



Western Australian Auditor General's Report

The Planning and Management of Perth Arena

Report 1: March 2010





THE PRESIDENT
LEGISLATIVE COUNCIL

THE SPEAKER
LEGISLATIVE ASSEMBLY

PERFORMANCE EXAMINATION – THE PLANNING AND MANAGEMENT OF PERTH ARENA

This report has been prepared for submission to Parliament under the provisions of section 25 of the *Auditor General Act 2006*.

Performance examinations are an integral part of the overall performance auditing program and seek to provide Parliament with assessments of the effectiveness and efficiency of public sector programs and activities thereby identifying opportunities for improved performance.

The information provided through this approach will, I am sure, assist Parliament in better evaluating agency performance and enhance parliamentary decision-making to the benefit of all Western Australians.

A handwritten signature in black ink, appearing to read 'C. Murphy'.

COLIN MURPHY
AUDITOR GENERAL
10 March 2010

Contents

AUDITOR GENERAL'S OVERVIEW	4
EXECUTIVE SUMMARY	5
Introduction	5
Audit conclusion	5
Key findings	6
Recommendations	7
AGENCY RESPONSES	8
Response from the Department of Treasury and Finance	8
Response from the WA Sports Centre Trust	8
PERTH ARENA IS A SIGNIFICANT PROJECT FOR WESTERN AUSTRALIA	9
Introduction	9
Agencies involved in the examination	9
Examination focus and scope	10
ORIGINAL COST AND TIME ESTIMATES WERE MADE BEFORE THE PROJECT WAS WELL UNDERSTOOD AND DEFINED	11
Findings	11
Perth Arena is currently estimated to cost \$483 million, \$323 million more than announced in September 2005	11
Perth Arena is scheduled to open in November 2011, almost three years later than originally planned	13
INADEQUACIES IN THE GOVERNANCE, MANAGEMENT AND ADMINISTRATION OF THE ARENA PROJECT HAVE EXPOSED THE STATE TO GREATER RISK THAN PLANNED	15
Findings	15
Background	16
The tender process was problematic and contract negotiations resulted in DHW accepting an offer which was fundamentally different from the original requirements	16
DHW did not transfer responsibility for completion of the Arena design to the contractor, resulting in the state bearing the risk of cost increases and delays due to design changes	17
Key decisions on fundamental changes to the contract were made without adequate assessment of the risks and value for money, legal advice, or consideration of alternative options	18
DHW made changes to the design that could not be fully priced and it did not know if these represented value for money	19
Key risks were not brought to the attention of the Minister for Housing and Works or Cabinet, so their decisions may not have been fully informed	19
Project governance, management and administration were inadequate	20
GOVERNANCE ARRANGEMENTS HAVE BEEN STRENGTHENED, BUT RISKS REMAIN OF FURTHER COST INCREASES AND DELAYS	26
Findings	26
Background	26
The governance framework and risk management has been strengthened since early 2009	26
Any further cost increases will reduce the budget available for fit out or require additional government funding	29
The estimated operating profit for the Arena is less than originally forecast	29
Uncertainty over the completion date affects VenuesWest's capacity to schedule events	29

Auditor General's Overview

Our audit of the Perth Arena project is not a good news story. It offers important lessons for current and future capital works projects.

The Arena project shows how announcing estimates of the cost and timeframes of a project before it is well understood puts the project under pressure from the start and raises unrealistic expectations to which agencies will be held accountable.

A lack of effective governance and oversight as existed on the Arena project demonstrates how poorly thought through decisions can expose the state to serious risks. Without the visibility and scrutiny that comes with effective governance the early warning signs of projects going wrong are more likely to be missed, as are opportunities to put them back on track.

Experience on the Arena project also shows that circumventing normal processes and project administration for speed or expediency is a significant risk. Major projects should not be the type of project to take this risk.

An important lesson that extends beyond just capital works projects is the necessity for agencies to be able to explain how decisions were made and why. This is a fundamental expectation of Parliament and the community, particularly when agencies are spending hundreds of millions of dollars. Decisions, directions and the advice and analysis that lie behind them should always be documented. Failing to do so blurs accountability. It leaves agencies unable to explain to taxpayers how their money was spent and why. That is simply unacceptable.

Executive Summary

Introduction

Perth Arena (the Arena) is under construction and the multi-purpose indoor entertainment and sports venue is planned to be operating by the start of 2012. It is located on the Northbridge Link site on Wellington Street in Perth's CBD.

The Arena is intended to fill a gap in Perth's indoor entertainment and sporting venues, seating between 5 000 and 14 000 people. The keystone event behind the decision to build the Arena was the Hopman Cup tennis tournament. However, to be successful the Arena will need to host a range of other events.

The Department of Housing and Works (DHW) was responsible for scoping, planning, tendering and contracting for the Arena. In December 2007 responsibility for the delivery of the Arena was transferred to the Office of Strategic Projects (OSP) who reported directly to the Minister for Housing and Works ('the Minister'). Construction work had already commenced when responsibility was transferred to OSP. Responsibility for all works projects has since moved into the Department of Treasury and Finance (DTF) along with OSP which has been renamed DTF Strategic Projects.

The building contractor is BGC Construction (BGC), which is part of the BGC (Australia) Pty Ltd group of companies. The WA Sports Centre Trust trading as VenuesWest is the client agency for the Arena project, and is responsible for fitting out and operating the Arena. VenuesWest is running a procurement process to engage an operator.

We examined the planning and management of the Arena project including tendering, contract award, and construction between March 2004 and December 2009. Our main lines of enquiry were:

- What is the current status of the project against original cost and time estimates?
- Has the management of the Arena project minimised risk to the state?

Audit conclusion

Perth Arena is substantially over budget and late. On current estimates, it will cost \$483 million, more than three times the original estimate of \$160 million. The Arena is scheduled to open almost three years later than originally planned, in November 2011 rather than January 2009. Insufficient scoping and planning meant that both the original cost estimate and opening date were unrealistic.

Key decisions on the project during contract negotiations have altered the planned allocation of risks between the state and contractor, increased the risks to the state, and led to project delays and cost increases. These decisions were made without systematic or sufficient analysis of their impact, consideration of alternatives, external scrutiny or legal advice.

There is little evidence that appropriate planning, monitoring and reporting processes were established or followed. Significant changes to the contract and resulting risks were not reported in writing to the Minister and Cabinet so their decisions may not have been fully informed.

DHW did not implement the project management and governance arrangements required to control a major project like the Arena. This resulted in inadequate transparency, oversight and blurred accountability. Statutory governance, financial and record keeping obligations under the *Public Sector Management Act* and the *Financial Management Act* may not have been met.

Recent changes to governance and project management have improved transparency and strengthened project oversight. But the project remains at risk of further cost increases. Further time delays represent a risk to the Arena's fit out and transition to operation which depends on the agreed construction schedule being met. At the end of December 2009, construction was three months behind schedule.

Key findings

- The announcement in September 2005 that the Arena would cost \$160 million and would be operating in 2009 was unrealistic. It was based on insufficient scoping and planning and without proper costing and analysis.
- The Arena is estimated to cost at least \$483 million. The resolution of claims from the contractor for additional costs and time delays may increase this.
- The Arena is scheduled to open in November 2011 but this date remains at risk. OSP advised us that construction is three months behind schedule and the timing of the fit out to make the Arena operational is still to be finalised
- DHW did not transfer the responsibility for completing the Arena design to the contractor as intended under its procurement strategy, so the state retained a higher level of risk than intended.
- Major changes to the Arena design were made during contract negotiations without a good understanding of what this would cost or the impact on the project schedule. Under the contract, the state bears the risk of any cost increases and delays resulting from design changes.
- DHW accepted a price that contained significant uncertainties. It included provisional sums such as \$20 million for the car park, and assumed that 'design engineering' savings of \$34 million would be made. Relying on these assumptions to achieve the contracted price was optimistic and high risk. At the end of December 2009 the car park has cost \$54 million, and only \$2 million in savings have been achieved
- Despite the uncertainties in the contract price, DHW sought approval for a budget that assumed the price would be achieved. Subsequently, the budget has increased by \$140 million and further funding requirements are possible.
- DHW entered into contract negotiations without clear objectives or a plan which defined its position on what outcomes would be acceptable. In accepting a revised offer which did not transfer design responsibility to the contractor, DHW accepted an offer which was fundamentally different from the original requirements. Alternatives such as other non-conforming tenders or starting a new tender process were not fully considered.
- Key risks such as the change in contract type and the pricing uncertainties were not brought to the attention of the Minister for Housing and Works or Cabinet, so their decisions may not have been fully informed.

- Governance, oversight, project management and administration were inadequate and normal processes were not followed. This meant opportunities to review the project and put it back on track were missed:
 - an appropriate governance structure was not established to oversee the project, and a client agency was not appointed until mid 2009
 - critical components of the Strategic Asset Management Framework and DHW internal processes were not applied, and key plans to manage the project were not put in place
 - the project team was inadequately resourced
 - poor record keeping on the project contravened the *State Records Act 2000*, provides little evidence of appropriate planning, monitoring and reporting and means DHW and OSP could not provide any written record of the contract negotiations.
- Changes since December 2008 to the governance arrangements, greater project management resources and the appointment of a client agency have strengthened project governance and resulted in more robust project management.

Recommendations

- **Agencies involved in the procurement and delivery of capital projects should:**
 - **put in place governance structures and project management systems which reflect the scale and complexity of the project**
 - **ensure government receives full and complete advice about project status, risks, and decisions**
 - **seek appropriate legal advice**
 - **establish and maintain adequate records which meet their obligations under the State Records Act 2000.**
- **The Department of Treasury and Finance should exercise more active oversight of major projects and should ensure consistent application of the Strategic Asset Management Framework to all major capital projects.**
- **The Department of Treasury and Finance should reinforce the Strategic Asset Management Framework with more rigorous staged project approval processes that ensures:**
 - **that projects are funded only when well scoped and planned, and announced budgets and timelines are realistic**
 - **the risks at each stage have been identified and addressed**
 - **the governance frameworks implemented by agencies reflect good practice**
 - **transparency of the progress and performance of major projects to government and Parliament.**

Agency Responses

Response from the Department of Treasury and Finance

Overall, the findings and recommendations detailed in the report are fully supported by this Department.

I note that with the implementation of *Works Reform* in 2009, substantial progress has been made towards addressing the concerns raised in your examination. However, I also note that the Perth Arena project carries substantial residual risk to the State and acknowledge the need for ongoing vigilance in project management.

I draw your attention to the following *Works Reform* principles and initiatives which have particular relevance to your findings and recommendations:

- A renewed focus on compliance with the Government's Strategic Asset Management Framework policy and guidelines through the capital investment cycle
- The Department of Treasury and Finance assuming responsibility for business case development, enabling a consistent and robust approach to identifying and documenting project scope, delivery timeframe and cost at the capital investment decision stage
- A considered approach to selection of procurement models for delivery of non-residential building projects based on risk assessment and recognition of Government objectives.

Response from the WA Sports Centre Trust

The Perth Arena is a complex project and it is pleasing to note the report's assertion that the governance arrangements have been strengthened. Project risks have been analysed by VenuesWest and the Office of Strategic Projects in detail and have been monitored by the Board of VenuesWest and the Perth Arena Steering Committee. Regular monitoring of these risks and progress to mitigate them will continue to be a focus.

Although not noted in the Report, the Board of VenuesWest has also appointed a Perth Arena Subcommittee to provide additional oversight of the project.

The findings in the report support a long held view by VenuesWest that large scale public facilities such as the Perth Arena require the identification of and input from a client agency early in the project.

The Board of VenuesWest welcomes the findings of the review and looks forward to ensuring that the Perth Arena is a world class entertainment and sporting venue for generations to come.

Perth Arena is a significant project for Western Australia

Introduction

In September 2005, following an unsuccessful attempt to get the private sector to build and operate a multipurpose indoor entertainment and sports stadium, the then government announced that it would build and own a 'world class' stadium for \$160 million. The new stadium would be 'a landmark building' completed in time to host the 2009 Hopman Cup tennis tournament. The Arena design brief called for:

- operational viability – a commercially and functionally viable building for the operator
- a landmark building – which would maximise benefits to the wider community, contribute positively to its place in the public realm, and provide a link to the Northbridge precinct
- a world class stadium that would meet the acoustic and performance requirements of the entertainment and events industry, hosting large scale live performances, a diverse range of world championship sporting events, and the Hopman Cup tennis tournament.

The Arena is designed to be an iconic building to:

- seat 12 000 people for sporting events and 14 000 for concerts
- include a state-of-the-art operating system to allow maximum flexibility, an adaptable performance floor, extensive support rooms
- have a retractable roof, 500 corporate seats, and a 680 bay underground car park
- provide a forecourt facility similar to Melbourne's Federation Square.

Agencies involved in the examination

This examination involved three agencies:

- the former Department of Housing and Works (DHW)
- the Department of Treasury and Finance (DTF)
- WA Sports Centre Trust (trading as VenuesWest), a statutory authority.

Examination focus and scope

We examined the planning and management of the Arena project including tendering, contract award, and construction between March 2004 and December 2009. We focused on two main lines of enquiry:

- What is the current status of the Arena against original cost and time estimates?
- Has the management of the Arena project minimised risk to the state?

In conducting the examination we:

- reviewed the available documentation and confirmed with the Department of Housing that all information had been passed to the current project managers
- interviewed current and former senior officers and project management staff
- reviewed the government's asset management and capital investment policy
- reviewed national and international good practice guidelines on project and contract management.

We conducted the examination in accordance with the Australian Auditing Standards.

Original cost and time estimates were made before the project was well understood and defined

Findings

- Perth Arena is currently estimated to cost \$483 million, \$323 million more than announced in September 2005.
 - The original cost estimates for the Arena were unrealistic and made without an understanding of what the project would involve.
 - Changes to the scope of the project during the planning, tendering and contract award phases have added to cost increases.
- Perth Arena is scheduled to open in November 2011, almost three years later than originally planned.
 - The original opening date for the Arena was announced before the project was adequately defined.
 - Extensions in construction time as a result of design changes have further delayed the Arena opening date.
 - The Arena opening date remains at risk and could be delayed until January 2012.
 - If it opens as scheduled, the Arena will host only two of the five Hopman Cup tournaments originally planned.

Perth Arena is currently estimated to cost \$483 million, \$323 million more than announced in September 2005

In September 2005, the Government announced it would build the Arena for \$160 million. By April 2009 the budget had more than tripled to \$483 million (Table 1). The increases were due to greatly underestimated project costs at the outset and inaccurate estimates for subsequent design changes and project risk.

Approved Budget	September 2005 Original (\$m)	August 2006 Pre-tender (\$m)	May 2007 Post contract award (\$m)	April 2009 Current (\$m)
Management and Procurement	\$160	\$250	\$2	\$4
Design			\$28	\$35
Construction and Ground Works			\$293	\$348
Fit Out and Transition to Operation		Not Included	Not Included	\$42
Car Park	Not Included	\$70	\$20	\$54
Total (\$ millions)	\$160	\$320	\$343	\$483

Table 1: Perth Arena Budget (excluding GST)

The estimated cost of Perth Arena has increased by \$323 million.

The original cost estimates for the Arena were unrealistic and made without an understanding of what the project would involve

The \$160 million September 2005 budget proved to be a significant underestimate. The Arena cost was announced before the business case or design had been completed. This meant that the final project scope was not defined. The \$160 million was based on benchmark square metre rates for the smaller Vodafone Stadium in Victoria.

Changes to the scope of the project during the planning, tendering and contract award phases have added to cost increases

By August 2006, the pre-tender project estimate had risen to \$320 million. This estimate was based on a more detailed design, costed at \$250 million, that included a state-of-the-art operating system, corporate suites, function rooms, and a moveable performance floor. The addition of a multistorey car park over the near-by railway line increased the budget by a further \$70 million.

In May 2007, the budget was increased by \$15 million to accommodate the contract price negotiated with BGC. Another \$8 million for site preparation, prior to construction commencing, was approved prior to May and included in the \$343 million budget.

The May 2007 budget included a proposed saving of \$50 million by having the car park under the Arena. DHW agreed with this estimate in spite of previous advice that the cost of a single level underground car park would be over \$70 million (680 bays) or \$41 million (280 bays). The revised budget also assumed that savings of \$34 million would be made in 'value engineering'.

In April 2009, the May 2007 budget was increased by almost 50 per cent from \$343 million to \$483 million. When the cost of fit out is excluded from the current budget, the estimated cost of the Arena is nearly as much as the price of BGC's original tender which was considered unaffordable. The increases comprise:

- management and procurement has increased by \$2 million, and design has increased by \$7 million
- failure to achieve anticipated construction savings and changes to building design have added \$55 million
- inclusion of the \$42 million for fit out and transition to operation
- car park costs have increased by \$34 million.

The current budget includes a contingency to recognise a level of risk remaining on the project. BGC has submitted \$53 million in formal additional time and cost claims. These claims are being assessed by the state and depending on the amount agreed, could further increase the cost of the Arena.

Current Budget and Actual Expenditure	April 2009 (Current Budget \$m)	Actual Spent at December 2009 (\$m)	Proportion of Budget Spent at December 2009
Management and Procurement	\$4	\$1	25%
Design	\$35	\$29	83%
Construction and Ground Works	\$348	\$181	45%
Car Park	\$54		
Fit Out and Transition to Operation	\$42	\$2	<1%
Total	\$483	\$213	44%

Table 2: Spend to date for Perth Arena at December 2009 (excluding GST)

Forty-four per cent of the total budget had been spent by December 2009.

Perth Arena is scheduled to open in November 2011, almost three years later than originally planned

The original opening date for the Arena was announced before the project was adequately defined

The opening date for the Arena has been delayed a number of times reflecting an inadequate understanding of what the project would involve and how long it would take. The initial plan was for the Arena to be completed in time to host the January 2009 Hopman Cup. It was expected that five of the six Hopman Cup tournaments between 2008 and 2013 would be held at the Arena. This was announced before adequate project definition work had been done to make it a robust date.

DHW planned to start construction in November 2006. Construction time was estimated at 30 months. Even this initial plan would not have resulted in completion in time for the 2009 Hopman Cup. In December 2006, the start of construction was pushed back to June 2007 with the Arena opening in time for the 2010 Hopman Cup. In May 2007, the successful tenderer was awarded a 34 month construction contract with the estimated completion in March 2010.

Extensions in construction time as a result of design changes have further delayed the Arena opening date

On current estimates, construction and fit out will not be finished until late 2011. Under the contract, BGC is entitled to time extensions for delays which result from design changes requested by the state. It has been granted an additional 316 working days (Figure 1).

The result of the time extensions is that the Arena is not expected to open until November 2011. However, this date is at risk. OSP advised that construction is three months behind schedule and the timing of the fit out has not been finalised. These risks could push back the opening date to January 2012.

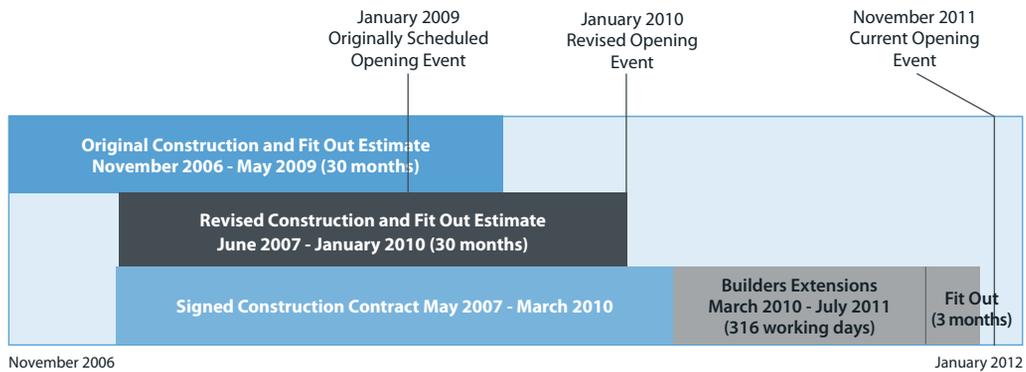


Figure 1: Original and Revised Perth Arena Construction Timelines

Perth Arena is scheduled to open almost three years later than originally planned. DHW repeatedly underestimated the Arena’s construction timelines and opening dates.

Inadequacies in the governance, management and administration of the Arena project have exposed the state to greater risk than planned

Findings

- The tender process was problematic and contract negotiations resulted in DHW accepting an offer which was fundamentally different from the original requirements.
- DHW did not achieve a key objective of its procurement strategy to transfer responsibility for completion of the Arena design to the contractor, resulting in the state bearing the risk of cost increases and delays due to design changes.
- Key decisions on fundamental changes to the contract were made without adequate assessment of the risks and value for money, legal advice was not sought and alternative options were not fully considered.
- DHW made changes to the design that could not be fully priced and it did not know if these represented value for money.
- Key risks such as the change in the allocation of design responsibility to the state and pricing uncertainties were not brought to the attention of the Minister for Housing and Works or Cabinet, so their decisions may not have been fully informed.
- Project governance, management and administration were inadequate:
 - the project lacked an appropriate governance structure which limited oversight and scrutiny
 - in order to meet the announced timelines critical elements of the Strategic Asset Management Framework and normal approval processes were not followed
 - key plans were not in place at the right time, limiting DHW's ability to manage and control the project
 - the project team was insufficiently resourced for a major project
 - poor record keeping on the project contravened the *State Records Act 2000*, provides little evidence of appropriate planning, monitoring and reporting and means DHW and OSP could not provide any written record of the contract negotiations.

Background

In January 2007, DHW invited selected companies to submit tenders for design and construction of the Arena. Two firms submitted tenders though only a submission from BGC was considered conforming. BGC was selected as the preferred tenderer and DHW entered into negotiations with them. On 28 May 2007, BGC was awarded the contract to build the Arena, and DHW retained responsibility for the Arena's design.

The governance framework for a major project like the Arena would normally involve a 'client' agency being responsible for defining what they want and then DHW being responsible for the delivery of the project to the client. The client agency would be the agency who would take on long-term ownership of the asset for service delivery.

Having a client agency provides external scrutiny of a project and ensures that there is regular reporting and visibility of project progress and decisions outside the delivery agency. This helps reduce risk. The skills required to deliver a project are different to those to act as a client. Governance frameworks for major projects also often include a steering committee on which agencies like DTF and State Solicitor's Office are represented, providing further oversight and expert advice.

DHW was both client and delivery agency, with the only external oversight and reporting being through the Minister for Housing and Works, and Cabinet. DHW remained solely responsible for the project until December 2007. In December 2007 OSP became responsible for the project. OSP reported directly to the Minister for Housing and Works until December 2008 and then became part of DTF when responsibility for all public works was transferred to DTF.

This chapter examines the procurement strategy for the Arena and the governance and administrative practices that were in place up until December 2009.

The tender process was problematic and contract negotiations resulted in DHW accepting an offer which was fundamentally different from the original requirements

Although two companies provided three tenders in response to the Arena Request for Tender (RFT), issued in January 2007, none of the tenders was initially acceptable. One conformed to the conditions of the RFT but the price was unacceptable, and the other two did not conform.

The tenders were reviewed by a tender evaluation panel which made a recommendation on a preferred tenderer with whom DHW should negotiate. We found no evidence of terms of reference for the evaluation panel, or the point at which they would hand over to a negotiation team. DTF were initially included on the evaluation panel, but withdrew prior to the evaluation.

During the tender evaluation process, confidential information on one of the bids was made public, which resulted in advice from the conforming tenderer that they would take legal action if DHW entered negotiations with the other tenderer. DHW sought legal advice on this issue. The advice DHW received was to consider the conforming tender first but also identified the option of stopping the RFT process. The option of stopping the process was not seriously considered.

In line with the main part of the legal advice, DHW entered into negotiations with BGC on the basis of the single conforming tender. During negotiations, fundamental changes were made to the allocation of risk to the state and to the design specified in the RFT. The result was an offer and contract that was fundamentally different from the original requirements

The negotiations were conducted rapidly. BGC was selected as the preferred tenderer on 2 May 2007 and negotiations were conducted between then and 23 May 2007 when DHW received a revised offer. Five days later, on the 28 May 2007, BGC were awarded the contract to construct the Arena. There was, consequently, little scrutiny of the outcomes of the tender evaluation process and negotiations either within or outside DHW.

The final approval stages were conducted much more quickly than normal. Internal DHW process called for a review by its Tenders Committee where a project is potentially contentious. The only review of Perth Arena by this committee was in relation to the site preparation. The tender evaluation and final offer were not referred for scrutiny. The DHW tender approval form was not fully completed.

DHW did not transfer responsibility for completion of the Arena design to the contractor, resulting in the state bearing the risk of cost increases and delays due to design changes

In negotiations, DHW agreed to retain responsibility for completing building design as a way of reducing the contract price. This changed the contract to a 'construct only' contract. The state therefore retained responsibility for any cost increases and time delays associated with building design changes.

DHW's procurement strategy for the Arena was to secure a fixed price novated 'design and construct' contract. This would have transferred, or 'novated', the responsibility for completing the design of the Arena to the builder. Given that the design was substantially incomplete, this procurement strategy would have reduced risks to the state.

Retaining responsibility for the design was a major change in the procurement strategy, a departure from the RFT and fundamentally changed the risk allocation on the project. The evidence available does not provide sufficient information to determine who made the decision to retain design responsibility or how this decision was taken. DHW estimated that keeping responsibility for finalising design reduced the offer price by \$70 million. The state has received claims for extra costs of \$53 million associated with design changes, and granted 316 extra days for the contractor to complete the building.

DHW considered that the design and construction of the Arena could be completed for \$320 million. The gap between DHW's budget of \$320 million and the tendered price of \$460 million was largely driven by the cost risk attributed to completing the design. The gap indicated that DHW had underestimated that risk compared to the potential contractors. It also indicates that there may have been some benefit in DHW maturing the design further, before issuing an RFT. The current estimated cost of \$440 million, excluding fit out, is close to the tenderer's original estimate of the cost of managing the risks to deliver the project.

By retaining design responsibility DHW changed the level of risk passed to BGC and, consequently, reduced the offer price. The other tenderer who provided a non-conforming bid may also have reduced their price if they did not have to take on design responsibility, but this option was not explored. Other companies who had been deterred from tendering by the level of risk in a novated design and construct contract, may have been willing to tender, introducing greater competitive pressure. However, DHW did not seriously consider re-tendering the project as a 'construct only' RFT or negotiating with the other tenderer. Fully exploring alternative options would have given DHW greater assurance that they had secured the best deal available through greater competition.

By the end of the contract negotiations the original tender price had reduced from \$460 million to \$302 million (excluding GST) (including Arena and car park – Table 3). However, we found no evidence that DHW had decided in advance what levels of risk it was willing to accept to reduce the price, nor any analysis of what the long-term cost impact might be of taking back the responsibility for design.

	Original Tender Value (\$m) 'Design & Construct' Contract	Agreed Price (\$m) 'Construct' Only Contract
Design	\$11	\$0
Construction	\$379	\$282
Car Park	\$70	\$20
Total	\$460	\$302

Table 3: Tender and agreed price for Perth Arena (excluding GST)

Negotiations with the tenderer reduced the construction price of Perth Arena by over \$100 million.

Although the design costs were taken out of the contract price, DHW still needed to meet those costs (then estimated at \$11 million). DHW was also left with the risk that the overall project cost would be higher than the 'design and construct' tendered price.

Key decisions on fundamental changes to the contract were made without adequate assessment of the risks and value for money, legal advice, or consideration of alternative options

We found no documented evidence that the costs, benefits and risks arising from the change in risk allocation on the project resulting from DHW retaining design responsibility were formally assessed. Internal memos noted retaining design responsibility was a major change and that this represented a risk. From the information available, however, the Minister was not fully informed in writing about the significance and implications of the change, nor were any alternatives, such as re-tendering or reviewing the other offers, proposed for the Minister to consider. Such alternatives could have provided DHW with greater assurance that they were achieving the best price possible.

DHW did not seek legal advice about the contract it negotiated with BGC. State Solicitors were made aware shortly before contracts were agreed, that DHW was close to accepting a significantly revised offer from BGC, and of some of the changes in that offer. State Solicitors verbally suggested that DHW not proceed to contract without legal review and advice. DHW did not take up this suggestion and the contract between the state and BGC was not reviewed by the State Solicitor's Office prior to being awarded.

DHW made changes to the design that could not be fully priced and it did not know if these represented value for money

At the same time as agreeing to retain the design risk for the Arena, DHW made major changes to the design. The major change, moving the car park to underneath the Arena, could not be robustly priced and a provisional sum was included. We found no analysis of how this and other changes to the design impacted price, construction time or building functionality. Although DHW knew that design changes reduced the tendered price, they did not know what the actual impact would be on the final cost of the Arena or if the design changes represented value for money to the state.

Changes to the building design have increased costs to the state and delayed completion of the Arena. The main change was to the Arena's stand alone car park. The original design provided to the tenderers was for a multistorey car park over the nearby railway line. Building the car park underground was considered a less risky option, although DHW's early investigation of the ground conditions indicated that there was a high water table.

The re-location of the car park meant that detailed development of the Arena design had to be completed in parallel with construction. The shift to a construct only contract meant that the resulting financial costs arising from any delays in the design became the responsibility of the state. Likewise, any consequent delays in construction due to the change in car park location were the state's responsibility. These risks have eventuated. The change in the car park location has delayed the project by a year whilst the cost of the underground car park has increased from a provisional estimate of \$20 million to \$54 million.

Key risks were not brought to the attention of the Minister for Housing and Works or Cabinet, so their decisions may not have been fully informed

DHW did not report in writing key information to the Minister and Cabinet which would have better informed the Government's decision-making. For example, DHW did not advise the Minister in writing:

- about the fundamental change in the contract from a novated 'design and construct' to a 'construct only'; and explain the resulting increased risk to the state
- that the negotiated contract price included provisional sums with unsubstantiated costs
- that achieving the contract price relied on realising \$34 million of cost savings during construction.

DHW officers advised us that they provided fortnightly verbal briefings to the Minister highlighting key risks and issues. Without written records of the briefings we cannot verify what information was provided.

Our review of the relevant Cabinet submissions confirmed this information was not reported to Cabinet.

Project governance, management and administration were inadequate

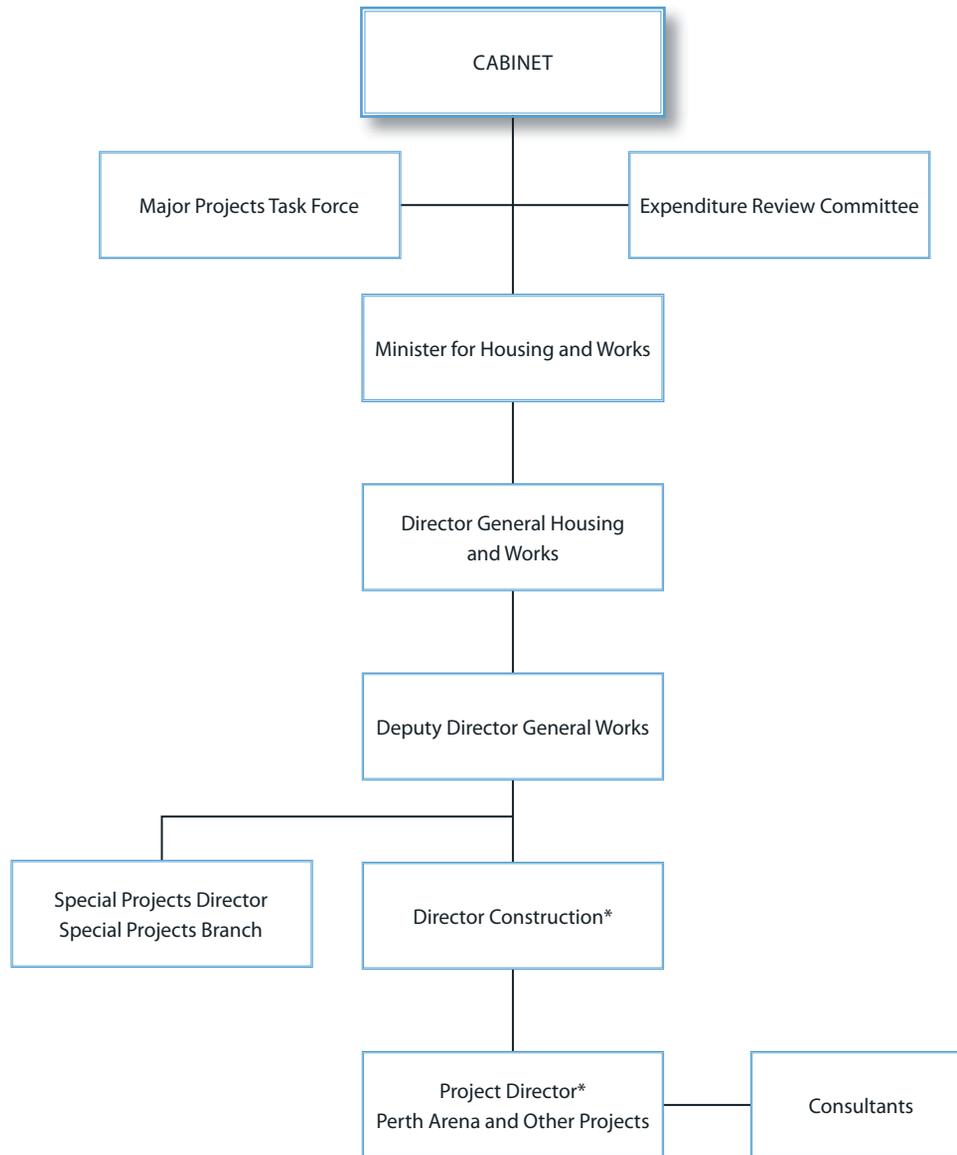
The project lacked an appropriate governance structure which limited oversight and scrutiny

Governance and oversight arrangements suitable for a major project were not put in place for the Arena. Major projects should have a number of key governance arrangements in place to provide independent oversight and assurance as well as clear accountability. These arrangements were not established for Perth Arena. Instead, DHW had sole responsibility for the project – acting as both client and delivery agency, with the only oversight and reporting being to the Minister for Housing and Works and the Major Government Projects Task Force, a sub-committee of Cabinet (Figure 2).

Appropriate arrangements would include:

- establishment of a client agency with responsibility for the project budget and scope. Potential stakeholder agencies for the Arena included the WA Sports Centre Trust, Department of Sport and Recreation, WA Tourism Commission, and Department of Culture and the Arts. None of these agencies was designated as the client agency, effectively leaving DHW to fulfil the client agency role, as well as being responsible for delivery.
- DHW as the separate delivery agency. Under this role, DHW would advise the client agency on project definition, cost planning, tender development, and contracting. Then at construction stage DHW takes control, although the budget and project oversight remain with the client agency.
- a project steering committee which provides strategic oversight and drives the project. Members would ordinarily include representatives of the client and delivery agency as well as representatives from central agencies such as the State Solicitors Office and DTF. A project steering committee was formed in 2005, but evidence found indicated it met only once, between 2005 and the end of 2007.

The reason for the absence of these governance arrangements is unclear. It is also unclear why DHW did not make other compensating arrangements, such as having an independent review of the project and its progress.



* Same person for some elements of the project.

Figure 2: DHW organisational and accountability structure for the Perth Arena Project from 2006 to December 2007

The governance structure was inadequate for a major project.

In order to meet the announced timelines critical elements of the Strategic Asset Management Framework and normal approval processes were not followed

DHW did not follow critical components of the Strategic Asset Management (SAM) Framework in its planning and management of the Arena project. Key components of the early project evaluation and definition stages were either skipped or rushed, and opportunities to review the project and put it on a sound footing were missed. The Arena passed through key stages without the required scoping and planning work:

- The project was announced before a business case was complete, and building the business case happened in parallel with the early stages of tendering.
- A project definition plan was not prepared, missing out a key 'reality check' stage in SAM
- The Arena procurement plan was not completed until half way through the formal tendering process.

Government has required agencies to follow the SAM framework since October 2005. The purpose of SAM is to improve the planning for and management of major projects so that construction timelines and budgets can be controlled. The framework incorporates guidelines developed and supported by DHW and DTF.

Under SAM, long-term planning and evaluation of major projects should commence many years prior to the start of construction. However, changing priorities of government as illustrated by the relatively rapid decision to build the Arena mean that variations to the requirements of SAM can be necessary. Such variations should be carefully considered and kept to a minimum.

CRITICAL STAGES OF STRATEGIC ASSET MANAGEMENT

PROJECT EVALUATION
Purpose: Clarifies links to service delivery goals and strategic direction, includes indicative cost and timeline
Timeline: 5-6 years before project start
Deliverables: Concept Approval Business Case
Reviewed by: DTF
Approved by: Minister and ERC

PROJECT DEFINITION
Purpose: Detailed development of project brief including contracting strategy and reliable cost and time estimates
Timeline: 1-4 years before project start
Deliverables: Project Definition Plan
Reviewed and endorsed by: DHW
Approved by: DTF

PROJECT DELIVERY
Purpose: To design and construct the project within limits of approved budget, timelines and scope
Timeline: Year of project start
Deliverables: Contract Documentation
Cost plans reviewed by: DHW
Budget monitored by: Client agency – DTF notified if project is likely to exceed approved budget

PERTH ARENA PROCESS

September 2005 Government announces the Arena to be built and opened by January 2009
 (DHW tenders for Arena design)

December 2006 ERC approves Business Case
 (Level of DTF review unclear)

(No Project Definition Plan)

December 2006 - March 2007 Tender Process for 'Design and Construct' Contract
 (Tender documents released progressively during process)

May 2007 'Construct Only' Contract awarded
 (No bill of quantities)

June 2007 Construction commences

Figure 3: Summary of Strategic Asset Management requirements for critical stages and the Perth Arena project management process

DHW fast-tracked processes to meet the announced timelines, and did not review critical stages or complete required documentation. This placed the already high risk project at further risk.

SAM requires DTF to 'scrutinise' the business case prior to the project going forward, but the extent and nature of DTFs involvement on the Arena was not clear. This stage was an opportunity to assess the feasibility and reasonableness of the project costs and timelines, as well as its long-term viability. DHW commissioned consultants to develop the Arena business case after the project cost and opening date had been announced. Development of the business case happened at the same time that the tender process for construction was beginning.

SAM calls for DHW to review and endorse the project definition plan. The plan includes the procurement strategy and revised cost estimates based on more detailed project definition. SAM refers to this stage as a 'reality check'. DHW did not develop a definition plan; it was already developing tender documentation for a novated design and construct contract. The procurement plan detailing the contract strategy was not finalised until February 2007, midway through the tender process. The tender closed on 27 March 2007.

DHW's fast-tracked processes made an already challenging project more risky. The Economic Audit Committee raised similar concerns in its Final Report *Putting the Public First* (2009). The report concluded that 'where infrastructure projects are fast-tracked, the application of the SAM (Framework) becomes even more critical to ensuring successful project outcomes, notwithstanding the shorter planning timeframes'. The report concluded that in these circumstances the SAM Framework required application in a different form, but should be applied nonetheless.

Key plans were not in place at the right time, limiting DHW's ability to manage and control the project.

Key planning documents for Perth Arena were not put in place until late 2009, over two years into construction. Without these plans, DHW lacked the capacity to:

- successfully schedule and monitor project activities needed to meet the opening deadline set by government
- identify how effectively it was managing risk
- recognise whether costs and timelines were on-budget or escalating.

For major projects a range of plans should be put in place prior to tendering or shortly after contract award. These plans, such as a project definition plan, contract management plan, communications plan, risk assessment and management plan, cost management plan, and project schedule, are necessary to manage the project, administer the contract, mitigate risk, communicate with stakeholders, and monitor cash flow.

The project team was insufficiently resourced for a major project

DHW's project team was inadequate for a major project, thereby compounding the risk to the project from the lack of appropriate governance and oversight.

The project team comprised two officers, neither of which was dedicated full-time to the project. On a day-to-day basis the Project Director relied on consultants (a cost manager, the architects and a contract manager) to manage the design contract, assist with project costings and later to administer the contract – with limited oversight. Under the structure established by DHW the principal and superintendent was the same person. Normal practice would be that these roles be separated. In contrast, the current team managing the project is much larger and able to provide more robust oversight of the consultants.

Poor record keeping on the project means there is little evidence of appropriate planning, monitoring and reporting

During the period that DHW managed the project, adequate documentation was not established or maintained. The lack of documentation has meant that we were often unable to establish why decisions were made, by whom, and whether appropriate processes were followed. From December 2007, when OSP took over responsibility for the project, documentation began to gradually improve. The lack of adequate documentary records by DHW includes any evidence to show:

- robust project planning, regular monitoring and reporting within DHW
- risk analysis, expert advice or consideration of alternative options, in relation to the contract and design changes. For example, in its negotiations with BGC, DHW did not document:
 - options considered pre-negotiation and their cost and benefits
 - the state's pre-negotiation position
 - arguments put by BGC during negotiations
 - the reasons for accepting the eventual changes to the contract and building design
 - how the consensus view between the state and BGC was reached.

DHW's failure to place important documents in the electronic or hard copy records system contravened the *State Records Act 2000* and its record keeping plan. As an example, the Tenders Office was unable to locate the construction tender documents. We also found that the project files transferred from DHW to OSP were incomplete and in disarray.

Guidelines issued by the State Records Commission in support of the Act make it clear that records should be maintained, including documentation of:

- significant meetings where business decisions are made
- work-related significant discussions (phone calls, face-to-face conversations)
- business decisions made or directions given
- significant internal or external correspondence (including emails) sent or received that relate to agency work.

Governance arrangements have been strengthened, but risks remain of further cost increases and delays

Findings

- The governance framework and risk management has been strengthened since early 2009.
 - A governance framework more appropriate for a major project has now been established.
 - Day-to-day management of the project is better resourced.
 - Risks have been identified but not all are being systematically monitored by the Project Steering and Control Committees.
- Any further cost increases will reduce the budget available for fit out or require additional government funding.
- The estimated operating profit for the Arena is less than originally forecast.
- Uncertainty over the completion date affects VenuesWest's capacity to schedule events.

Background

From December 2007 OSP took on responsibility for delivery of the Arena. OSP initially reported directly to the Minister for Housing and Works and was administratively attached to DHW. From December 2008 OSP became part of, and reported to DTF.

In April 2009 VenuesWest formally became the client agency with responsibility for fitting out and operating the Arena. Appointing VenuesWest as the client agency resolved the long standing problem of having DHW act as both delivery and client agency, separating the client and delivery agency roles. VenuesWest did not become responsible for the Arena budget until June 2009.

This chapter examines the governance and administrative practices that have been in place since December 2008 when full responsibility for the project was transferred to DTF. It also considers issues associated with the future operation of the Arena

The governance framework and risk management has been strengthened since early 2009

A governance framework more appropriate for a major project has now been established

Governance arrangements that better match a major project have been established and project oversight has strengthened. However, neither these arrangements, nor the increased day-to-day management resources brought to bear by VenuesWest and OSP, can fully mitigate the impact of earlier limited project planning or the risks retained by the state in the contract.

In December 2007, OSP was established and given responsibility for the project. It took over a year to fully implement revised governance arrangements. Between December 2007 and their transfer to DTF in December 2008, OSP reported directly to the Minister, but remained administratively part of DHW. During this time OSP used established DHW processes whilst developing project documentation, implementing appropriate oversight and governance, and managing the contract which had been agreed with BGC. At the same time they were monitoring construction which had already commenced.

The key changes to the governance of the project include:

- the separation of the 'delivery' and 'client agency' roles to achieve improved monitoring of the project and oversight of progress
- a Project Steering Committee has been formed with representatives from both client and delivery agencies, as well as the Board of VenuesWest, the State Solicitors Office, and a representative from the Minister for Sport and Recreation. This committee provides strategic oversight of the project
- a Project Control Group which has representatives from the project teams provides day-to-day monitoring and control of the project.

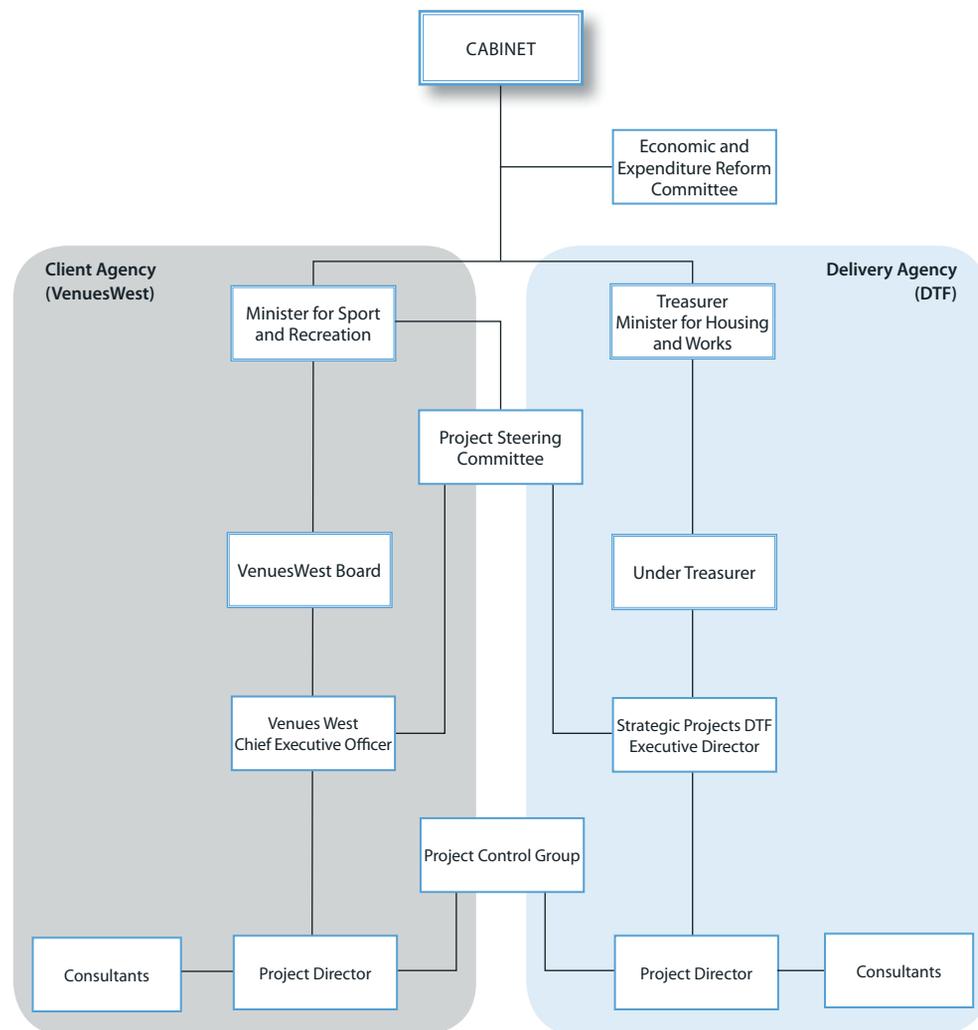


Figure 4: Current Governance Framework (2009 onwards)

A more robust governance framework has been established.

Day-to-day management of the project is better resourced

Day-to-day management of the project is more robust with improved documentation, monitoring, and reporting. Key documents, which previously did not exist, such as a project plan, cash flows, and Project Steering Committee terms of reference have been developed and approved.

The Office of Strategic Projects and VenuesWest have recognised the scale and complexity of the Perth Arena project. Dedicated project teams have been established in each agency supported by expert advice such as from the State Solicitors Office, RiskCover, and consultants.

Greater resources are being allocated to managing the Arena project. The DHW project team was made up of a part-time DHW executive, part-time special projects director and a part-time project director supported by consultants. A full-time contract manager was appointed once the contract was awarded in June 2007. By comparison OSP has a part-time executive staff member, full-time project director, a commercial and contracts officer and a full-time graduate records clerk as well as a number of part-time project staff. The contract administrator now has four staff working on the project.

VenuesWest has two staff members providing part-time executive oversight, a fit out team with a part-time project director, a project consultant, and three full-time project staff.

The project team monitors construction progress as well as how much has been spent on the Arena. The Project Control Group receives regular information on the proportion of the budget spent. A project plan details what elements of construction are due for completion each month which means that the project teams know whether construction is behind or ahead of schedule.

The Project Steering Committee and VenuesWest Board receive regular written reports. The Minister for Housing and Works, and Minister for Sport and Recreation also receive both verbal briefings and written reports. For example the Minister for Housing and Works receives written bi-monthly major projects updates, and the Minister for Sport and Recreation receives the Steering Committee agenda and papers, and copies of sub-committee minutes.

Risks have been identified but not all are being systematically monitored by the Project Steering and Control Committees

OSP and VenuesWest have separate risk registers for the Arena project. However neither are reporting a joined-up picture of the actions taken to address the project risks to the Project Control Group or the Project Steering Committee. There is the potential that some risks may not be addressed or that mitigation actions may not be well coordinated.

VenuesWest is relying on OSP to manage the installation of fixtures for the Arena. VenuesWest's risk review identified that the best option for installing fixtures into the Arena would be a variation to the current construction contract. It is the same contract which has already resulted in increased costs to the state. VenuesWest are relying on OSP's project plan, change management plan, and improved governance arrangements to ensure that the contract is managed appropriately.

Any further cost increases will reduce the budget available for fit out or require additional government funding

The approved \$483 million for construction, fit out and transition to operation of the Perth Arena is the budgeted cost to the state. If construction costs increase then the project will either require further government funding or the additional cost will need to be met from the \$42 million budget for the Arena fit out.

There is a risk of the construction costs rising. BGC has submitted cost claims for design and construction changes requested by the state. It is not clear when there will be resolution of these claims, which are being assessed by the state. Further changes to design, materials or extensions to construction may mean additional claims. OSP has a change management plan to assess contractor claims.

The estimated operating profit for the Arena is less than originally forecast

A review of the latest business case for the Perth Arena reduced the forecast annual operating profit to \$3.1 million in its first year and \$3.9 million in subsequent years. This is over \$1 million less than the original estimate which forecast an operating profit of \$4.3 million in year one and \$5 million in subsequent years.

No allowance has been made for capital replacement which is needed to sustain the fabric and structure of the building to a high level. Revised estimates show that the capital replacement cost of the Arena (1.5 per cent of building cost) could be \$4.8 million in any one year. At this level, additional funding may be required to bridge the gap between the Arena's operating profit and the cost of capital replacement.

Uncertainty over the completion date affects VenuesWest's capacity to schedule events

VenuesWest have a phased strategy for moving from completion of construction to operation, but the completion date remains at risk. The current agreed construction completion date is 13 July 2011. However, BGC's expected completion date is October 2011. OSP are planning for fit out to be done simultaneously with the final elements of construction. If this is feasible and construction is completed in July the Arena would be operational in time for the 2012 Hopman Cup. If construction extends beyond October 2011 or fit out is conducted after completion of construction, this would add a further three months and could delay the opening date beyond January 2012.

The uncertainty over completion of the Arena affects VenuesWest's capacity to engage a private sector operator on favourable terms. The operator will need to deliver a program of quality events in the immediate period after the Arena is opened. VenuesWest's research, and advice from the events industry, is that the venue operator needs 12 to 18 months lead time to ensure that the venue is staffed and events are secured. If the completion date is not reliable, it will be more challenging for an operator to schedule events, potentially losing valuable operating revenue at an early stage.

Auditor General's Report

REPORT NUMBER	2009 REPORTS	DATE TABLED
13	Audit Results Report: 2008-09 Assurance Audits	11 November 2009
12	Fourth Public Sector Performance Report 2009 – Preliminary Examination of the Royalties for Regions Program – Accountability for Government Grants – Management of Government Purchasing Cards	11 November 2009
11	Third Public Sector Performance Report 2009 – Regulation of Firearms – Follow-up – Managing Staff Attendance in the Public Sector – Evaluation in Government	21 October 2009
10	Adult Community Mental Health Teams: Availability, Accessibility and Effectiveness of Services	14 October 2009
9	Every Day Counts: Managing Student Attendance in Western Australian Public Schools	19 August 2009
8	Opinion on Ministerial Notification: Ministerial Decision to not Provide Information to Parliament – Country Age Pension Fuel Card	19 August 2009
7	Second Public Sector Performance Report – Dangerous Goods Safety – Compliance in Western Australia's Commercial and Recreational Fisheries	25 June 2009
6	Maintaining the State Road Network	17 June 2009
5	Rich and Rare: Conservation of Threatened Species	10 June 2009
4	Coming, Ready or Not: Preparing for Large-scale Emergencies	20 May 2009
3	Audit Results Report – 31 December 2008 Assurance Audits and other audits completed since 3 November 2008	6 May 2009
2	Information Systems Audit Report	8 April 2009
1	Public Sector Performance Report 2009 – Management of Water Resources in Western Australia – Follow-up – Administration of the Metropolitan Region Scheme by the Department for Planning and Infrastructure – Management of Fringe Benefits Tax	1 April 2009

The above reports can be accessed on the Office of the Auditor General's website at www.audit.wa.gov.au

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