

The Bulk Water Alliance partners, Icon Water Limited (formerly ACTEW Corporation Limited), GHD and Lend Lease (formally Abigroup) and John Holland Group, provided a consolidated response.²⁶

2.17 In its response, the Bulk Water Alliance partners pointed out:

The Bulk Water Alliance (BWA) was responsible for the delivery of a program of works comprising six projects, three of which are the subject of this audit. Two of the six projects – the construction of the enlarged Cotter Dam and the Murrumbidgee to Googong pipeline – were critical to achieving water security for the ACT, while the third—the Googong Dam Spillway upgrade – was essential to secure the long term safety of a major water supply asset.

....

All projects completed by the BWA provided lessons learned for the alliance partners, many of which are identified in this audit report. These are lessons that Icon Water is taking forward to its latest (though smaller) water infrastructure projects. Similarly, GHD is already applying construction lessons to overseas projects where there is a demand for improved dam aesthetics and John Holland has rolled out key safety initiatives from the project across the rest of its business. The work completed by this audit, along with the BWA's own Value for Money reports, ensures that those involved and others undertaking similar work have a detailed record of successes and lessons learned from these projects.

The BWA partners and their employees remain immensely proud of their involvement in this significant construction, achieved through collaboration and innovation. We are

²⁶ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 17.

proud of the positive legacy the Cotter Dam project leaves for the people of Canberra and the surrounding areas. Most importantly, despite the huge safety challenges, the project was completed without loss or major injury, with all personnel returning safely home to their families.²⁷

GOVERNMENT RESPONSE

2.18 The Government tabled its response to the Audit report in the Legislative Assembly on 15 September 2015.²⁸

2.19 In its response, the Government stated:

The Audit Report concludes that ACTEW's use of the alliance arrangement to construct and deliver the projects was appropriate and effective, and conformed to best practice guidelines while suggesting that some processes could have been better implemented.

The Audit Report also investigated certain claims made in a public interest disclosure... The Audit Report found that there was no evidence to suggest that ACTEW or the Government sought to mislead or deceive the public in relation to the project costs, as claimed by the entity initiating the PID.

Icon Water welcomes the Audit Report and acknowledges that there have been "lessons learned" from the alliance arrangement which will be carried forward by the alliance partners in future infrastructure projects.

There were no recommendations in the Audit Report, however the Government is in general agreement with the findings and conclusions and acknowledges the successful outcome of these important infrastructure projects for the Territory.²⁹

2.20 Further, in its response, the Government noted that:

...the Auditor-General's Report on the Bulk Water Alliance, which accepts that the alliance model selected to manage the three major water security projects was appropriate and effective, and the process conformed with best practice guidance.

The Audit Report clearly illustrates the extent of the challenges and inherent risks associated with the planning, preparation, design and the construction of major infrastructure projects. Major projects can involve certain risks beyond the control of the alliance partners.

...there were cost overruns beyond the control of project management for the Enlarged Cotter Dam project. This includes the impact of significant periods of bad

²⁷ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, pp. 17–18.

²⁸ Available at: http://www.parliament.act.gov.au/_data/assets/pdf_file/0008/773423/Government-Response-to-AG-Report-No-6-of-2015-Bulk-Water-Alliance-tabled-2015-09-15.pdf

²⁹ ACT Government. (2015) Government response to ACT Auditor-General's Report No. 6 of 2015 on the Bulk Water Alliance, 15 September, p. 4.

weather, three flood events and the discovery of the geological fault which all contributed to delays and increased costs. The other two projects, whilst they were not completed on time were delivered under budget.

The community now has much improved water storage capacity which will provide security against future climate change impacts and avoid having to resort to severe water restrictions during periods of prolonged drought.

...the Audit Report found no evidence to suggest that ACTEW or the Government deliberately misled the public in reporting changes to the costs of the dam during the planning and construction phases.

The detailed findings and conclusions of the Audit Report, in the main, outline the day to day management of the dam's construction through the alliance mechanism. Icon Water has acknowledged that all the projects completed by the BWA provided "lessons learned" for the alliance partners and Icon Water will take these into consideration with future projects.³⁰

³⁰ ACT Government. (2015) Government response to ACT Auditor-General's Report No. 6 of 2015 on the Bulk Water Alliance, 15 September, pp. 5–6.

3 PROJECT ALLIANCING/ALLIANCE DELIVERY

3.1 The concept of project alliancing underpins the Bulk Water Alliance (BWA)—the focus of the Audit. A project alliance is one example of a “partnering” arrangement or methodology available to the public sector for infrastructure procurement and delivery of public services.³¹

3.2 A partnering arrangement or methodology in this context is defined as:

...any mutually beneficial commercial procurement relationship between public and private sector parties that involves a collaborative approach to achieving public sector outcomes.

The 2 main variables in a partnering arrangement are:

- the type of relationship between the public and private sector parties; and
- the nature of the outcome and how it is to be achieved.³²

3.3 In the case of project alliancing—it differs from traditional procurement with regard to risk sharing and, in the main, uses a selection process for alliance partners focused on qualitative criteria with less of a focus on price as a key criterion. A landmark study—*In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector* (2009)—on the use of project alliancing in Australia:

...confirmed that alliancing can provide real benefits in the delivery of public infrastructure and has a place in the suite of other established procurement methods that are available to governments. This is welcome where it can demonstrably deliver incremental public value over other alternatives and reduces the cost of industry engaging with governments.³³

3.4 Importantly, the Study also identified that the:

...adoption of alliancing by government raises some matters which must be carefully managed in the interest of delivering value to the taxpayer. Alliancing is a very sophisticated development in delivering major infrastructure and agencies must fully understand the opportunities and tradeoffs that may be required.³⁴

³¹ Office of the Auditor-General. (2006) *Achieving public sector outcomes with private sector partners*, Wellington NZ, February; Tamburro, N. and Wood. P. (2013) *Alliancing in Australia: competing for thought leadership*, *Proceedings of the ICE - Management, Procurement and Law*, Volume 167, Issue 2, October 2013 pp. 75–82.

³² Office of the Auditor-General. (2006) *Achieving public sector outcomes with private sector partners*, Wellington NZ, February, p. 4.

³³ Department of Treasury and Finance, Victoria. (2009) *In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector*, October, p. viii.

³⁴ Department of Treasury and Finance, Victoria. (2009) *In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector*, October, p. viii.

- 3.5 Project alliancing was introduced into Australia in the mid-1990s—with the Wandoo Alliance (1994)³⁵—and by approximately 2005 was considered a leading method for procurement and delivery of major infrastructure.³⁶ In the first instance, it was used for the procurement of oil and gas, and then road and rail infrastructure followed by uptake with water infrastructure projects.³⁷ As to delineation across sectors—from 1996 to 2009, whilst the use of alliancing in the private sector has remained relatively static, it has increased exponentially in the public sector, in particular from around 2005.³⁸

PROJECT ALLIANCE

- 3.6 As a form of “partnering”—in a project alliance, the public and private sector parties:
- ...work together as an integrated team to deliver a specific project where their commercial interests are aligned with actual project outcomes. The team is selected on a “best-for-project” basis, and may include designers, constructors, and suppliers. The team is provided with incentives to achieve high performance, and all members commit to working through collaboration, innovation, and mutual support.³⁹
- 3.7 Project alliance arrangements are usually established:
- ...to design and build infrastructure, often when there are many uncertainties related to the project that may result in significant risks.⁴⁰
- 3.8 A project alliance arrangement requires:
- performance obligations to be stated as collective as opposed to individual, with an equitable sharing of risk and reward, and adoption of a “no blame, no dispute” culture;
 - governance of the project by a Project Alliance Board (or equivalent), including representatives from all parties, with agreement that all decisions must be unanimous;
 - day-to-day management of the project by a project team that operates as a separate entity from each of the public and private sector parties involved in the alliance agreement; and
 - a transparent and “open-book” approach towards all financial matters, including cost and profit.⁴¹

³⁵ The Wandoo Alliance—delivered an operating offshore oil platform (Bunbury, WA) ahead of schedule and under budget.

³⁶ Tamburro, N. and Wood, P. (2013) Alliancing in Australia: competing for thought leadership, *Proceedings of the ICE - Management, Procurement and Law*, Volume 167, Issue 2, October 2013 pp. 75–82.

³⁷ Department of Treasury and Finance, Victoria. (2009) *In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector*, October.

³⁸ Department of Treasury and Finance, Victoria. (2009) *In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector*, October, p. 8.

³⁹ Office of the Auditor-General. (2006) *Achieving public sector outcomes with private sector partners*, Wellington NZ, February, p. 5.

⁴⁰ Office of the Auditor-General. (2006) *Achieving public sector outcomes with private sector partners*, Wellington NZ, February, p. 24.

3.9 Some key features of project alliance arrangements—across three key facets—include:

SELECTION PROCESS⁴²:

- The selection process for choosing alliance participants is normally based on quality criteria alone. The private sector participants are usually selected solely on their technical and quality attributes, and the budget is usually not agreed between the parties until after the selection process has been completed. This means that there is uncertainty about the budget for a long period, and a risk that the whole process could be aborted after significant resources have already been invested in reaching this stage.

ESTABLISHMENT⁴³:

- Costs will be incurred in establishing the project team, and creating and maintaining the alliance culture. The overall value-for-money assessment should take these costs into account.
- A significant amount of work is required to establish an alliance—including the target outturn cost—as well as a need for ongoing team building. Because of the “upfront effort” required, an alliancing approach would not be suitable for small projects. However, project size needs to be balanced against projects that might benefit from an alliancing approach, such as where a lot of stakeholders are involved, environmental issues are paramount, and superior outcomes are required.
- There is a long period of uncertainty before the target outturn cost is known, and a risk that it will not be possible to agree the target outturn cost when considerable investment has already been made by all participants to reach this stage. There is also a risk that project costs will exceed the target outturn cost. In this circumstance the additional costs are borne by all participants in pre-agreed proportions.
- Establishment of a Project Alliance Board (PAB)—which usually includes one or two representatives of the public entity and from each of the contractors. The PAB provides governance, sets policy and delegations, and monitors performance.
- For an alliancing approach to be effective, it is important that the public entity to the arrangement possesses expertise in this type of approach.

⁴¹ Office of the Auditor-General. (2006) *Achieving public sector outcomes with private sector partners*, Wellington NZ, February, p. 5.

⁴² Office of the Auditor-General. (2006) *Achieving public sector outcomes with private sector partners*, Wellington NZ, February, pp. 5; 28.

⁴³ Office of the Auditor-General. (2006) *Achieving public sector outcomes with private sector partners*, Wellington NZ, February, pp. 28; 30; 58; 59; 28.

RISK SHARING⁴⁴:

- Participants collectively assume all risks associated with the project, regardless of whether these risks are within the control of the alliance and whether participants have considered them in advance (this excludes any risks that the alliance participants specifically agree to retain individually). It is also noted that financial consequences of risks that materialise are usually shared only up to the point where private participants' profits are lost. Beyond this point, risks are usually borne solely by the public sector participant.
- The risk-sharing basis of the alliance means that situations that would be treated as variations under a traditional contract are usually not considered to be variations under an alliance. However, it is usual for certain situations to be treated as "scope variations"—for example, if the public sector party changes the fundamental function or design requirements of the contract. Project alliance participants need to be clear on what should or should not be treated as a scope variation before the target cost is finalised.

ITERATIONS OF PROJECT ALLIANCING IN AUSTRALIA

3.10 Since its introduction as a method for procurement and delivery of major infrastructure in the mid-1990s, project alliancing has undergone a series of developments. Its maturation as a viable project delivery methodology can be mapped across a series of iterations and in response to a number of key drivers. These are set out Table 3.1—Iterations of project alliancing in Australia (1994 to present).

3.11 The summary of the maturation of project alliancing in Australia at Table 3.1 demonstrates that it has evolved as a project delivery methodology over the last two decades and, in the main, this has been driven by continuous improvement. Continuous improvement, in the context of its use in the public sector, has been concerned with structuring an alliance so that optimal value for money for taxpayers is achieved.

3.12 As a result, the characteristics for selecting an alliance delivery method have thus changed over time. The landmark study referred to earlier found:

As the Australian market has changed and matured over time, so too has the alliance delivery method...From its inception in Australia in 1994, alliancing was chosen to reduce development costs, share risks, avoid disputes, and minimise use of the Owner's management team. Fifteen years later, common characteristics for using an alliance noted in various government guidelines include a need for Owner involvement, complex interfaces, tight timeframes, complex and/or unpredictable risks, complex external threats or opportunities, and scope or output specifications which cannot be clearly defined upfront.⁴⁵

⁴⁴ Office of the Auditor-General. (2006) *Achieving public sector outcomes with private sector partners*, Wellington NZ, February, pp. 32; 50.

⁴⁵ Department of Treasury and Finance, Victoria. (2009) *In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector*, October, p. 52.

Table 3.1—Iterations of project alliancing in Australia (1994 to present)⁴⁶

Iteration	Key drivers/events	Key references/documents
1—From mid-1990s	<ul style="list-style-type: none"> ▪ Governments perceived traditional procurement models to be adversarial and adopted alliancing to move from a risk allocation focus to (purportedly) a risk-sharing approach. 	UK oil and gas industry projects
2—From 2004 to 2009	<ul style="list-style-type: none"> ▪ Alliancing was perceived as a model for achieving exceptional outcomes and value for money without the need for price competition. ▪ Alliancing increased exponentially in the public sector and became the preferred contract model for infrastructure by non-departmental agencies, such as water and road authorities. ▪ Clients embraced the new procurement model but without the success of the oil and gas industries. Suppliers benefiting from the commercial capability and capacity gaps in client agencies were able to maximise their own commercial self-interest. 	
3—From early 2009	<ul style="list-style-type: none"> ▪ Central government authorities, like the treasuries in NSW, Vic, QLD and WA, became concerned about the gap between claims that alliancing was delivering outstanding outcomes and the massive cost increases seen over business case estimates, all taking place in a non-competitive environment. ▪ As a result, independent research was commissioned to assess the value for money delivered through alliancing. 	Research was commissioned by an Inter Jurisdictional Alliance Steering Committee and the Department of Treasury and Finance in Victoria. This was published <i>In Pursuit of Additional Value: A Benchmarking Study into Alliancing in the Public Sector</i> (November 2009).
4—From late 2009	<ul style="list-style-type: none"> ▪ Based on research undertaken, treasuries concluded that central departments should lead thinking about alliancing and collaborated to develop common policy principles and guidelines for the model. ▪ It was recognised that public sector clients should interact robustly with suppliers to protect the public interest. ▪ Alliancing was perceived as a commercial transaction in which parties will act in their own self-interests. It was also seen as a model for delivering major projects with undimensionable project risks; but not as a remedy for poor or absent project planning by the client or a lack of relevant skills. 	<p>The Inter Jurisdictional Alliancing Steering Committee, through the Victorian Department of Treasury and Finance, developed and published policy and guidelines governing alliancing in July 2010.</p> <p>The Australian Federal Government subsequently re-issued these as the <i>National Alliance Contracting policy and guidelines</i> in July 2011.</p>
5—2010 to the present	<ul style="list-style-type: none"> ▪ Clients became more selective about using alliancing as a procurement model. Use of the model reduced and where an alliance was used value for money improved significantly. ▪ The Productivity Commission undertook an inquiry into public infrastructure, including its funding and financing mechanisms (Report No 71 of May 2014). ▪ The terms of reference for the Commission's inquiry were: 'an inquiry into ways to encourage private financing and funding for major infrastructure projects, including issues relating to the high cost and the long lead times associated with these projects.' 	The Australian Federal Government revised (and published) its National Alliance Contracting Guidelines— <i>Guide to Alliance Contracting in September 2015</i> taking into account the Productivity Commission's Report No. 71 of May 2014.

⁴⁶ Department of Treasury and Finance, Victoria. (2009) *In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector*, October; Tamburro, N. and Wood, P. (2013) 'Alliancing in Australia: competing for thought leadership', *Proceedings of the ICE - Management, Procurement and Law*, Volume 167, Issue 2, October 2013 pp. 75–82; Productivity Commission, Report No. 71:Public Infrastructure, May 2014; Office of the Auditor-General. (2006) *Achieving public sector outcomes with private sector partners*, Wellington NZ, February.

4 THE AUDITOR-GENERAL

INTRODUCTION

- 4.1 The Committee heard from Dr Maxine Cooper, the ACT Auditor-General, and an accompanying official, on 19 April 2016 to discuss the Audit report on the BWA.

MATTERS CONSIDERED

- 4.2 In her opening statement, the Auditor-General spoke about the main elements and findings of the Audit. These included:
- While an audit of ACTEW capital works and infrastructure programs was flagged in the draft performance audit program of 2013–14, a public interest disclosure in relation to the ECD was also addressed in the Audit.⁴⁷
 - The Audit was very technical and included ACTEW and its private sector alliance partners—GHD, Abigroup and John Holland Group. Communication matters were also examined.⁴⁸
 - Although the Audit report didn't make any recommendations, the Auditor-General's view was that 'it can be used to inform any future alliance contracting arrangements...'.⁴⁹
 - While ACTEW's use of the alliance to deliver the ECD and the Murrumbidgee to Googong pipeline was 'appropriate and effective', the merits of using the alliance for the Googong spillway 'were not considered to be evidenced.'⁵⁰
 - The 'enlarged Cotter Dam's final cost of \$410.5 million exceeded the final estimated cost of \$363 million established in September 2009.' The \$363 million is comprised of a target outturn cost of \$299 million and ACTEW's costs of \$64 million. The ECD project was delivered 20 months overdue.⁵¹
 - Some cost estimates for the project 'were based on unrealistic construction schedules' and unforeseeable events, such as the one-in-a-100-year flood, 'do not fully account for the extent of the overrun.'⁵²

⁴⁷ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 41.

⁴⁸ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, pp. 41; 42.

⁴⁹ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 43.

⁵⁰ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 42.

⁵¹ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 42.

⁵² Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 42.

- 4.3 With regard to factors which contributed to the increased time and costs of the ECD project, the Auditor-General told the Committee that these included:
- a previously undetected geological fault—not reasonably foreseeable;
 - a slower than forecast rate for excavating and cleaning up the foundations of the dam in preparation for the placement of the dam wall—a foreseeable risk;
 - a slower than anticipated placement of roller compacted concrete in the dam wall—a foreseeable risk; and
 - additional work to prepare for and mitigate flood events at the site—some were foreseeable, others were not.⁵³
- 4.4 With regard to findings concerning communication, the Auditor-General commented:
- ...while there were delays in providing cost information about the enlarged Cotter Dam to the public, there was no documented evidence that ACTEW or the government sought to deliberately mislead or deceive the public.⁵⁴
- 4.5 In the context of using an alliance model for the BWA projects, the Committee was told that:
- The Audit outlines key factors associated with making a decision to use an alliance model for the BWA projects.⁵⁵
 - A gain share, pain share mechanism was used with a ‘flat spot’—this was ‘favourable to the private sector participants’—the Official explained:

We draw attention to the so-called flat spot. We certainly do have the belief in the conclusions and findings that it was advantageous to the non-owner participants. It was a matter of trade-off, I presume, between achieving a lower target outturn cost and having a revised gain share, pain share mechanism. That assessment was made. Those decisions were made by ACTEW at that time, and that arrangement was come up with.⁵⁶
- 4.6 The Committee was interested to hear more about the Audit findings for the BWA projects. Some of the key matters discussed included:
- The appropriateness of the alliance model despite that the Cotter Dam project was delivered 20 months late and over budget.⁵⁷
 - The assumptions which underpinned the schedule of the BWA projects. According to the Auditor-General:

⁵³ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 42.

⁵⁴ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 42.

⁵⁵ Mr Brett Stanton, *Transcript of evidence*, 19 April 2016, p. 43.

⁵⁶ Mr Brett Stanton, *Transcript of evidence*, 19 April 2016, p. 51.

⁵⁷ *Transcript of evidence*, 19 April 2016, pp. 44; 45.

A model will never stop the human assumptions that underpin, if you like, the schedule. I think you can make a distinction between the two. We have criticised them in terms of unrealistic assumptions and expectations. That is how I conceptualise the difference: an appropriate model, but within that model there are some decisions that have to be made, and in making those particular decisions, their estimations were not correct.⁵⁸

- The doubts about the merits and benefits of including the spillway in the BWA projects.⁵⁹
- The shortcomings in the estimate for the ECD which was 'very ambitious in terms of the placement' and 'the contingency amount identified for the project was low for a project of this size.'⁶⁰
- The Audit finding that 'some of the increased costs associated with the dam were due and attributable to the major flood event, but not all.'⁶¹
- Whether the geological fault at the Cotter Dam was reasonably foreseen—an official explained:

The advice that we had was that the geological testing that was done for the project was appropriate. The methodology, or essentially the placement of the bore holes, was reasonable. The advice that we had was that the fault itself fell between two of those bore holes and was undetected. That is the best advice that we have.⁶²

- How the community can be kept better informed regarding costs and risks—according to the Auditor-General:

Again, you make sure all the risk factors are put out there. The audit would say you put them out there at the same time. You say, "We know this amount, but there are a whole lot of other factors we don't know, that we are assuming.' So always put out your risk factors and your assumptions so that everything is transparent.⁶³

⁵⁸ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 45.

⁵⁹ Mr Brett Stanton, *Transcript of evidence*, 19 April 2016, p. 46.

⁶⁰ Mr Brett Stanton, *Transcript of evidence*, 19 April 2016, pp. 46; 47.

⁶¹ Mr Brett Stanton, *Transcript of evidence*, 19 April 2016, p. 49.

⁶² Mr Brett Stanton, *Transcript of evidence*, 19 April 2016, p. 50.

⁶³ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 52.

5 THE TREASURER

INTRODUCTION

- 5.1 The Committee heard from the Treasurer and accompanying agency and directorate officials on 31 March 2016 to examine matters relating to the Inquiry.

MATTERS CONSIDERED

- 5.2 The Committee discussed a range of matters pertaining to the Audit report. These matters are organised across the four audit themes with an additional category lessons learned.

PLANNING FOR THE BULK WATER ALLIANCE

ALLIANCE MODEL

- 5.3 The Committee noted the Auditor-General's conclusion that 'the alliance was not an unreasonable vehicle to proceed with this' and asked whether the Government would consider a similar alliance for other major projects.⁶⁴ In responding, the Treasurer pointed out that the ECD project was a 'generational project' and there were no plans to construct any other new dams in the ACT.⁶⁵

VALIDATION FOR INFRASTRUCTURE PROJECTS

- 5.4 As to the process undertaken for validation of proposals for the delivery of infrastructure, the Under Treasurer explained that all proposals put to the Government were analysed, 'particularly coming from a minister to cabinet, to budget cabinet.' The Under Treasurer indicated that the extensiveness of the validation process varied according to 'the risk and scale of the project'. For example, in the case of the light rail project, independent expert costing advice was obtained and there were 'several rounds of costings'. For other projects, however, 'in-house analysis' may be undertaken. Analysis may involve benchmarking with other projects and other jurisdictions; and discussions and negotiations with proposing agencies to test the assumptions used. Where there is an unsolicited bid, the costs internally to government are assessed and proponents may be engaged to test assumptions. The Under

⁶⁴ Ms Joy Burch MLA, *Transcript of evidence*, 31 March 2016, p. 5.

⁶⁵ Mr Andrew Barr MLA, *Transcript of evidence*, 31 March 2016, p. 5.

Treasurer emphasised that he places 'a very high degree of importance on providing the government with the best costing information' before it makes a decision and that this '...is a very important part of the job of Treasury.'⁶⁶

INTERNAL REVIEWS UNDERTAKEN BY TREASURY AS THE COST OF COTTER DAM CONSTRUCTION INCREASED

5.5 The Committee asked what internal reviews had been undertaken by Treasury when the costs of the ECD construction increased. A directorate representative explained how Treasury relied on the advice of ACTEW which had obtained expert advice. An 'independent estimator' was used 'to review the costings of 2005 and 2007.' Also, around 2009, 'an independent review of the costings' was undertaken 'as that figure of \$363 million became the final figure for the TOC.' It was pointed out that there were no firm figures until the TOC was determined in mid-2009.⁶⁷ The Committee was also told that the Independent Competition and Regulatory Commission (ICRC) had also reviewed the cost estimates.⁶⁸

5.6 In conclusion, the Committee was advised:

...there was a large amount of advice provided by ACTEW which we reviewed, but, as we said, our view is to look at this and ask is it prudent, is it pragmatic, is it supported by experts? Overwhelmingly, ACTEW was being advised by experts in building dams.⁶⁹

ASSESSMENT OF COSTING(S)

5.7 The Committee inquired on a project of the size of the BWA whether the Government should have had its own expert look at the numbers. It heard:

One might argue that we did have that because we had the ACTEW Corporation, which was running our water projects and our water supply. They are the experts. The territory has set up a regime where it is a territory-owned corporation. It has legislation applying both at the territory level and the commonwealth as a company. The territory appoints a board of experts who then appoint a managing director who in turn appoints senior management. I do not think it is Treasury's role to come over the top of that and say they are wrong. We rely on the expertise of those various levels of governance and accountability and expertise to then advise us and then we, in turn, advise the government.⁷⁰

⁶⁶ Mr David Nicol, *Transcript of evidence*, 31 March 2016, pp. 7; 8.

⁶⁷ The final Target Outturn Cost was agreed by the Bulk Water Alliance in August 2009 and endorsed by the ACTEW Board in September 2009 [refer ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 75].

⁶⁸ *Transcript of evidence*, 31 March 2016, p. 9.

⁶⁹ Mr Neil Bulless, *Transcript of evidence*, 31 March 2016, pp. 8; 9.

⁷⁰ Mr Neil Bulless, *Transcript of evidence*, 31 March 2016, p. 9.

5.8 The Under Treasurer added that when looking at costs proposed by others, Treasury looks at 'the evidence...as to what process is gone through to determine these costs.'⁷¹ The Under Treasurer explained that if the process was robust, in certain circumstances, he would accept the advice of experts. However, if the 'costs were significantly large' and he questioned the expertise or perspective of the experts providing the advice, he may recommend that further costing advice be sought.⁷² As for the Cotter dam project, the Under Treasurer added that his:

...personal judgment is that it was reasonable to rely on the expertise that was presented through Icon for the costs of this project.⁷³

5.9 When asked how a determination is made whether or not you have got appropriate expertise to validate costings, the Under Treasurer explained that, in the case of Capital Metro, 'the best costing people in the business' were hired through a tender process. The Under Treasurer explained that Treasury examines the information provided by experts and interrogates the modelling, assumptions and costings and that 'a lot of experience and expertise and judgment' is used in these assessments and the forming of a view as to the appropriateness of cost proposals.⁷⁴

5.10 The Committee also heard that every project has risks and while 'you cannot foresee the future on every risk' there are processes 'to try to cost in risk'. With regard to the Cotter Dam project, 'some of the cost increases were largely due to events outside the control of the project team.'⁷⁵

ESTABLISHMENT AND MANAGEMENT OF THE ALLIANCE

SELECTION OF APPROPRIATENESS OF CONTRACT METHOD

5.11 The Committee noted the long-term nature of the BWA projects and asked whether an alliance was still considered 'to be the best way to go forward'.⁷⁶ The Under Treasurer responded:

I think each project is different and should be assessed on its merits as to what the best contracting method is. I am talking particularly of larger projects. ...I accept the auditor's finding this was an appropriate contracting method for this project. I have not done an assessment about whether I would have a different view or not.⁷⁷

⁷¹ Mr David Nicol, *Transcript of evidence*, 31 March 2016, p. 9.

⁷² Mr David Nicol, *Transcript of evidence*, 31 March 2016, pp. 9; 10.

⁷³ Mr David Nicol, *Transcript of evidence*, 31 March 2016, p. 10.

⁷⁴ Mr David Nicol, *Transcript of evidence*, 31 March 2016, p. 10.

⁷⁵ Mr David Nicol, *Transcript of evidence*, 31 March 2016, p. 10.

⁷⁶ Mr Jayson Hinder MLA, *Transcript of evidence*, 31 March 2016, p. 15.

⁷⁷ Mr David Nicol, *Transcript of evidence*, 31 March 2016, p. 16.

5.12 The Under Treasurer explained that when thinking about the contracting method for a project—important considerations include risk allocation and cost. It was explained that some ‘procurement and contracting methods cost a lot more just in the legal and administrative arrangements.’⁷⁸

5.13 The Under Treasurer further explained that a private public partnership (PPP), for example, is ‘higher cost’ but ‘is really a form of insurance’ because of the transfer of risk and pointed out that:

For risks that you understand, know of and can generally manage, it is much easier to do a more traditional form of contracting.⁷⁹

5.14 The Under Treasurer said:

You learn your lessons from looking at these projects and seeing what contracting forms are used but, really, my view would be that you assess contracts on a case-by-case basis and come up with a judgement and expert opinion advice.⁸⁰

5.15 The Under Treasurer added that the skills of the people managing the contracts was also an important consideration, emphasising that:

You cannot just go into a new contracting form without the necessary skills and expertise to manage it...⁸¹

LESSONS LEARNED REGARDING INCENTIVES

5.16 The Committee inquired as to whether any lessons were to be learned about where incentives are directed in contractual arrangements. The Under Treasurer commented:

...speaking in generalities—not for this project—incentives are useful things to consider. I think one example is that we used incentives in the construction of the car park for Calvary; so if they beat the date, we shared the benefit, and that provides a pretty significant incentive for a contractor to build. But incentives are a double-edged sword. You want to make sure it is built right and safely and all of those sorts of things as well. So incentives have to be used very carefully and in the right circumstance, but I think in the right circumstance they can be effective.⁸²

⁷⁸ Mr David Nicol, *Transcript of evidence*, 31 March 2016, p. 16.

⁷⁹ Mr David Nicol, *Transcript of evidence*, 31 March 2016, p. 16.

⁸⁰ Mr David Nicol, *Transcript of evidence*, 31 March 2016, p. 16.

⁸¹ Mr David Nicol, *Transcript of evidence*, 31 March 2016, p. 16.

⁸² Mr David Nicol, *Transcript of evidence*, 31 March 2016, p. 17.

ENLARGED COTTER DAM PROJECT TIMING AND BUDGET

COST AND TIME OVERRUNS

- 5.17 The Committee was interested to hear the Treasurer's views regarding whether the cost and time overruns that occurred with the ECD project had been resolved to satisfaction.
- 5.18 The Treasurer referred to the Government's response to the Audit report which was tabled in the Legislative Assembly. The Treasurer pointed out the Audit finding that the alliance model was an appropriate and effective mechanism for the management of the BWA projects. The Treasurer acknowledged that cost overruns 'beyond the control of the project management for the enlarged Cotter Dam project' attributed to bad weather, flood events and the discovery of a geological fault had 'all contributed to delays and increased costs.' The Treasurer also pointed out that two⁸³ of the Alliance projects 'were delivered under budget and that Icon Water will take lessons learned into account in future projects'.⁸⁴

FACTORS CONTRIBUTING TO COST OVERRUNS

- 5.19 The Committee discussed the time and cost overruns of the ECD project and factors that had contributed to these, including the detection of a geological fault at the base of the abutment of the dam, and the slower than expected rate of progress and excavation and clean up. As to the contribution of each factor to costs, the Treasurer pointed out that a 'detailed reconciliation of the different elements of contribution to the final cost I think is publicly available' and this information would be provided to the Committee.⁸⁵

COMMUNICATION

ADEQUACY OF INFORMATION FLOW

- 5.20 The Committee asked the Treasurer whether the flow of information from the ACTEW Board and to the community had been adequate. The Treasurer advised that he was not a shareholder until 2011 and was not in a position to speak for the former Chief Minister or the former Deputy Chief Minister.⁸⁶
- 5.21 The Committee sought advice from the Treasurer as to when and how Cabinet first became aware of the geological fault; when the geological fault was first brought to Treasury's

⁸³ Murrumbidgee to Googong Pipeline project [final cost of the Project was \$140.5 million, compared with the Final Target Outturn Cost plus Owner costs of \$154.5 million] and Googong Dam Spillway project [the final cost of the Project was \$54.0 million, compared with the Final Target Outturn Cost plus Owner costs of \$56.0 million]—refer ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 10.

⁸⁴ Mr Andrew Barr MLA, *Transcript of evidence*, 31 March 2016, pp. 1; 2.

⁸⁵ Mr Andrew Barr MLA, *Transcript of evidence*, 31 March 2016, pp. 6; 7; refer response to QToN #3, 31 March 2016.

⁸⁶ *Transcript of evidence*, 31 March 2016, p. 4.

attention; the cost of the geological fault to the whole project; the cost of the three weather events to the Project; and the process whereby the cost of the Project increased from an initial estimate of \$145 million to \$363 million and to final cost of \$410 million. Responses to these questions were provided on notice.⁸⁷

LESSONS LEARNED ABOUT COMMUNICATING THE COST AND TIMING OF THE PROJECT

- 5.22 The Committee was interested to hear what had been learned from the issues concerning the provision of information to the community and the Legislative Assembly for future large infrastructure projects, and what processes may have been put in place to avoid similar problems happening again. In his response, the Treasurer noted that ACTEW no longer exists and that Icon Water had been established. As to providing the community with information considered by the Board, the Treasurer advised:

As soon as that information was confirmed at a board level it was made publicly available.⁸⁸

- 5.23 When the Committee asked whether communication issues could arise for PPP-type projects, the Treasurer stated that he would reflect on that question.⁸⁹

- 5.24 The Treasurer subsequently provided the following response on notice:

Icon has acknowledged there are valuable lessons for each of the Bulk Water Alliance partners to take forward. The contractual arrangements and risk allocation between the private sector partners and the Territory is quite different for Alliance and PPP contracts. While the experience of the Bulk Water Alliance may provide lessons for other PPPs, the scope of the work can vary greatly across project types and will depend on project specific factors.⁹⁰

COMMUNICATION WITH SHAREHOLDERS THROUGH CABINET

- 5.25 The Committee asked what arrangements had been put in place with Icon Water to avoid issues in relation to communications with the Shareholders through Cabinet. The Treasurer responded:

Certainly there is a more frequent set of meetings, scheduled meetings, between shareholders and both the board chair and deputy chair and then with the board itself. There is information available in relation to board papers and the like. It is obviously

⁸⁷ *Transcript of evidence*, 31 March 2016, pp. 2; 3; Mr Andrew Barr MLA, Responses to QTONs #1-5, 31 March 2016.

⁸⁸ Mr Andrew Barr MLA, *Transcript of evidence*, 31 March 2016, p. 6.

⁸⁹ Mr Andrew Barr MLA, *Transcript of evidence*, 31 March 2016, p. 6.

⁹⁰ Mr Andrew Barr MLA, Response to QTON #6, 31 March 2016.

quite a long and detailed response that I will provide. Again, I think it has already been publicly provided, but I will provide that in writing to the committee.⁹¹

5.26 The Treasurer provided further information on notice.⁹²

LESSONS LEARNED FROM PROJECTS

5.27 The Committee was interested to know whether there was potential to learn lessons from projects completed under budget as well as those that are not. The Committee was told:

...the focus is on those projects where costs exceeded estimates rather than where the costs came under....In a general sense, if a project is run very well, that is noticed and people do absorb lessons as to what went well and what did not....projects generally run well when governance is well specified and well run, when communications are open and encouraged, when you encourage a culture of dealing with problems quickly and effectively and when you set up your processes for managing, designing and implementing well, and they are well understood by everyone.⁹³

5.28 With regard to the ECD and Murrumbidgee projects, the Committee heard that expert advice obtained from consultants by the ICRC was that the estimated capital expenditure for the projects was considered to be robust. That was also reflected in the advice from ACTEW.⁹⁴

5.29 In subsequent discussion, the Committee noted that while some unforeseen events impacted on the schedule and cost of the ECD project, the Auditor-General had concluded that foreseeable events—such as the low efficiency and slower-than-target progress—also contributed to the overrun. The Committee asked how ‘these types of foreseeable, avoidable and overly ambitious schedules’ could be avoided ‘in future large-scale infrastructure projects.’⁹⁵

5.30 The Committee heard that while specific comment could not be provided regarding the BWA projects, broadly speaking, Treasury will assess the ‘aggressiveness of a schedule in a project and give advice to government about the risks of that.’ It also heard that ‘a schedule overrun does not always equate to a budget overrun.’ The Under Treasurer explained that ‘project proponents generally have an unrealistic expectation of how quickly they can roll a project out.’ The Under Treasurer further explained that:

...if a government has a significant infrastructure program, the size of the program may make it more difficult for a government to roll it all out as a whole rather than have

⁹¹ Mr Andrew Barr MLA, *Transcript of evidence*, 31 March 2016, p. 7.

⁹² Refer response to QTON #1 and #2, 31 March 2016.

⁹³ Mr David Nicol, *Transcript of evidence*, 31 March 2016, pp. 11; 12.

⁹⁴ Mr Neil Bulless, *Transcript of evidence*, 31 March 2016, p. 12.

⁹⁵ Ms Nicole Lawder MLA, *Transcript of evidence*, 31 March 2016, p. 13.

individual projects one at a time. One piece of advice Treasury gives government is about the size of their infrastructure program....With a smaller overall program it might be easier to meet an aggressive schedule than with a large program, all things being equal.⁹⁶

5.31 The Under Treasurer pointed out that:

...when you are designing a project program you often design an ideal rollout....Often, however, that is optimal. You very rarely beat a project time line because it is an ideal.⁹⁷

⁹⁶ Mr David Nicol, *Transcript of evidence*, 31 March 2016, p. 14.

⁹⁷ Mr David Nicol, *Transcript of evidence*, 31 March 2016, p. 14.

6 ICON WATER LIMITED

INTRODUCTION

- 6.1 The Committee heard from the Managing Director and other officials from Icon Water on 31 March 2016 to examine matters relating to the BWA.
- 6.2 In his opening statement, the Managing Director of Icon Water Ltd highlighted some of the key features of the BWA projects—including that there were three projects; the ECD project which increased water storage capacity by 35 per cent is one of the 'most significant infrastructure projects in Canberra's history' and had won multiple awards; there was no loss of life or major injury sustained; and lessons learned have been leveraged by all Alliance partners moving forward.⁹⁸

MATTERS CONSIDERED

- 6.3 The Committee discussed a range of matters pertaining to the Audit report. These matters are organised across the four audit themes.

PLANNING FOR THE BULK WATER ALLIANCE

ALLIANCE MODEL

- 6.4 The Committee discussed with officials the rationale for the adoption of an alliance model for the water infrastructure projects and was told:

The reason the alliance model was selected was in recognition of the fact that we did not have all the details that we needed to make a 100 per cent estimate....the total out-turn cost was developed based on 30 per cent of detailed design. That is typical for most alliance projects. The complexity that arises is that you are actually developing the estimate and the design and seeking clarification on whatever environmental obligations may be imposed on you concurrently.⁹⁹

- 6.5 The Committee heard that the alliance model shares the risk of having to make decisions based on limited detail. The Committee was further told that 'the alliance was quite a powerful

⁹⁸ Mr John Knox, *Transcript of evidence*, 31 March 2016, p. 19.

⁹⁹ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 24.

model and one that enabled us to give the ACT and the broader community a solution in a relatively short time. Another 'benefit of the alliance' was having the constructor and the designer collocated full time on the dam site, which enabled a quick response when issues such as the 2012 flood occurred.¹⁰⁰

- 6.6 The Committee asked whether an alliance approach would be used again for future major capital works projects and was told:

The major benefit of the alliance is the risk-sharing model. It depends on the level of risk and the level of complexity of the project. If you are looking at a relatively simple project where the risks are very well known and there is a clear distinction between who is best placed to manage those risks, whether it be, say, Icon Water or a contractor, you would probably go down the path of a traditional contract, a lump sum contract or a variation thereof. You do pay a premium for entering into an alliance, but the assessment you make is as to whether the premium you pay for entering into an alliance is of greater benefit than the potential loss in realising those risks or encountering a risk that you did not bank on.¹⁰¹

- 6.7 It was pointed out that Icon Water currently has another alliance arrangement in place that is delivering capital works at the lower Molonglo water quality control centre and that this work would be informed by lessons learned from the Bulk Water Alliance.¹⁰²

INCLUSION OF THE GOOGONG DAM SPILLWAY IN THE BULK WATER ALLIANCE

- 6.8 The Committee referred to the Auditor-General's comment that the 'appropriateness of including the Googong Dam Spillway in the Bulk Water Alliance is unable to be determined as there was no monitoring or reporting on the expected benefits.' It noted that the Audit concluded that the 'merits of including the Googong Dam Spillway project in the alliance have not been evidenced' and asked how the project came to be included without including those metrics.¹⁰³
- 6.9 An official told the Committee that 'we did not do a very good job' of tracking and quantifying benefits. The Official also told the Committee that 'we wanted to attract a tier 1 type contractor' and was advised we needed to move quickly to engage a contractor given the large amount of activity underway on drought-proofing projects. The Committee heard that the design work to upgrade the Googong Dam spillway had been undertaken and 'was sitting on the shelf effectively.' It was explained that incorporation of the Googong Dam spillway was

¹⁰⁰ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 24.

¹⁰¹ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 25.

¹⁰² Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, pp. 25; 26.

¹⁰³ *Transcript of evidence*, 31 March 2016, p. 26.

seen as a means of engaging services early and having a program with enough critical mass to be attractive to a tier 1 contractor.¹⁰⁴

ESTABLISHMENT AND MANAGEMENT OF THE ALLIANCE

SELECTION OF ALLIANCE PARTNERS

- 6.10 In relation to the selection of partners, the Committee heard that the selection process was developed by transaction advisers. Steps included a request for tender, an assessment process with construction partners nominating key personnel, presentations, and workshops to assess ability to work as a team and under pressure. It was explained that a designer was chosen first and independently of selecting a constructor. Workshops were held to test the ability of parties to work in a collaborative contractor model. Once selected, there was 'a degree of internal regulation' as the designer kept the constructor in check.¹⁰⁵

BENEFITS OF COMMENCING GOOGONG SPILLWAY PROJECT BEFORE THE COTTER DAM PROJECT

- 6.11 The Committee was interested to hear how the Googong Dam Spillway project had helped to remove the start-up issues with a partner prior to the commencement of work on the ECD project.¹⁰⁶
- 6.12 An official from Icon Water responded:

...I think one of the benefits in getting Googong up before the enlarged Cotter Dam project was that when you set up an alliance of this size it is almost like forming an entirely new company complete with its own set of policies, procedures, work instructions, protocols, and that allowed us to get a head start on those things.

It also allowed us to establish the governance frameworks within the actual project delivery space....It allowed us to bed those processes in. And a lot of those processes were simply transferred across....It definitely gave us a head start.

To be honest, it also allowed us to verify the performance of our partners....¹⁰⁷

REALISATION OF BENEFITS

- 6.13 With regard to the realisation of benefits, the Managing Director referred to some technology-based projects such as refreshing the asset management system and stated that 'capturing all the benefits across the program, portfolio or projects is forefront in our mind.'¹⁰⁸

¹⁰⁴ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 26.

¹⁰⁵ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 36.

¹⁰⁶ *Transcript of evidence*, 31 March 2016, p. 38.

¹⁰⁷ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 38.

6.14 An official expressed the view that ‘benefits realisation works pretty well when you have a homogenous set of projects that you can leverage across the component projects.’ The Official added that having a benefits model across the BWA program was difficult as it included a spillway upgrade project, a pipeline project and a new dam. However, the Committee was advised that ‘a lot of lessons learned out of the Googong Dam spillway construction project were transferred across to inform the construction planning for the enlarged Cotter Dam.’ Procedures, processes, subject matter experts and key personnel were also transferred across.¹⁰⁹

6.15 The Committee was also advised that the capital works approval process within Icon Water had been completely overhauled. An official advised:

We have very clear, set stage gates. In those stage gates the potential benefits are declared up-front. The further work that we have to do is developing the model that captures the declared benefits in those business cases and then tracking them. That is the bit we are working on at the moment. But we are at least capturing them and recording them.¹¹⁰

ENLARGED COTTER DAM PROJECT TIMING AND BUDGET

GEOLOGICAL FAULT

6.16 The Committee was interested to find out more about the geological fault found at the dam site and why it had not been identified sooner given the ‘extensive geophysical investigations’ that were undertaken.

6.17 An official from Icon Water confirmed that the bulk of the overrun in costs for the ECD were attributable to geological issues encountered on site. It was explained that the project won multiple awards for the geological investigation and modelling undertaken and expert advice was that a sufficient degree of investigation was undertaken. However, the geological fault was located between two bore holes. The Official explained that there ‘was nothing that indicated at the time that there was a problem between any of the bore holes ... conducted’ and that he was confident that the ‘right degree of investigation’ was undertaken. The Committee heard that:

Based on the initial investigation and the fact that nothing alarming was raised in those results, there was an on-balance risk assessment conducted to say that no further investigation was conducted.¹¹¹

¹⁰⁸ Mr John Knox, *Transcript of evidence*, 31 March 2016, p. 27.

¹⁰⁹ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, pp. 27; 28.

¹¹⁰ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 28.

¹¹¹ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 20.

6.18 The Committed sought to ascertain the cost of the geotechnical investigations¹¹² and on notice, the Treasurer advised:

I am advised by Icon Water Limited that the total direct cost of geotechnical investigation work (including onsite supervision during construction and hire of subcontractors involved in undertaking drilling works) was \$5,221,000 plus fees. Of this total direct cost, \$876,000 was expended pre-TOC and \$4,345,000 expended post TOC.¹¹³

6.19 The Committee also asked about the depth below the surface to which the geotechnical investigations had been undertaken. An Icon Water official recalled that the depth varied between 5 and 10 metres depending on the location along the perimeter of the dam's profile. The Official further advised that there were some locations where drilling was undertaken deeper than anticipated.¹¹⁴

6.20 In response to further questioning, the Committee was informed that the fault was located at a depth of 'between three and five metres.'¹¹⁵

CAUSES OF COST OVERRUN OF \$82 MILLION

6.21 The Committee asked what percentage of the \$82 million cost overrun was due to 'bad luck' and was told that 'the bulk of the reasons for that overrun were related to the geological issues and the weather.' It heard that a very lean TOC had been developed; and rain impacted or halted work. When work was halted the surface had to be re-prepared before resuming the placement of concrete. There were also flow on effects in relation to crane hire, labour and formwork. The geological issues predominantly related to the fault at the bottom of the dam wall and faults on the left-hand abutment.¹¹⁶

6.22 The Committee was further advised regarding the overrun:

So there is 70 per cent for the concrete production and placement. About 11 per cent of the overrun related directly to the floods. We had the three floods, two in late 2010 and then the really big one in March of 2012. Five per cent was attributable to the dam foundation issue. Another five per cent related to expansion of the diversion tunnel. So after we went through the first two floods, we were advised about the size of that diversion, so that was a risk mitigation decision. I would say that about \$2 million of the total \$82 million was probably attributable to inefficiencies in delivering the dam,

¹¹² *Transcript of evidence*, 31 March 2016, p. 21.

¹¹³ Mr Andrew Barr MLA, Response to QTON #9, 31 March 2016.

¹¹⁴ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 21.

¹¹⁵ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 21.

¹¹⁶ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, pp. 28; 29.

or areas in delivery, if I could put it that way. The rest I am confident in declaring that I think they are predominantly related to weather and geology.¹¹⁷

- 6.23 An official pointed out that while the actual cost was \$82 million higher than the TOC, a lot of that was recovered through the pain share arrangement with alliance partners and insurance to recover some of the costs associated with the 2012 flood. The Official concluded:

Overall, the increase was \$47.5 million higher than the budget allowance, which was 13 per cent higher than the \$363 million.¹¹⁸

- 6.24 On notice, the Treasurer provided the following information with regard to cost overruns:

I am advised by Icon Water Limited that while actual direct costs for the Enlarged Cotter Dam project exceeded the Target Outturn Cost by \$81.8 million, a material portion of these additional costs were recovered in other areas which resulted in the total cost variance reducing to \$47.5 million (13 per cent higher than the approved budget). This included:

- \$29.1 million being recovered from the Bulk Water Alliance partners due to the painshare incentive arrangement established.
- \$7.3 million recovered from Icon Water's insurers to offset a portion of the costs associated with floods in 2010 and 2012.¹¹⁹

	\$m
Enlarged Cotter Dam Direct Cost TOC Variance	81.8
Painshare recoveries	-29.1
Insurance recoveries	-7.3
Increase in fees due to scope change	2.1
Total Enlarged Cotter Dam Variance	47.5

PAIN-SHARING ARRANGEMENT

- 6.25 The Committee was interested to know if there were any lessons learned from the pain-sharing arrangement provided for in the Contract. An official responded:

I think the simple answer is there is not any one lesson, but there are some principles that can be applied to future scenarios. On the ECD project, the fundamental decision that was made by ACTEW Corporation at the time was to try to excise the risks they thought they could manage best. So you ended up with a non-traditional pain share, gain share model that had what we call a flat spot in the middle, which is basically like

¹¹⁷ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 29.

¹¹⁸ Mr Sam Sachse, *Transcript of evidence*, 31 March 2016, p. 29.

¹¹⁹ Mr Andrew Barr MLA, Response to QTON #10, 31 March 2016.

a dead man zone where ACTEW decided to bear the risk of flooding, which changed the model.

...I think the principle remains that wherever you can manage the risk you take that out of the TOC. Perhaps the lesson learned for us is that we should have had a clearly articulated contingency that sat outside the TOC to account for those things. But if you had left it in the TOC, the risk would be that if you got to the end of the project and it was padded out and you paid a risk premium to transfer that risk to the contractor and it did not materialise, they walk away with more of the pie than you may have liked.¹²⁰

REVISED GAIN SHARE, PAIN SHARE MECHANISM

6.26 The Committee referred to the Auditor-General's finding that in negotiating down the final TOC, ACTEW agreed to a revised gain share, pain share mechanism that was commercially advantageous to the non-owner participants. The Committee asked why this was agreed to.¹²¹

6.27 It was explained that non-owner partners were indemnified for risk within a particular range—that was 'a calculated assessment conducted by ACTEW based on the probability of flooding...we removed the risk cost that would have been thrown back to ACTEW by including flood.'¹²² An official expressed the view that the decision was sound, based on what was known at the time and that there was a drought, adding:

...I would much rather have a lean TOC and indemnify the ACT from that risk of paying someone too much at the end for a risk that really was not there to begin with.¹²³

FACTORS CONTRIBUTING TO DELAY

6.28 The Committee referred to pages 96 and 97 of the Audit report which presented a summary of the factors contributing to delays in the Cotter Dam project. The Committee discussed the four months delay in the Project due to it being impacted by rain during placement.

6.29 An official explained that 'there are multiple ways you can be impacted by rain.' While placement may continue during light rain, more intense rain can give rise to issues such as drainage and compromise the integrity of the concrete. As a result, production may decrease or ultimately cease. It was explained that as soon as you cease you introduce a cold joint. When work resumes work has to be undertaken to prepare the surface again.¹²⁴

¹²⁰ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 30.

¹²¹ *Transcript of evidence*, 31 March 2016, p. 31.

¹²² Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 31.

¹²³ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 32.

¹²⁴ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, pp. 32; 33.

- 6.30 The Committee noted suggestions made in the Audit report that the slower than target progress was foreseeable and that a faster rate was not achievable. An official explained that the targets were ambitious and the deliberate strategy was to achieve a lean TOC. However, the Official pointed out that even with the delays that were experienced the production rate achieved was strong by world standards. The Official also advised that the Auditor-General's view did not align with that of an independent technical panel that 'everything we could have done to identify any geological issues was conducted.'¹²⁵
- 6.31 The Committee referred to paragraph 4.67 of the Audit report that listed six dot points of issues that were associated with delays in progress. It was agreed that a breakdown would be provided to the Committee about the contribution that each of these factors made to the overall delay.¹²⁶
- 6.32 The Committee also referred to the view expressed in the Audit report (page 117) that the rainfall that occurred after the March 2012 flood was not unusual, yet targets for the placement of concrete were not achieved. An official acknowledged that but emphasised that 'it was exacerbated by the weather, by the rain.'¹²⁷
- 6.33 With regard to the specific contribution each of the six issues noted in the Audit report as contributing to the delays in the placement of roller compacted concrete, on notice, the Treasurer provided the following information¹²⁸:

I am advised by Icon Water Limited that the table below summarises the extent to which each factor contributed to the delays in the placement of roller compacted concrete.

Key delays (as listed in paragraph 4.67 of the Audit report)	Estimated %
Delays associated with the March 2012 flood event	25.00
Issues with the gallery construction method leading to delays	5.00
The high number of cold joints resulting from rain, including the significant amount of time required to 'green-cut' and clean up the cold joints	27.50
The congestion of the roller compacted concreting surface, due to equipment and embedments within the dam, causing slow progress	18.75
Delays caused by the time taken to move formwork	12.50
The Christmas shut down period	11.25
TOTAL	100.00

¹²⁵ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 33.

¹²⁶ *Transcript of evidence*, 31 March 2016, p. 34.

¹²⁷ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 35.

¹²⁸ Mr Andrew Barr MLA, Response to QTON #11, 31 March 2016.

6.34 During discussion, an official from Icon Water explained that the predominant issues impacting on the laying of the concrete was 'real estate'. The Official pointed out that the working area narrowed as you move your way up the dam wall and this 'slowed us up more than we expected.' In addition, the extent of drainage control required for stormwater sheeting off the abutments and on to the actual working surface was underestimated.¹²⁹

AWARDS WON BY THE COTTER DAM PROJECT

6.35 The Committee was interested to hear more about the various awards won by the Cotter Dam project. These included ten industry awards across a range of subject matters including engineering, environmental excellence and landscape architecture.¹³⁰

NUMBER OF SHIFTS REQUIRED TO CLEAN UP A COLD LIFT

6.36 The Committee referred to paragraph 4.74 of the Audit report which indicated that seven shifts were required to clean up a cold lift when typically only four would be required. The Committee requested advice about why this took up so much more time than was expected.¹³¹

6.37 An official advised that it related to expectations about the degree of clean down, the ambient temperature at the time when you conduct the cold joints, and because more interruptions to the placement were encountered than originally anticipated, which created more cold joints. It was agreed that additional information would be provided the Committee in writing.¹³²

6.38 On notice, the Treasurer provided the following information:

I am advised by Icon Water that the 'average' time taken to complete green-cuts includes the non-productive period between roller compacted concrete (RCC) placement work stopping and resuming. If inclement weather (i.e. rain or wind preventing tower crane operation) occurred during the green-cutting process it was captured in the statistics for green-cutting delays.

Key issues that contributed to the time taken to complete green-cuts were:

1. No vehicular access to/from the RCC placement area...
2. The RCC placement area wasn't very large and it was often quite congested given the amount of plant/equipment that could not be craned out...
3. Green-cutting quite often generated considerable waste material/debris...¹³³

¹²⁹ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 35.

¹³⁰ *Transcript of evidence*, 31 March 2016, p. 36.

¹³¹ *Transcript of evidence*, 31 March 2016, p. 39.

¹³² Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 39.

¹³³ Mr Andrew Barr MLA, Response to QTON #12, 31 March 2016.

COMMUNICATION

USE OF OUTDATED INFORMATION AND IMPROVED GOVERNANCE AND INFORMATION

6.39 The Committee referred to page 135 of the Audit report, noting the conclusion that on 17 September 2009 ACTEW reported to the Assembly that the reason for the increase in cost 'used outdated information' from the earlier December 2008 report. The Committee asked how this had occurred¹³⁴ and was told that:

...the progression of the cost is based on the progression of the design at that point in time, what we knew and the level of detailed investigation that had been conducted.¹³⁵

6.40 The Committee noted that this explanation did not account for how ACTEW had 'used outdated information' in reporting to the Assembly. An official explained that:

...there were multiple iterations of our options paper that were independently reviewed....It may well be that at that point in time, based on the facts that we had, we held constant on those assumptions.¹³⁶

6.41 Another official added that the reason could not be determined but that:

...more care could have been shown, could have been used, in making those statements to make sure that the information was accurate.¹³⁷

6.42 As to steps taken to ensure that reporting using outdated information does not happen again, an official told the Committee that improvements had been made to governance arrangements across the board in Icon Water, including to board operations, briefing of executives, and quality of information.¹³⁸

6.43 The Committee was further told:

We have continually improved our processes for how we produce board papers, brief the board, the managing director and how the managing director interacts with the voting shareholders.¹³⁹

6.44 The Managing Director added:

...there has been a substantial uplift in the overall governance of the organisation.¹⁴⁰

¹³⁴ *Transcript of evidence*, 31 March 2016, p. 22.

¹³⁵ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 22.

¹³⁶ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 22.

¹³⁷ Ms Jane Breaden, *Transcript of evidence*, 31 March 2016, p. 22.

¹³⁸ Ms Jane Breaden, *Transcript of evidence*, 31 March 2016, pp. 22; 23.

¹³⁹ Ms Jane Breaden, *Transcript of evidence*, 31 March 2016, p. 23.

¹⁴⁰ Mr John Knox, *Transcript of evidence*, 31 March 2016, p. 23.

COMMUNICATION BETWEEN ACTEW'S MANAGING DIRECTOR AND THE ASSEMBLY

6.45 The Committee referred to instances where incorrect information had been provided to the Assembly regarding the impact of higher prices of reinforced steel and about the depth of foundations that were as not supported by geotechnical investigations. The Committee asked what had been done to ensure that all necessary information was accessible to communicate to relevant authorities when required.¹⁴¹

6.46 The Managing Director told the Committee:

Generally speaking, we engage with a number of the agencies, the government agencies, quite closely. We sit on a D-Gs water group, which is chaired by EPD. We are on a planning infrastructure group as well with one of the other agencies. We sit on the SEMSO group. We also have a chair at the ACT and Region Catchment Management Group that Professor Falconer chairs as well. We have our regular briefings with the Treasurer. We also meet the Under Treasurer on a regular basis. We have a map of basically everybody that we keep in touch with all the way through things and provide regular briefings. We feel very confident that we are well prepared and across everything that needs to be clearly communicated.¹⁴²

¹⁴¹ *Transcript of evidence*, 31 March 2016, p. 37.

¹⁴² Mr John Knox, *Transcript of evidence*, 31 March 2016, p. 37.

7 COMMITTEE COMMENT

*From its inception in Australia in 1994, alliancing was chosen to reduce development costs, share risks, avoid disputes, and minimise use of the Owner's management team. Fifteen years later, common characteristics for using an alliance noted in various government guidelines include a need for Owner involvement, complex interfaces, tight timeframes, complex and/or unpredictable risks, complex external threats or opportunities, and scope or output specifications which cannot be clearly defined upfront.*¹⁴³

7.1 The concept of project alliancing underpins the BWA—the focus of the Audit. The Audit report presented the results of a performance audit that focused on:

...ACTEW's activities in participating in the Bulk Water Alliance for the delivery of the three major water infrastructure projects: (i) the Enlarged Cotter Dam; (ii) the Murrumbidgee to Googong Pipeline; and (iii) the Googong Dam Spillway.¹⁴⁴

7.2 A landmark study—*In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector* (2009)—identified that the:

...adoption of alliancing by government raises some matters which must be carefully managed in the interest of delivering value to the taxpayer. Alliancing is a very sophisticated development in delivering major infrastructure and agencies must fully understand the opportunities and tradeoffs that may be required.¹⁴⁵

7.3 The Committee is of the view that the Audit has been important for two major reasons: (i) the use of project alliancing by Territory entities is not commonplace, that projects suitable for this form of procurement are of a long-term nature and as a delivery methodology it is complex and technical. Accordingly, the Audit documents a series of valuable lessons for any current and future alliance contracting arrangements that may be entered into by an entity on behalf of the Territory. It would be remiss of any Territory entity not to heed these lessons; and (ii) the Audit examined the appropriateness of ACTEW's (now Icon Water) decision to use project alliancing to deliver the three projects profiled including how the Alliance was structured and managed.

7.4 In considering the Audit report and its findings, the Committee is of the view that five areas warrant further comment: (i) development of the audit objective and scope; (ii) suitability of

¹⁴³ Department of Treasury and Finance, Victoria. (2009) *In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector*, October, p. 52.

¹⁴⁴ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 29.

¹⁴⁵ Department of Treasury and Finance, Victoria. (2009) *In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector*, October, p. viii.

the alliance model; (iii) the BWA projects; (iv) communication matters; and (v) lessons learned. Comment against each of these is set out below.

DEVELOPMENT OF AUDIT OBJECTIVE AND SCOPE

7.5 The objective and scope of the Audit were developed from late 2013 through 2014. With regard to the specifics of development, the Auditor-General explained:

An audit on ACTEW capital works and infrastructure programs was flagged in the draft performance audit program of 2013-14, specifically in the May 2013 draft. That evolved into the Bulk Water Alliance performance audit that is the subject of today's hearing. However, in August 2013 a public interest disclosure in relation to the enlarged Cotter Dam was referred to our office by the Commissioner for Public Administration. After discussions with the entity making the disclosure, it was decided to address the public interest disclosure issues as part of the Bulk Water Alliance performance audit.¹⁴⁶

7.6 As stated in the Audit report:

The entity making the public interest disclosure made comments, some general and some specific, about issues associated with ACTEW and ACTEW Voting Shareholders regarding the Enlarged Cotter Dam; and communication regarding this project.

The Auditor-General considered that, by virtue of paragraph 20(g) of the *Public Interest Disclosure Act 2012*, a performance audit was the most appropriate means by which to deal with the issues raised. As an audit of ACTEW's management of capital works and infrastructure was already identified in the Draft Performance Audit Program the Auditor-General decided, on 21 August 2013, to conduct a performance audit in relation to the issues and advised the entity making the disclosure and other relevant stakeholders:

The scope and objective of the audit is yet to be determined, however the audit, amongst other things, is likely to consider the actual cost of the project, the reasons for the increase in costs compared to budget estimates and communication of these issues.¹⁴⁷

7.7 The Auditor-General told the Committee:

The subject matter in the audit is very technical in nature. Technical specialists were engaged by the audit team to provide advice in relation to the alliance contracting and civil engineering. We also had an audit of the audit undertaken, which we refer to as our quality assurance.

¹⁴⁶ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 41.

¹⁴⁷ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 27.

Apart from considering technical issues, there were matters of communication, including an assertion made in the public interest disclosure relating to integrity matters that needed to be examined. Considering the assertions was very time consuming as it required the audit team to consider documentary evidence from a very diverse range of sources.¹⁴⁸

- 7.8 The Committee notes that the ACT Auditor-General is a disclosure officer for receiving public interest disclosures under the *Public Interest Disclosure Act 2012* (the PID Act). Further, the ACT Auditor-General is one of only two in Australia that is a designated sector wide disclosure officer.¹⁴⁹ The Committee notes the actions of the Auditor-General, in accordance with the PID Act, to examine the PID as part of the Audit.
- 7.9 The Committee is of the view that the role of the Auditor-General to receive protected disclosures from third parties under the PID Act is an important one and an essential element of robust PID schemes in the public sector.¹⁵⁰

SUITABILITY OF THE ALLIANCING MODEL

- 7.10 The Committee notes that in relation to planning for the BWA, the Audit concluded that 'an alliance was an effective procurement model and means to manage the construction of the ECD as it was a high value, complex, long term project with a number of unknown factors (prior to construction).' The Audit also concluded that the decision to proceed with an alliance for this project was consistent with the *National Alliance Contracting Guidelines: Guide to Alliance Contracting*.¹⁵¹
- 7.11 The Auditor-General told the Committee:

The Bulk Water Alliance was used by ACTEW to enlarge the Cotter Dam from four gigalitres to 78 gigalitres and construct the Murrumbidgee to Googong pipeline and the Googong spillway. Except for the Googong spillway, the other projects were aimed at increasing the ACT's water security.

Evidence considered during the audit led to the conclusion that, as the construction of the enlarged Cotter Dam was high value, complex and a long-term project, ACTEW's use of the alliance to deliver it and the Murrumbidgee to Googong pipeline was appropriate and effective. We came to that conclusion despite the fact that a cost overrun for the enlarged Cotter Dam and all three projects under the alliance were

¹⁴⁸ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, pp. 41–42.

¹⁴⁹ Des Pearson, *2016 Strategic Review of the ACT Auditor-General*, 26 May 2016, p. 46.

¹⁵⁰ Brown, A.J., Olsen, J. and Roberts, P. (2011) *Whistling while they work—A good-practice guide for managing internal reporting of wrong doing in public sector organisations*, ANU Press, September [online publication].

¹⁵¹ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 2.

overdue. With respect to using an alliance for the Googong spillway, the merits of that were not considered to be evidenced.¹⁵²

7.12 The Audit concluded that an alliance model was also appropriate for the Murrumbidgee to Googong Pipeline given the risks involved.¹⁵³ The Committee acknowledges the Audit found that the appropriateness of including the Googong Dam Spillway in the Alliance was 'unable to be determined as there was no monitoring or reporting on the expected benefits'. Further, the Audit concluded that the 'merits of including the Googong Dam Spillway project in the alliance have not been evidenced'.¹⁵⁴

7.13 As to the rationale for inclusion of the Project, in the absence of important metrics on its expected benefits, an Icon Water official told the Committee that:

I will start off by acknowledging that we did not do a very good job of actually tracking our benefits and quantifying those benefits. But in terms of context, given I was there for various conversations at the time, we had brought in some transaction advisers. The context at the time was that there was a furious amount of activity in the water sector around drought-proofing projects, particularly in south-east Queensland. We had been given information in relation to the fact that because this was a complex project, and to hedge our bets, we wanted to attract a tier 1 type contractor, such as John Holland. We were advised that we would need to move relatively quickly to engage their services in terms of not being gazumped by the rest of the water industry competing for a relatively small pool of resources.

We had previously done some design work, which was sitting on the shelf effectively, to upgrade the Googong Dam spillway. We saw the incorporation of the Googong Dam spillway as a means of engaging those services early and providing a program with enough critical mass that would be commercially attractive to a tier 1 contractor. The strategy was really to lock in a contractor now before they got taken by someone else, so that they were available to run those water security major projects when we needed to. It was a strategy that was predicated on advice from those transaction advisers. Did we do a good job of tracking the benefits? Absolutely not. Did we actually leverage benefits across the program? I think we did...¹⁵⁵

7.14 As to the transfer of benefits across the Alliance projects, discussion ensued as follows:

Mr Hezkial: ...With respect to where the synergies were, a lot of lessons learned out of the Googong Dam spillway construction project were transferred across to inform the construction planning for the enlarged Cotter Dam. We also transposed a lot of the

¹⁵² Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 42.

¹⁵³ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p.2.

¹⁵⁴ *Transcript of evidence*, 31 March 2016, p. 26.

¹⁵⁵ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, pp. 26–27.

procedures and processes. Some of those subject matter experts and key personnel were also transferred across to the Cotter Dam project. Did we realise the full benefit of the program? The answer is absolutely yes, in my mind. Did we document that and quantify it? We did not do a very good of that at all. That is what we are now looking to implement within the organisation.

MS BURCH: Ms Lawder was commenting about one of those projects, and justifying it within the alliance; am I right in saying that you took lessons from that and made improvements in the larger project from those smaller projects?

Mr Hezkial: Absolutely.

MS BURCH: So you had a benefit?

Mr Hezkial: Absolutely. With respect to one of the key mechanisms by which we are doing that, we have also completely overhauled the capital works approval process within Icon Water. We have very clear, set stage gates. In those stage gates the potential benefits are declared up-front. The further work that we have to do is developing the model that captures the declared benefits in those business cases and then tracking them. That is the bit we are working on at the moment. But we are at least now capturing them and recording them.¹⁵⁶

7.15 Whilst the Committee appreciates the imperative of having a program with enough critical mass to be attractive to a tier 1 contractor, coupled with increased demand at the time for drought-proofing projects in the water sector necessitating a need to act quickly, understanding and better tracking of benefits for current and future projects of this kind is needed.

7.16 The Committee recognises that Icon Water has acknowledged that it 'did not do a very good job of actually tracking our benefits and quantifying those benefits' for the Googong Dam spillway and has signalled an intention to address these shortcomings. The Managing Director emphasised:

It is another point as we go through this audit that is at front of mind, to make sure that whenever we are in a program of work we capture that benefits realisation model moving forward.¹⁵⁷

7.17 The Committee acknowledges that the capital works approval process within Icon Water has been completely overhauled. An official advised:

We have very clear, set stage gates. In those stage gates the potential benefits are declared up-front. The further work that we have to do is developing the model that captures the declared benefits in those business cases and then tracking them. That is

¹⁵⁶ *Transcript of evidence*, 31 March 2016, pp. 27–28.

¹⁵⁷ Mr John Knox, *Transcript of evidence*, 31 March 2016, p. 27.

the bit we are working on at the moment. But we are at least capturing them and recording them.¹⁵⁸

- 7.18 The Committee accepts that Icon Water has taken on board the Audit findings regarding the appropriateness of including the Googong Dam Spillway in the Alliance. Notwithstanding, the Committee believes the findings are applicable to current and future contract arrangements for all infrastructure projects. Accordingly, the Committee makes the following recommendation.

Recommendation 1

- 7.19 The Committee recommends that the ACT Government ensure that appropriate records are retained about the scoping of infrastructure projects and decisions made in relation to their design, delivery and procurement methods to ensure that all key project management decisions are evidenced and justified.**

THE BULK WATER ALLIANCE PROJECTS

- 7.20 The BWA delivered the ECD, Murrumbidgee to Googong Pipeline and the Googong Dam Spillway projects. The Audit found that:

...the Enlarged Cotter Dam's final cost of \$410.5 million exceeded its final estimated cost of \$363.0 million (Bulk Water Alliance's Final Target Outturn Cost of \$299.0 million and ACTEW's costs of \$64.0 million), as approved on 1 September 2009, and was overdue by 20 months. An earlier pre-Bulk Water Alliance estimate of \$145.0 million, developed by ACTEW and presented to the ACT Government in 2007, was preliminary and did not include all of the anticipated costs. The Murrumbidgee to Googong Pipeline cost \$140.5 million, less than the final estimated cost of \$154.5 million and was overdue by 3 months. The Googong Dam Spillway cost \$54.0 million, less than the final estimated cost of \$56.0 million and was overdue by 8 months. The three project's combined cost of \$605.0 million is an increase of 5.5 percent over the combined final budgeted costs.¹⁵⁹

- 7.21 A summary of the Audit findings in relation to the final cost and timing of the BWA projects is at Table 7.1.

¹⁵⁸ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 28.

¹⁵⁹ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 2.

Table 7.1—Summary of audit findings in relation to the final cost and timing of the Bulk Water Alliance projects¹⁶⁰

Project	Final cost	Timing
1. Enlarged Cotter Dam	The final cost of \$410.5 million was about 13.0 per cent higher than the Final Target Outturn Cost plus Owner costs of \$363.0 million.	The project was completed 20 months overdue.
2. Murrumbidgee to Googong Pipeline	The final cost of the project of \$140.5 million was about 9.1 per cent less than the Final Target Outturn Cost plus Owner costs of \$154.5 million.	The project was completed 3 months overdue.
3. Googong Dam Spillway	The final cost of \$54.0 million was about 3.6 per cent less than the Final Target Outturn Cost plus Owner costs of \$56.0 million.	Completion of the project was 8 months overdue.
Total for the three water infrastructure projects	In total, the final cost of the three projects was \$605.0 million, an amount about 5.5 per cent higher than the Final Target Outturn Costs plus Owner costs of \$573.5 million.	The expected completion dates for all projects were exceeded.

7.22 The Committee notes that all three projects under the Alliance were overdue with regard to completion dates, the total cost(s) for two projects¹⁶¹ were less than their respective final estimated costs and one project¹⁶² exceeded its final estimated cost.

7.23 The Committee is of the view that the concepts and subsequent impact with regard to materiality, of project cost, risk, and delivery are inextricably linked. The Committee makes comment as below.

PROJECT COST(S)

7.24 As noted above, of the three projects—the ECD's final cost of \$410.5 million exceeded its final estimated cost of \$363.0 million (Bulk Water Alliance's Final Target Outturn Cost of \$299.0 million and ACTEW's costs of \$64.0 million), as approved on 1 September 2009, and was overdue by 20 months. Further, an earlier pre-BWA estimate of \$145.0 million, developed by ACTEW and presented to the ACT Government in 2007, was preliminary and did not include all of the anticipated costs.¹⁶³

7.25 The Committee notes that the Audit findings concerning the estimated actual and target costs associated with the ECD are not uncommon when compared with the outcomes of projects delivered elsewhere in Australia using the alliance delivery model.

7.26 A landmark study initiated by state treasuries in NSW, Victoria, Queensland and Western Australia examined the rationale¹⁶⁴ for the increased use of the alliance delivery method in

¹⁶⁰ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 10.

¹⁶¹ Murrumbidgee to Googong Pipeline and the Googong Dam Spillway.

¹⁶² Enlarged Cotter Dam project.

¹⁶³ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 2.

Australia and whether value for money could be improved at any stage through the project lifecycle.¹⁶⁴ Using quantitative and qualitative approaches across a number of case studies¹⁶⁵, some of the key study findings¹⁶⁶ in relation to cost were:

- Key finding 1—‘Business cases often did not clearly define the project Value for Money proposition to the rigour required for investment decision making. It was found that the average increase from business case cost estimate to Actual Outturn Cost (AOC) was of the order of 45–55%’ (p. xi)
- Key finding 5—‘In general the agreed (initial) TOC was higher than the business case cost estimate. The average increase was of the order of 35–45%.’ (p. xii)
- Key finding 13—‘In general there was an increase from agreed (initial) TOC to adjusted (final) TOC. The average increase was of the order of 5–10%.’ (p. xiv)
- Key finding 14—‘In general, the AOC was less than the adjusted (final) TOC. The average saving was of the order of 0.5%.’ (p. xiv)

7.27 The Committee acknowledges that a considerable amount of work is required to establish an alliance—including the target outturn cost.¹⁶⁷ Further, there is a long period of uncertainty before the target outturn cost is known and there is also a risk that project costs will exceed the target outturn cost. Where this occurs any additional costs should be borne by all participants in pre-agreed proportions.¹⁶⁸

7.28 The Committee is not suggesting that the Audit findings concerning the significant variation in the estimated actual and target costs associated with the ECD is acceptable but rather that these findings are not unique to the BWA.

7.29 As detailed in chapter three, the Committee emphasises that there is now a considerable body of research on the use of project alliancing in Australia that has distilled important benchmarks for its best practice. The Committee considers that it would be remiss of any Territory entity either currently using or considering alliance contracting arrangements not to heed this best practice.

¹⁶⁴ Department of Treasury and Finance, Victoria. (2009) *In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector*, October.

¹⁶⁵ Phase 1 of the research involved a survey of seventy-one alliance projects in NSW, Victoria, Queensland and Western Australia with a value of \$70 million or more. Of the alliance projects surveyed—a number were water-related alliances and included: Alkimos Water Alliance; Burnett Dam Alliance—Paradise Dam; Connect Alliance—Sydney Desalination Plant Pipeline; Gold Coast Desalination Alliance; Hinze Dam Stage 3 Alliance; Sunset Coast Water Alliance; and Water Matters Alliance [refer Department of Treasury and Finance, Victoria. (2009) *In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector*, October, Appendix B—List of alliances included in Phase 1, pp. 1-3].

¹⁶⁶ Department of Treasury and Finance, Victoria. (2009) *In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector*, October, pp. xi; xii; xiv.

¹⁶⁷ Office of the Auditor-General. (2006) *Achieving public sector outcomes with private sector partners*, Wellington NZ, February, p. 58.

¹⁶⁸ Office of the Auditor-General. (2006) *Achieving public sector outcomes with private sector partners*, Wellington NZ, February, p. 59.

PROJECT RISKS AND DELIVERY

- 7.30 The Audit concluded that a number of factors contributed to increased time and costs of the ECD project. These included:
- a previously undetected geological fault at the base of the abutment of the dam (not a reasonably foreseeable risk);
 - a slower than forecast rate of progress in excavating and cleaning up the foundations of the dam (a foreseeable risk);
 - slower than anticipated placement of roller compacted concrete in the dam wall (a foreseeable risk); and
 - additional work undertaken to prepare for, and mitigate, flood events at the site (some of which were not foreseeable risks).¹⁶⁹

- 7.31 As to the impact of risks on the cost and delivery schedule—the Auditor-General explained:

While a “lean” target outturn cost was established for the enlarged Cotter Dam project, which aimed at achieving better performance from ACTEW’s alliance partners and minimising overall costs, some cost estimates were based on unrealistic construction schedules. Unforeseeable events, including the one-in-100-year flood, while impacting on the construction schedule and costs, do not fully account for the extent of the overrun.

The increased time and costs of the enlarged Cotter Dam project were due to: a previously undetected geological fault—not a reasonably foreseeable risk; a slower than forecast rate for excavating and cleaning up the foundations of the dam in preparation for the placement of the dam wall—a foreseeable risk; a slower than anticipated placement of roller compacted concrete in the dam wall—which we consider a foreseeable risk; and additional work to prepare for and mitigate flood events at the site—some were foreseeable; others were not.¹⁷⁰

- 7.32 The Committee acknowledges that the governance arrangements and the way that risks and rewards are shared in project alliances differ from other forms of procurement arrangements. Notwithstanding, the Committee notes the Audit found that:

- The Alliance had the necessary processes in place to identify, allocate and manage risks, however, with ‘respect to the Alliance’s assessment of risk there were optimistic assessments of some construction parameters...’¹⁷¹
- The risk analysis undertaken by the Alliance was not effective in identifying and calculating the value of the risks associated with the ECD project for the purpose of identifying a

¹⁶⁹ ACT Auditor-General’s Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, pp. 3–4.

¹⁷⁰ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 42.

¹⁷¹ ACT Auditor-General’s Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 14.

‘contingency sum’. The Audit found that while the Monte Carlo analysis used is mainly effective in identifying and quantifying discrete and independent risks, many of the risks associated with the ECD project were interdependent. The Audit found that ‘interdependency of many of the risks associated with the Enlarged Cotter Dam project, and their associated costs, would not have been identified in the Monte Carlo analysis.’¹⁷²

- The ‘financial incentives to perform more efficiently were driven at the project level and not at the broader program level’ and that ‘the Bulk Water Alliance did not track and measure the innovations, efficiency gains and/or knowledge transferred as a result of operating as a program alliance.’¹⁷³

COMMUNICATION

7.33 The Audit report made a number of findings regarding communication. These focused largely on communication by ACTEW on the cost and timing of the ECD project with the Chief Minister and Deputy Chief Minister, as the Voting Shareholders, and the broader community.

7.34 The Committee notes the Audit concluded that information on expected cost increases were provided to the Chief Minister, Deputy Chief Minister and the Legislative Assembly.¹⁷⁴

7.35 The Audit also concluded that there were ‘two instances where more care could have been taken’ to check the accuracy of information provided to the community and to the Legislative Assembly about the reasons for the increase in the cost of the ECD project.¹⁷⁵

7.36 The Auditor-General told the Committee:

With respect to communication in the public interest disclosure assertions, it was found that while there were delays in providing cost information about the enlarged Cotter Dam to the public, there was no documented evidence that ACTEW or the government sought to deliberately mislead or deceive the public.¹⁷⁶

7.37 With regard to the ‘two instances where more care could have been taken’ to check the accuracy of information provided to the community and to the Legislative Assembly about the reasons for the increase in the cost of the ECD project, an Icon Water official acknowledged that:

¹⁷² ACT Auditor-General’s Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 9.

¹⁷³ ACT Auditor-General’s Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 5.

¹⁷⁴ ACT Auditor-General’s Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 4.

¹⁷⁵ ACT Auditor-General’s Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 4.

¹⁷⁶ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 42.

...more care could have been shown, could have been used, in making those statements to make sure that the information was accurate.¹⁷⁷

7.38 The Committee acknowledges that Icon Water has signalled that steps have been taken to ensure that reporting using outdated information does not happen again, and that improvements have been made to governance arrangements across the Corporation, including to: board operations; briefing of executives; and quality of information.¹⁷⁸

7.39 The Committee was further told:

We have continually improved our processes for how we produce board papers, brief the board, the managing director and how the managing director interacts with the voting shareholders.¹⁷⁹

7.40 The Committee accepts that Icon Water has taken on board the Audit findings and taken steps to mitigate the risk of outdated information being sourced for any future reporting purposes. Notwithstanding, the Committee believes the findings are applicable to current and future contract arrangements for all major infrastructure projects. Accordingly, the Committee makes the following recommendation.

Recommendation 2

7.41 The Committee recommends that the ACT Government take appropriate steps to ensure that a communication strategy is developed for all major infrastructure projects to ensure that all stakeholders, the Legislative Assembly and the community receive timely information about the budget allocated for projects, the purpose and design of projects, any significant increases in project costs that occur, as well as the emergence of factors that may contribute to delay in project completion.

LESSONS LEARNED

7.42 The Committee notes that the Audit did not make any recommendations, however, the Auditor-General explained:

Another feature of this audit is that it does not make any recommendations. While this is the case, it can be used to inform any future alliance contracting arrangements as it is a case study on managing complex capital works under an alliance contracting

¹⁷⁷ Ms Jane Breden, *Transcript of evidence*, 31 March 2016, p. 22.

¹⁷⁸ Ms Jane Breden, *Transcript of evidence*, 31 March 2016, pp. 22; 23.

¹⁷⁹ Ms Jane Breden, *Transcript of evidence*, 31 March 2016, pp. 22; 23.

arrangement. It was also important in giving some assurance around what ACTEW—now Icon—were actually doing with respect to the alliance.¹⁸⁰

7.43 As to the lessons to be learned, the Treasurer advised on notice that:

Icon has acknowledged there are valuable lessons for each of the Bulk Water Alliance partners to take forward. The contractual arrangements and risk allocation between the private sector partners and the Territory is quite different for Alliance and PPP contracts. While the experience of the Bulk Water Alliance may provide lessons for other PPPs, the scope of the work can vary greatly across project types and will depend on project specific factors.¹⁸¹

7.44 The Committee acknowledges that as detailed in chapter three, since its introduction in Australia in the mid-1990s, as a method for procurement and delivery of major infrastructure, project alliancing has undergone a series of developments. Its evolution as a project delivery methodology over the last two decades, in the main, has been driven by continuous improvement. Importantly, continuous improvement, in the context of its use in the public sector, has been concerned with structuring an alliance so that optimal value for money for taxpayers is achieved.

7.45 The Committee also acknowledges that the use of project alliancing by Territory entities is not commonplace, that projects suitable for this form of procurement are of a long-term nature and as a delivery methodology it is complex and technical. Accordingly, the Committee considers that the important lessons from the BWA are valuable for informing any future alliance contracting arrangements that may be entered into by an entity on behalf of the Territory.

7.46 The Committee emphasises that any such arrangements are:

...not a substitute for strong and effective governance and decision-making by government, which continues to be responsible and accountable for the project or service in a way that protects the public benefit.¹⁸²

7.47 The Committee accepts that Icon Water has acknowledged these lessons and has signalled a credible intention to learn from them. Notwithstanding, the Committee is of the view that there are a number of valuable lessons that can be learned from the Audit to inform any future alliance contracting arrangements. The Committee believes that there is merit in documenting, for future reference, good practice and areas where improvements could be made. Accordingly, the Committee makes the following recommendation(s).

¹⁸⁰ Dr Maxine Cooper, *Transcript of evidence*, 19 April 2016, p. 42.

¹⁸¹ Mr Andrew Barr MLA, Response to QTON #6, 31 March 2016.

¹⁸² Office of the Auditor-General. (2006) *Achieving public sector outcomes with private sector partners*, Wellington NZ, February, p. 17.

Recommendation 3

- 7.48 The Committee recommends that the ACT Government develop guidelines for the procurement of major public infrastructure when using alliancing contracting arrangements. This information should be presented in a format for future reference and be publicly available.**
- 7.49 The Committee understands that Icon Water currently has another alliance arrangement in place that is delivering capital works at the Lower Molonglo Water Quality Control Centre and that this work has been informed by lessons learned from the BWA.¹⁸³

Recommendation 4

- 7.50 The Committee recommends that the responsible Minister inform the ACT Legislative Assembly about how Icon Water has applied the lessons learned from the Bulk Water Alliance to its alliance arrangement for the delivery of capital works at the Lower Molonglo Water Quality Control Treatment Centre (at the completion of the Project).**

¹⁸³ Mr Ray Hezkial, *Transcript of evidence*, 31 March 2016, p. 25.

8 CONCLUSION

- 8.1 The Committee thanks all those who contributed to its inquiry by making a submission, providing additional information or appearing before it to give evidence.
- 8.2 The concept of project alliancing underpins the Bulk Water Alliance—the focus of the Audit. The Audit report presented the results of a performance audit that focused on:
- ...ACTEW's activities in participating in the Bulk Water Alliance for the delivery of the three major water infrastructure projects: (i) the Enlarged Cotter Dam; (ii) the Murrumbidgee to Googong Pipeline; and (iii) the Googong Dam Spillway.¹⁸⁴
- 8.3 A landmark study—*In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector* (2009)—identified that the:
- ...adoption of alliancing by government raises some matters which must be carefully managed in the interest of delivering value to the taxpayer. Alliancing is a very sophisticated development in delivering major infrastructure and agencies must fully understand the opportunities and tradeoffs that may be required.¹⁸⁵
- 8.4 The Committee is of the view that the Audit has been important for two major reasons: (i) the use of project alliancing by Territory entities is not commonplace, that projects suitable for this form of procurement are of a long-term nature and as a delivery methodology it is complex and technical. Accordingly, the Audit documents a series of valuable lessons for any current and future alliance contracting arrangements that may be entered into by an entity on behalf of the Territory. It would be remiss of any Territory entity not to heed these lessons; and (ii) the Audit examined the appropriateness of ACTEW's (now Icon Water) decision to use project alliancing to deliver the three projects profiled including how the Alliance was structured and managed.
- 8.5 The Committee has made **four** recommendations in relation to its inquiry into Auditor-General's report No. 6 of 2015: *Bulk Water Alliance*.

Nicole Lawder MLA
Chair
26 July 2016

¹⁸⁴ ACT Auditor-General's Report No. 6 of 2015: *Bulk Water Alliance*, June 2015, p. 29.

¹⁸⁵ Department of Treasury and Finance, Victoria. (2009) *In Pursuit of Additional Value—A benchmarking study into alliancing in the Australian Public Sector*, October, p. viii.

Appendix A LIST OF WRITTEN SUBMISSIONS

Submission No. 1—ACT Government

Submission No. 2—Confidential

Appendix B COMMITTEE PUBLIC HEARINGS

The following witnesses appeared before the Committee at public hearings:

Public hearing of Thursday 31 March 2016

- Mr Andrew Barr MLA, Treasurer
- Mr David Nicol, Under Treasurer, Chief Minister, Treasury, Economic Development Directorate (CMTEDD)
- Mr Neil Bulless, Executive Director, Expenditure Review Division, CMTEDD
- Mr John Knox, Managing Director, Icon Water Ltd
- My Ray Hezkial, General Manager, Project Delivery, Operations and Maintenance, Icon Water Ltd
- Ms Jane Breaden, General Manager, Business Services, Icon Water Ltd
- Mr Sam Sachse, General Manager, Finance, Icon Water Ltd

Public hearing of Tuesday 19 April 2016

- Dr Maxine Cooper, ACT Auditor-General
- Mr Brett Stanton, Director, Performance Audits