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Performance Audit

# Approval of Funding for Public Works

Australian National Audit Office

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Australian National
Audit Office

Canberra ACT
5 February 2009

Dear Mr President
Dear Mr Speaker

The Australian National Audit Office has undertaken a performance audit across agencies in accordance with the authority contained in the *Auditor-General Act 1997*. I present the report of this audit and the accompanying brochure to the Parliament. The report is titled *Approval of Funding for Public Works.*

Following its tabling in Parliament, the report will be placed on the Australian National Audit Office's Homepage—http://www.anao.gov.au.

Yours sincerely

Ian McPhee
Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT

**AUDITING FOR AUSTRALIA**

The Auditor-General is head of the Australian National Audit Office. The ANAO assists the Auditor-General to carry out his duties under the *Auditor-General Act 1997* to undertake performance audits and financial statement audits of Commonwealth public sector bodies and to provide independent reports and advice for the Parliament, the Government and the community. The aim is to improve Commonwealth public sector administration and accountability.

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# Contents

**Tables**



**Figures**

# Abbreviations

| | |
|---|---|
| AEW&C | Airborne Early Warning and Control aircraft |
| AMSA | Australian Maritime Safety Authority |
| ANAO | Australian National Audit Office |
| AUSFTA | Australia-United States Free Trade Agreement |
| CAC Act | *Commonwealth Authorities and Companies Act 1997* |
| CPGs | Commonwealth Procurement Guidelines |
| CSIRO | Commonwealth Scientific and Industrial Research Organisation |
| Defence | Department of Defence |
| DMO | Defence Materiel Organisation |
| FMA Act | *Financial Management and Accountability Act 1997* |
| GAT | Gateway Assessment Tool |
| IDC | Christmas Island Immigration Detention Centre |
| OGC | United Kingdom Office of Government Commerce |
| PPP | Public Private Partnership |
| PWC Act | *Public Works Committee Act 1969* |
| the Committee | Parliamentary Standing Committee on Public Works |
| the Committee's Manual | Parliamentary Standing Committee on Public Works Manual of Procedures for Departments and Agencies |
| the Kinnaird Review | Defence Procurement Review 2003 |

| | |
|---|---|
| the Memorial | Australian War Memorial |
| UK | United Kingdom |

# Summary and Recommendations

# Summary

## Introduction

**1.** The Parliamentary Standing Committee on Public Works (known as the Public Works Committee (the Committee)) was established in 1913. It is constituted by the *Public Works Committee Act 1969* (the PWC Act). The Act empowers the Committee to inquire into and report to the Parliament on each public work referred to it. The Committee's terms of reference are contained in section 17(3) of the Act. Essentially, these are to consider:

- the stated purpose of the proposed work and its suitability for that purpose;
- the need for, and advisability of, the work;
- the cost-effectiveness of the proposal;
- the amount of revenue the work will produce if that is its purpose; and
- the current and prospective public value of the work.

**2.** The PWC Act provides that a public work with an estimated cost[1] exceeding a $15 million[2] threshold shall not be commenced unless:

- it has been referred to the Committee; and
- the House of Representatives has resolved, following examination of the report by the Committee, that it is expedient to proceed with the work (that is, an 'expediency motion' is passed).

**3.** Under the PWC Act, a public work the cost of which exceeds the threshold may only be commenced without such referral under certain specific exemption conditions, namely that:

(a) the House of Representatives has resolved that, by reason of the urgent nature of the work, it is expedient that it be carried out without having been referred to the Committee;

(b) the Governor-General has, by order, declared that the work is for defence purposes and that the reference of the work to the Committee

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[1] The Act defines 'estimated cost', in relation to a public work, to mean an estimate of cost made when all particulars of the work substantially affecting its costs have been determined.

[2] The threshold was increased from $6 million in November 2006.

would be contrary to the public interest (for example, for security reasons); or

(c) the work has been declared, under the Act, as being a repetitive work (for example, general maintenance work).[3]

**4.** The agency that is carrying out or contracting public works that are required to be referred to the Committee prepares a submission (also referred to as a 'Statement of Evidence'). The submission includes information on why the work is necessary, other options considered, estimated cost, and any plans or drawings that will help the Committee understand the purpose and scope of the work. At the same time as providing the Statement of Evidence, agencies are required to provide the Committee with a separate table showing a breakdown of the major cost components of the proposed work (referred to as the Confidential Cost Breakdown). In order to protect the integrity of the tendering process and assist the Commonwealth in maximising its value for money in funding the project, the practice of the Committee is that only Committee members and secretariat staff view the Confidential Cost Breakdown.

**5.** Subsequently, the Committee holds public hearings in relation to public works projects referred to it. Members of the Committee intending to attend the hearing on a particular project will generally inspect the proposed construction site prior to the hearing.[4] At the public hearing, officers from the proponent agency appear before the Committee and any organisation or person who has sent in a submission to the Committee on the particular project may be invited to give evidence. Private hearings, involving the Committee members and the proponent agency, are also held to allow discussion about cost details of the work, and may include sensitive tendering information.

**6.** After the public hearing and responses have been made to any questions on notice, the Committee prepares a report to present to the Parliament. The Committee is able to make any recommendations it sees fit within the bounds of the Act, and may recommend the proposed public work does not proceed.

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3 See sub-section (8) of section 18 of the Act. There is no guidance or examples provided of what constitutes an urgent, defence purpose or repetitive work in the Committee's *Manual of Procedures for Departments and Agencies*, although it does note that when an exemption is sought, officers of the agency should attend a meeting of the Committee to explain the background to, and need for, the exemption.

4 The public hearing is usually conducted either at or close to the site, following the Committee members' inspection.

**7.** Once the report is tabled in the Parliament, a motion is made by the Minister for Finance and Deregulation (or delegate) to proceed with the work. This is the 'expediency motion' and usually supports the Committee's recommendations. The Act provides that work may not commence on a public work referred to the Committee until the House of Representatives has 'resolved that it is expedient to carry out the work.'[5]

### The Committee's Manual

**8.** The Committee has published a *Manual of Procedures for Departments and Agencies* (the Committee's Manual).[6] The Manual is intended to be a guide to inform stakeholders of the Committee's processes and provide practical information. It outlines the process and timeline for referrals, the role of the Committee Secretariat and of the Department of Finance and Deregulation (Finance), and the recommended content and format of submissions to the Committee. The Manual also outlines the process of inquiry, site inspection, hearings and subsequent reporting by the Committee.

## Audit scope and objective

**9.** In 2007, the Joint Committee of Public Accounts and Audit advised the Australian National Audit Office (ANAO) that a priority[7] of Parliament was for the ANAO to conduct a performance audit of the processes associated with the development by agencies of public works proposals that fall within the scope of the Committee. Against this background, ANAO decided to undertake two related audits.

**10.** The first audit examined, from a procedural perspective, whether the Department of Defence's (Defence's) capital works projects have been submitted in accordance with the Committee's requirements for notification and review prior to entering into financial commitments for the works.[8] The report of that audit was tabled in the Parliament in April 2008.[9] The second

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5 This requirement is set out in subsection (7) of section 18 of the Act.

6 The Manual has no recognised status under the PWC Act (for example, it is not given legal force under the *Public Works Committee Regulations 1969*).

7 Each year, the Joint Committee of Public Accounts and Audit consults with all other Committees of the Australian Parliament to identify the priorities of the Parliament for performance audits to be undertaken in the following financial year by the ANAO.

8 Between 25 March 1998 and 18 March 2008, the PWC examined 48 Defence projects (not including Defence Housing Authority projects), representing 38 per cent of all projects examined during that period.

9 ANAO Audit Report No.28 2007–08, *Defence's Compliance with the Public Works Committee's Approval Processes*.

audit, which is the subject of this report, is a broader and more in-depth cross-portfolio audit. Its objective was to assess:

- the planning and delivery of capital works projects by proponent agencies;
- the extent to which projects have delivered on what was intended; and
- the extent to which proponent agencies have complied with the requirements of the *Public Works Committee Act 1969* and approved procedures.[10]

**11.** A focus of the audit was examination of six projects from the 58 reports released by the Committee during the tenure of the 41st Parliament (between December 2004 and September 2007), as set out in Table 1. The six projects included in the audit sample were selected to give a cross-section of agencies, project values, and project types of projects that were at or near completion. Based on the Statements of Evidence provided to the Committee, each of the six projects should have been completed before the end of calendar year 2007.

**12.** In order to set the work of the Public Works Committee in a wider context, the audit also considered some other approaches that have been adopted internationally, and included a review of other relevant approvals processes (including the two-pass/two-stage approval processes,[11] the Gateway Review Process[12] and agency processes adopted by the proponent agencies included in the audit).

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[10] ANAO Audit Report No.28 2007–08 (see paragraphs 10 and 1.12), examined Defence's compliance from a procedural perspective whereas this current audit has examined the substance of the six individual projects included in the audit sample.

[11] The strengthened 'two-pass' approval process for major Defence capital equipment projects was introduced in 2003 with a two-stage approval process for major non-Defence capital works projects announced in the 2007–08 Budget. ANAO's is currently undertaking a performance audit of the implementation of the strengthened 'two-pass' approval process.

[12] Gateway is a project assurance methodology that involves short, intensive reviews at critical points in the project's lifecycle by a team of reviewers not associated with the project. The intention is to provide an arm's length assessment of the project against its specified objectives, and an early identification of areas requiring corrective action.

## Table 1

### Projects examined in detail

| Project | Proponent Agency | Reported Value | Expected Completion due |
|---|---|---|---|
| Fitout for Department of Employment and Workplace Relations in Canberra | Department of Education, Employment and Workplace Relations (DEEWR) | $15.5m | Feb 2007 |
| Kokoda Barracks Redevelopment, Queensland | Department of Defence (Defence) | $86.7m | Nov 2007 |
| Re-development of Post-1945 Conflicts Galleries and Discovery Room for the Australian War Memorial, ACT | Australian War Memorial (the Memorial) | $17.8m | Oct 2007 |
| RAAF Base Amberley Redevelopment Stage 2, Queensland | Department of Defence | $285.6m | Dec 2007 |
| CSIRO Entomology Bioscience Laboratory at Black Mountain, ACT | Commonwealth Scientific and Industrial Research Organisation (CSIRO) | $14.5m | Early 2007 |
| Reserve Bank of Australia Business Resumption Site at Baulkham Hills, NSW | Reserve Bank of Australia (Reserve Bank) | $38.0m | Mid-2007 |

Source: ANAO.

**13.** Contemporaneous with this audit, ANAO also commenced an audit of the construction of the Respecified Christmas Island Immigration Detention Centre (IDC).[13] The methodology[14] for both the 'Approval of Funding for Capital Works' audit and the audit of the 'Construction of the Christmas Island IDC' included assessing the rigour of the project cost estimates and budgets as well as the management of projects in terms of their cost, timing and scope.

## Conclusion

**14.** Australian Government public works and property functions take place in a largely devolved environment, where individual agencies manage their own property requirements and the delivery of public works projects. Under this devolved model, proponent agencies play a leading role in the PWC approvals process, including providing the Committee with information of the

[13] This audit is expected to table in the Winter 2009 Sittings.

[14] Day-to-day management and conduct of both audits was undertaken under contract by Arup Pty Ltd, a global design, engineering, management and business consulting practice. Arup was selected following a competitive tender process.

proposed works and their estimated cost. Finance plays a role in assisting agencies to have their works referred to, and considered by, the Committee. Finance also has significant responsibilities in relation to the planning,[15] budgeting and Government approval of projects by Budget funded entities. In addition, on a case by case basis, Finance may undertake (on behalf of proponent agencies) the delivery of non-Defence capital works.

**15.** Factors such as different agency operating and budgetary environments, together with diversity in project deliverables and locations, means it is reasonable for project planning and delivery practices to vary. The audit found that variances in agency approaches also reflected, to various degrees, inconsistent standards in project planning.

**16.** A key area of variability in agency practices has related to the development of project estimates. In addition to determining which projects require referral, the project estimate is an important input to the Committee in its statutory role of considering and reporting on the cost-effectiveness of the proposed work as well as the current and prospective public value of the work. However, financial information being provided to the Committee has been of variable standard. As a consequence, for some projects:

- budgets and estimates have excluded amounts relevant to the project addressing the identified business need;
- there have been inconsistencies between the financial information included in the internal business cases supporting the project and the information provided to the Committee in the Confidential Cost Breakdown;
- there has been insufficient clarity about the level of confidence attaching to estimates; and/or
- insufficient allowance has been made for risks (through a provision for contingencies) and price and cost increases over time (through a provision for cost escalation).

**17.** In recent years, two processes (namely two-stage funding approval processes and Gateway reviews) have been introduced aimed at providing improvements in cost certainty and to facilitate greater scrutiny of projects. These processes have yet to have a significant effect on the planning and

[15] For example, the documented Budget processes require agencies to provide Finance with a business case (in accordance with a prescribed format) for construction projects costing more than a set threshold.

delivery of public works. This reflects the relatively short period of time the new processes have been in place (compared with the long lead times for the planning and delivery of modern infrastructure developments), as well as the need for the administering agencies to apply greater rigour to their scrutiny of infrastructure projects.

**18.** The Committee Manual requires that, if there are significant changes to a project after it has been considered by the Committee and approved by the Parliament, proponent agencies are to report these changes and, if necessary, seek the Committee's concurrence. This feedback 'loop' can provide incentives for agencies to be rigorous in developing project proposals before they are presented to the Committee, as well as providing valuable information to the Committee on agency performance in delivering projects that the Committee has previously considered. Existing arrangements have not resulted in timely advice of project changes being provided to the Committee.[16] Accordingly, benefits would be expected to result from a more active role by Finance in monitoring and coordinating advice to the Committee, whilst recognising that under current frameworks and resourcing arrangements proponent agencies are responsible for the planning and delivery of capital works projects.[17]

**19.** In addition to non-adherence by agencies to the requirement in the Manual for significant project changes to be reported to the Committee, shortcomings were also identified as particularly common in relation to agencies not preparing a Confidential Cost Breakdown that included all items outlined in the Manual.

**20.** Overall, the audit has demonstrated that greater discipline is required on the part of agencies in ensuring that the Committee's requirements are met, and that the Committee is kept appropriately informed about significant changes to projects after the Committee has presented its report to the Parliament. A key issue to be addressed in these respects is balancing the benefits that can be expected from a devolved approach to delivering public works with central agencies having a stronger role in promoting greater

[16] For four of the six projects in the audit sample, ANAO analysis was that significant changes in the budget, estimated costs, project timeframe and/or scope of works required reporting to the Committee. In no instance had this occurred. In addition, in respect to the Christmas Island Immigration Detention Centre project being separately audited by ANAO, in September 2008 the Committee reported on its consideration of increases to the project budget, raising concerns that advice from the proponent agency (Finance) concerning the increases was not timely.

[17] This role would be an additional responsibility for Finance, but similar to that Finance undertakes in respect to the reporting of medium works, where Finance's internal procedures note that the Committee has requested that agencies provide details of medium works through Finance.

consistency in project planning, budgeting and delivery practices by proponent agencies. An example worth considering in this respect is the United Kingdom's *Achieving Excellence in Construction* initiative which was instituted following time and cost overruns on various construction projects and has involved the Office of Government Commerce (OGC):

- driving forward improvements in the management of large, complex or novel projects involving procurement as well as seeking to assist public sector organisations in the successful delivery of projects (through a program of Gateway Reviews); and
- developing operational guidance and providing advice to support construction and property procurement and management. The guidance reflects lessons learned from Gateway Reviews and covers areas such as risk management, whole-of-life value for money and partnering.

## Key findings by chapter

### Agency roles and responsibilities (Chapter 2)

**21.** Prior to amendments to the PWC Act made in the late 1980s, the Commonwealth operated a large centralised property and public works system with in-house delivery of works programming, building design and project management. Australian Government public works and property functions now take place in a largely devolved environment, where individual agencies manage their own property requirements and public works.

**22.** Nevertheless, as a central agency, three of Finance's seven Business Groups continue to play a role in the planning, budgeting, approval and/or delivery of certain public works projects. Specifically:

- Budget Group provides advice on the policy merits and financial implications of all New Policy Proposals prepared by portfolio agencies;
- Financial Management Group administers the Gateway Review Process; and
- Property and Construction Division (within Asset Management Group) delivers certain non-Defence capital works, and provides specialist advice on request to agencies proposing and/or delivering capital works.

**23.** In recent years, two processes (namely two-stage funding approval processes and Gateway reviews) have been introduced aimed at providing improvements in cost certainty and to facilitate greater scrutiny of projects. These processes have yet to have a significant effect on the planning and delivery of public works. This reflects the relatively short period of time the new processes have been in place, as well as the need for the administering agencies to apply greater rigour to their scrutiny of infrastructure projects. In particular:

- for Defence projects, attention in the staged approval process for military equipment procurements is focussed on the military equipment component rather than any infrastructure component. This is because the military equipment invariably requires a significantly greater proportion of the project budget than that required to provide the infrastructure necessary for the capability to be made operational. In addition, a second branch within Finance's Budget Group has an overview of infrastructure projects undergoing two pass approval via its role as chair of the Defence Estate Interdepartmental Committee and its membership on the Defence Infrastructure Subcommittee (DISC);
- a small number of non-Defence projects have been subject to the staged approval process. More broadly, Finance scrutiny of new policy proposals relating to non-Defence capital works projects has been focused largely on the expected accounting effect of project expenditure on the Australian Government's budget position, rather than the robustness of the proposed works from financial and other perspectives;[18] and
- the operation of the Gateway risk assessment process (specifically the current selection 'cut-off') means it is likely that the majority of construction projects will not be subject to Gateway[19] and no construction project has yet completed the full Gateway review process.

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18 In November 2008, Finance advised ANAO that, current New Policy Proposals often focus on budget as a risk when it is more correctly a consequence of realisation of a risk event. Finance further commented that, for capital works projects, risk categories generally have consequences on time, cost, reputation and quality and that these categories include: scope certainty; user changes; land requirements; design complexity; time pressure; buildability; contracting environment; contract strategy; environmental (flora, fauna, indigenous and European heritage); geotechnical; geographic; social impact; political (local and State government, community agitation); market forces; logistic support; and architecture.

19 Most Gateway reviews to date have related to Information Technology projects rather than infrastructure and facility construction projects, with Finance advising ANAO that this reflects the large number of Information Technology projects coming forward to Government in recent years.

**24.** Improvements in these areas depend on the availability of specialist skills in areas such as project budgeting and estimating. Achieving improvement would also be aided by better coordination and/or integration of the various approvals and review processes Finance administers with its existing in-house experience and professional expertise in the planning, management and delivery of infrastructure works (through its Property and Construction Division).

**25.** In 2007–08, the Property and Construction Division reorganised its branch structures to better align its service delivery of assigned non-Defence capital works to the project lifecycle. Finance advised ANAO that these changes were modelled on the UK OGC initiatives. Finance further advised ANAO that its Property and Construction Division is resourced around supporting specific capital projects and property outcomes but that it is not resourced to provide whole of government guidance material or analysis of New Policy Proposals for works that are not being delivered by Finance.[20] Nevertheless, there would be benefit in Finance examining opportunities to allow the better sharing of information and expertise within the department, given the existing organisational arrangements for discharging Finance's various roles in relation to the planning, budgeting, approval and delivery of infrastructure projects.

## Project budgets and estimates (Chapter 3)

**26.** In the context of capital works, distinguishing between budgets, estimates and costs is important. A 'budget' refers to a funding allocation to deliver the proposed works. By way of comparison, the 'cost' of those works will not be known until they have been delivered.

**27.** Although the final cost is not known until after completion of works, at any point an 'estimate' can be made of the final cost. Any such estimate has a level of uncertainty attached to it, and that uncertainty should reduce as the project advances through planning, into delivery, and towards completion. In this respect, it is desirable that budgets and estimates be established with sufficient rigour such that, subject to sound project management and cost planning, the overall estimate is able to be maintained during the various stages of project design development—while detailed estimate items may increase as a consequence of improved definition, the allowance for risk

[20] See further at footnote 18 in relation to the current focus of analysis of New Policy Proposals on budget as a risk rather than as the consequence of the risk event.

(contingency) should also be able to be appropriately reduced, allowing the overall project estimate to be maintained.

**28.** The Confidential Cost Breakdown provided by proponent agencies to the Committee is a key input to the Committee's assessment of the cost-effectiveness of proposed works. For the six projects in the audit sample, the level of detail provided through the Confidential Cost Breakdown varied, as did the format and contents. In respect to two projects, there were also significant inconsistencies between the financial information included in the internal business cases supporting the project and the information provided to the Committee in the Confidential Cost Breakdown.

**29.** In addition, reflecting the absence of any cost estimating standards applying to Australian Government public works, proponent agencies have taken different approaches to the inclusion or exclusion of costs, including those relating to:

- the acquisition of land on which construction activities are to be undertaken; and
- agency internal planning, management and oversight costs. Where these costs are not included in budgets and estimates, they will not be visible. Not including such costs can also have adverse consequences when there are choices to be made about whether to in-source, or contract for, the delivery of important project management roles.

**30.** Estimating practices have also not been to a consistently robust standard in relation to allowances for risk (contingency) and cost escalation.[21] For some of the projects examined by ANAO:

- agencies did not consistently adhere to the requirement in the Committee's Manual that the allowances made for risk (contingency) and cost escalation be identified in the Confidential Cost Breakdown;
- the proponent agency had combined allowances for risk and cost escalation;
- while the factors that determine contingencies mean it is reasonable for allowances to differ among projects, sufficient allowance for known risk was not made in the estimate for some of the audited projects; and

[21] Escalation can be defined as the increase in the cost of a specific good or service over a defined period of time. Cost escalation should not be included in, or confused with, contingency. Contingency is an allowance to cover risk. Cost escalation, by way of comparison, is the forecasting of price and cost movements over time.

- the audited agencies did not demonstrate a consistent approach to calculating, allocating or reporting against escalation with insufficient allowance made in some instances given the prevailing market conditions and the expected delivery timeframe included in the project's Statement of Evidence to the Committee.

**31.** Variable approaches to preparing project estimates have also been found to exist in other areas of public administration, and this has been found to be one factor in actual costs exceeding initial estimates. One approach that has been commonly adopted to address this situation has been the development of cost estimating standards or guidelines, and requiring confidence levels attached to the estimates to be clearly disclosed.

**32.** More broadly, obtaining value for money in construction projects involves optimising the combination of whole-of-life facility costs and quality to meet anticipated user requirements. As future costs associated with the use and ownership of an asset are often greater than the initial acquisition cost, it is important in planning the construction of major facilities to consider the utilisation, ongoing maintenance and whole-of-life cost of those facilities. However, notwithstanding that the Committee is required to consider the present and prospective public value of the work, and the Commonwealth Procurement Guidelines require subject agencies to be preparing whole-of-life cost estimates, this information is not commonly being provided to the Committee even when agencies have undertaken the necessary analysis.

## Project outcomes (Chapter 4)

**33.** Measuring construction projects' performance is essential for ensuring that planned improvements in cost, time and quality are achieved, comparing achieved performance with that of similar projects and identifying potential for doing things better. Measurement also provides valuable feedback on the extent to which initiatives such as staged approvals and Gateway reviews have assisted to improve the on-time and on-budget delivery of major projects. In addition, providing information to the Committee where the project budget, cost, timeframe or scope has changed significantly from that which has previously been considered by the Committee can serve a number of important purposes, including:

- helping to promote compliance with the referral requirements of the PWC Act because fundamental changes to a project may mean that a further referral to the Committee is required;

- encouraging more consistently rigour in agency development of the project scope, timing and estimate that is advised to the Committee; and
- drawing the Committee's attention to areas that might warrant closer scrutiny in future inquiries.

**34.** The six projects included in the audit sample were selected to give a cross-section of agencies, project values, and project types of projects that were at or near completion. Based on the Statements of Evidence provided to the Committee, each of the six projects should have been completed before the end of calendar year 2007.

**35.** Two of the six projects (the Reserve Bank's Business Resumption Site project and the project to fitout 29–31 Brindabella Business Park for DEEWR) were fully delivered on time and within the original budget. In respect to the other four projects in the audit sample:

- completion of three projects had been significantly delayed (with delays ranging from four months to at least two years)[22];
- savings against budget in the order of $10 million were made in the letting of trade packages for one project[23] (which had a project estimate of $86.7 million), allowing additional works to those advised to the Committee to be undertaken;
- the budget for another project was increased from $20.3 million[24] to $24.1 million (a 19 per cent increase, with actual final costs being 1 per cent above budget) to meet additional costs of latent building conditions and (largely) to provide for enhancements to the quality of the works. The proponent agency has advised ANAO that, if additional

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22 The Committee's Manual does not require significant changes in the project timetable to be advised to the Committee but it is often the case that delays in a project will, due to cost escalation, result in the project budget and estimate increasing and/or a reduction in the scope of works. Changes in cost and/or scope are required to be reported to the Committee.

23 Which was also one of the three projects that has experienced a significant delay.

24 At the time the project was presented to the Committee, the internal project budget was $20.3 million (14 per cent higher than the $17.8 million estimate provided to the Committee), with that difference relating primarily to the budget allowance for the proponent agency's own staffing costs and related overheads. The Committee was advised that the $17.8 million estimate excluded amounts for GST, relocation costs, the proponent agency's internal costs of managing and oversighting the project and stakeholder consultation costs, but the evidence provided to the Committee did not quantify these exclusions.

funding[25] had not been available, it would have stayed within available funding; and

- in addition to being significantly delayed (see the first dot point above), for one project significant changes were made to the project delivery method from a lump sum construction contract to a contract management contract (as a result of the lump sum construction tender prices received being well in excess of the available budget) and parts of the refurbishment works for two buildings that had been included in the Statement of Evidence provided to the Committee had not been commenced at the time of ANAO's audit fieldwork.[26]

**36.** Notwithstanding that the PWC Manual requires significant changes to a project to be reported to the Committee, the Committee was not provided with advice in respect to any of the four projects in the audit sample where significant changes had occurred.

**37.** In addition to the benefits that may be expected from a more effective feedback 'loop', other approaches observed that would aid the delivery of project outcomes to a consistently high standard were:

- increased adoption of value management techniques by proponent agencies. Value management is a systematic review of the essential functions or performance of a capital project to ensure that value for money is being achieved. The principles and techniques of value management aim to achieve the required quality at optimum whole-life cost during the process of developing and delivering a project. The principles centre on the identification of the requirements that will add demonstrable value in meeting the business need, often through workshops led by trained value management facilitators; and
- use of post implementation reviews to assess the extent to which the expected business benefits have been achieved or are expected to be achieved, user and/or client satisfaction and any project management lessons that should be used.

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[25] $2.05 million of the additional funds came from third party sponsorships, with the remaining $1.75 million obtained from a New Policy Proposal.

[26] Whilst the proponent agency advised ANAO it is committed to these works, as at October 2008, the forecast cost to complete was $0.5 million greater than the $14.5 million project budget, with neither the budget nor the forecast cost to complete including any allowance for these particular works.

## Improvement opportunities

**38.** ANAO has made four recommendations. A central tenet of the recommendations is to encourage the application of greater discipline to the planning, budgeting, scrutiny and delivery of public works projects. Finance, which advises the Finance Minister on the administration of the PWC Act, plays a role in the referral of each project to the Committee, in addition to its broader roles and responsibilities. This role provides Finance with a degree of authority over the nature and quality of the referrals made to the Committee. Accordingly, a number of recommendations are focused on Finance working more closely with proponent agencies, drawing upon overseas experience where such an approach has been found to offer benefits in reducing time and cost overruns on individual projects.

## Agency responses

**39.** Finance and the Reserve Bank provided a response to the audit recommendations and made other comments on the draft report, but did not provide any formal comments on the report as a whole. In addition to responding to the audit recommendations and making other comments on the report, the Australian War Memorial, DEEWR, Defence and CSIRO provided the following formal comments.

### Australian War Memorial

> The Memorial's *Redevelopment of the Post-45 Galleries and Discovery Room* project was complex and extended well beyond a straightforward construction and fitout work into the creation of high quality, cutting-edge galleries. The creative development of exhibitions cannot be construed to be or treated as either a construction 'work' or a building 'fitout'. The project cost advised to the PWC was $17.8 million and at the same time the PWC was advised that the Memorial would be seeking additional funding through sponsorship. In the event, such funding totalled $3.8 million.
>
> The PWC was informed that the $17.8 million was exclusive of internal agency overhead costs,[27] which were regularly monitored by the Memorial's Council.

[27] The information and advice provided to the Committee did not quantify internal agency staffing costs and related overheads, which were budgeted at $2.52 million. By way of comparison, the estimate for the construction of the Christmas Island Immigration Detention Centre provided to the Committee included $3.3 million relating to Finance's internal resourcing costs of managing the delivery of the project.

The total outturn cost was $24.12 million, with the project being delivered successfully within 1 per cent of the budget.[28]

The Memorial is of the opinion that there was no requirement to report either the amounts of sponsorship funding or internal agency overhead costs beyond the information detailed in the Statement of Evidence to the PWC, the Confidential Cost Estimate and the evidence recorded in the Official Committee Hansard. The project experienced a legitimate funding increase of $3.8 million and the PWC was aware of the Memorial's intention to seek this additional funding through sponsorship, and to apply it to the project. It was not a change to the project scope but an enhancement of the quality of the displays and further reporting to the PWC was not warranted.[29] The Memorial's Council was delighted with the project's total management and the outstanding galleries that were produced. As far as it is concerned, the project was on time and on budget.

## DEEWR

DEEWR appreciates the opportunity to participate in the performance audit of *Approval of Funding for Public Works*.

DEEWR welcomes the ANAO's finding that the project to fitout 29–31 Brindabella Business Park was delivered on time and within the original budget. DEEWR accepts all relevant ANAO recommendations and notes those directed to other agencies, and is of the view that these will bring strengthening of processes in relation to the planning, budgeting, scrutiny and delivery of capital works projects.

## Defence

Defence welcomes the report on the *Approval of Funding for Public Works* which assessed the processes associated with the development of public works proposals across a number of agencies including Defence. Defence agrees with Recommendation No. 3 which recommends agencies undertake post implementation reviews.

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28 The final project budget of $24.12 million was $6.32 million higher than that advised to the Committee with final actual costs of $24.38 million. The budget increase was as a result of the original project budget and estimate of costs advised to the Committee not including $2.52 million in the Memorial's internal costs in relation to the project, and funding allocated to the project being increased by $3.8 million (comprising $2.05 million in sponsorship support and $1.75 million in additional Australian Government funding provided in the 2006–07 Budget for the Brisbane Bridge display).

29 The need to report approved budget increases to the Committee was illustrated by the Christmas Island Immigration Detention Centre project, with Government-approved increases to the project budget in December 2004 and August 2006 reported to the Committee in January 2008. In June 2008, the Committee announced that it would receive a briefing on the project, the main focus of which was the cost increase for the project.

While the report is well targeted, Defence does not agree that there are inconsistencies in the cost information for its projects,[30] nor does Defence agree with the concerns raised about combining projects or that significant project changes have occurred that should have been reported to the Public Works Committee. Defence believes that the latter of these findings does not acknowledge the large number of Defence submissions to the Public Works Committee, unique Defence project complexity and challenges or the continuous development of Defence's infrastructure management policy and procedures.[31]

Both of the Defence audited projects were early examples of projects completed under the project development and approval process implemented in 2004. Defence has made a significant effort to refine this process since 2005 and this work has included refining the way cost information is presented in business cases and to the Public Works Committee. Defence undertakes to use its considerable recent experience in project development, approval and delivery to assist the Department of Finance and Deregulation in its response to the other recommendations of the report.

## CSIRO

CSIRO notes the report is the outcome of the ANAO review of six projects, one of which relates to CSIRO. The CSIRO Entomology Biosciences Laboratories at Black Mountain, ACT was reviewed by the ANAO during 2008. The ANAO met and corresponded with CSIRO on a number of occasions. The proposed ANAO Report on the *Approval of Funding for Public Works* encompasses those discussions.

The Report in general reviews processes undertaken by agencies in delivering capital works and their compliance with Public Works Committee procedures. The Report addresses and recommends the application of sound project management practices and highlights areas where improvements could be made.

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30 For the two Defence projects examined in detail, ANAO identified inconsistencies between the cost breakdown provided to the Committee and the underlying agency cost plans. The two Defence projects audited by ANAO were early examples of projects being completed using the project development approval process introduced in 2004. In December 2008, Defence advised ANAO that, since 2005, it had put considerable effort into developing refined scope and cost information for inclusion in the project business case, for subsequent project approval, and for consideration by the PWC.

31 ANAO has assessed changes in terms of the projects individually referred to the Committee (the Act and the Committee's Manual do not provide a basis for assessing project changes other than on a project-by-project basis). The significant changes for the two Defence projects examined related to: for the RAAF Base Amberley Stage 2 Redevelopment, a delay from December 2007 to late 2009 to the expected completion date for the simulator facility associated with the Multi Role Tanker Transport relocation; and, for the Kokoda Barracks Redevelopment, cost savings in the order of $10 million which had allowed additional works to be undertaken.

The primary concerns expressed with the CSIRO project relate to the potential cost overruns, inadequate allowances for contingencies in the original project estimate, delayed completion and failure to advise the Public Works Committee of changes to the scope of work originally presented to the Public Works Committee. ANAO has recognised that internal CSIRO reviews of its capital works program in 2006 had significantly delayed the project. By the time construction tenders were received for the project, the local construction market was extremely buoyant, resulting in prices far in excess of that anticipated when the project was presented to the Public Works Committee. Accordingly, CSIRO adopted a construction management procurement strategy to control costs and modified the scope of some components of the project to provide facilities fit for CSIRO's purposes within the project budget. Construction of the project is still in progress. CSIRO notes that the ANAO report has indicated that CSIRO should have applied more rigorous risk analysis to counter such issues.

CSIRO intends to advise the Public Works Committee of changes to the project scope, cost and program in the second quarter of 2009, following completion of the current construction contract works. CSIRO has developed and implemented project management procedures to address the issues highlighted in the ANAO report.

# Recommendations

**Recommendation No. 1**

**Paragraph 3.23**

ANAO *recommends* that the Department of Finance and Deregulation consult with the Public Works Committee on the merits of the Committee being provided with greater clarity concerning the level of confidence attaching to project estimates including, as appropriate, information on the purpose of the estimate, its order of accuracy and how these factors are addressed in the project budget.

| | |
|---|---|
| Agreed response: | Finance, Reserve Bank, Defence. |
| Noted response: | CSIRO, DEEWR. |
| Disagreed response: | Australian War Memorial. |

**Recommendation No. 2**

**Paragraph 3.88**

ANAO *recommends* that the Department of Finance and Deregulation enhance the provision of project financial information to the Public Works Committee by:

a) developing guidelines (that include a definition of key terms and guidance on the calculation and treatment of separate allowances for project cost contingency and cost escalation) for the preparation of estimates of costs that underpin the briefing provided to the Finance Minister, as well as the Statement of Evidence and Confidential Cost Breakdown provided to the Committee; and

b) examining the merits of asking proponent agencies to provide whole-of-life estimates as part of their Statement of Evidence so as to assist the Committee in assessing the value for money of a proposed work.

| | |
|---|---|
| Agreed response: | Finance, Reserve Bank, Defence. |
| Noted response: | CSIRO, DEEWR. |
| Disagreed response: | Australian War Memorial. |

**Recommendation No. 3**

**Paragraph 4.30**

ANAO *recommends* that proponent agencies undertake a post implementation review or reviews of each public works project that has proceeded through the Public Works Committee process. The review should address:

a) the extent to which expected business benefits have been achieved or are expected to be achieved;

b) user and/or client satisfaction with the delivered project; and

c) whether there are lessons that could usefully be applied either within the agency or more broadly across the Commonwealth (in the latter case, providing the results to the Department of Finance and Deregulation would be appropriate).

| | |
|---|---|
| Agreed response: | Finance, Reserve Bank, CSIRO, Defence, DEEWR. |
| Agree with qualification response: | Australian War Memorial. |

**Recommendation No. 4**

**Paragraph 4.44**

ANAO *recommends* that the Department of Finance and Deregulation assess the merits of promoting adherence to the referral requirements of the *Public Works Committee Act 1969* and procedures promulgated by the Committee for the reporting to it of significant project changes by facilitating the provision to the Committee by proponent agencies of project finalisation reports concerning whether projects have proceeded in accordance with scope, purpose, function, design, space, cost and timetable advised to the Committee.

| | |
|---|---|
| Agreed response: | Finance, Reserve Bank, Defence. |
| Noted response: | CSIRO, DEEWR. |
| Disagreed response: | Australian War Memorial. |

# Audit Findings and Conclusions

# 1. Introduction

*This chapter provides an overview of the role and operation of the Public Works Committee, together with the audit objectives and approach.*

## Background

**1.1** The Parliamentary Standing Committee on Public Works (known as the Public Works Committee (the Committee)) was established in 1913. It is constituted by the *Public Works Committee Act 1969* (the PWC Act). The Act empowers the Committee to inquire into and report to the Parliament on each public work referred to it. The Committee's terms of reference are contained in section 17(3) of the Act. Essentially, these are to consider:

- the stated purpose of the proposed work and its suitability for that purpose;
- the need for, and advisability of, the work;
- the cost-effectiveness of the proposal;
- the amount of revenue the work will produce if that is its purpose; and
- the current and prospective public value of the work.

**1.2** The PWC Act provides that a public work with an estimated cost[32] exceeding a $15 million[33] threshold shall not be commenced unless:

- it has been referred to the Committee; and
- the House of Representatives has resolved, following examination of the work by the Committee, that it is expedient to proceed with the work (that is, an 'expediency motion' is passed).

## Parliamentary approval of public works

**1.3** The PWC Act provides that a public work for which the estimated cost exceeds the threshold amount requiring referral to the Committee may not be commenced unless such a referral has occurred or certain specific exemption conditions are met, namely that:

[32] The Act defines 'estimated cost', in relation to a public work, to mean an estimate of cost made when all particulars of the work substantially affecting its costs have been determined.

[33] The threshold was increased from $6 million in November 2006.

(a) the House of Representatives has resolved that, by reason of the urgent nature of the work, it is expedient that it be carried out without having been referred to the Committee;

(b) the Governor-General has, by order, declared that the work is for defence purposes and that the reference of the work to the Committee would be contrary to the public interest (for example, for security reasons); or

(c) the work has been declared, under the Act, as being a repetitive work (for example, general maintenance work).[34]

**1.4** The agency that is carrying out or contracting public works that are required to be referred to the Committee prepares a submission (also referred to as a 'Statement of Evidence'). The submission includes information on why the work is necessary, other options considered, estimated cost, and any plans or drawings that will help the Committee understand the purpose and scope of the work. At the same time as providing the Statement of Evidence, agencies are required to provide the Committee with a separate table showing a breakdown of the major cost components of the proposed work (referred to as the Confidential Cost Breakdown). Only Committee members and secretariat staff view the Confidential Cost Breakdown in order to protect the integrity of the tendering process and assist the Commonwealth in maximising its value for money in funding the project.

**1.5** Subsequently, the Committee holds public hearings in relation to public works projects referred to it. Members of the Committee intending to attend the hearing on a particular project will generally inspect the proposed construction site prior to the hearing.[35] At the public hearing, officers from the proponent agency appear before the Committee and any organisation or person who has sent in a submission to the Committee on the particular project may be invited to give evidence. Private hearings, involving the Committee members and the proponent agency, are also held to allow discussion about cost details of the work, and may include sensitive tendering information.

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[34] See sub-section (8) of section 18 of the Act. There is no guidance or examples provided of what constitutes an urgent, defence purpose or repetitive work in the Committee's *Manual of Procedures for Departments and Agencies*, although it does note that when an exemption is sought, officers of the agency should attend a meeting of the Committee to explain the background to, and need for, the exemption.

[35] The public hearing is usually conducted either at or close to the site, following the Committee members' inspection.

**1.6** After the public hearing and responses have been made to any questions on notice, the Committee prepares a report to present to the Parliament. The Committee is able to make any recommendations it sees fit within the bounds of the Act, and may recommend the proposed public work does not proceed.

**1.7** Once the report is tabled in the Parliament, a motion is made by the Minister for Finance and Deregulation (or delegate) to proceed with the work. This is the 'expediency motion' and generally supports the Committee's recommendations. The Act provides that work may not commence on a public work referred to the Committee until the House of Representatives has 'resolved that it is expedient to carry out the work.'[36]

**1.8** As the period from initial referral through to Parliamentary expediency can take three months or more[37], it important that agencies seeking approval to proceed with a public work factor these timings into their project delivery schedule and plans.

## The Committee's Manual

**1.9** The Committee has published a *Manual of Procedures for Departments and Agencies* (the Committee's Manual).[38] The Manual is intended to be a guide to inform stakeholders of the Committee's processes and provide practical information. It outlines the process and timeline for referrals, the role of the Committee Secretariat and of the Department of Finance and Deregulation (Finance), and the recommended content and format of submissions to the Committee. The Manual also outlines the process of inquiry, site inspection, hearings and subsequent reporting by the Committee, and includes a workflow, or general timeline, that sets out the order in which events take place when a project is identified as needing to be referred to the Committee (see Figure 1.1). The timeline also links the reader to specific information within the Committee's Manual.

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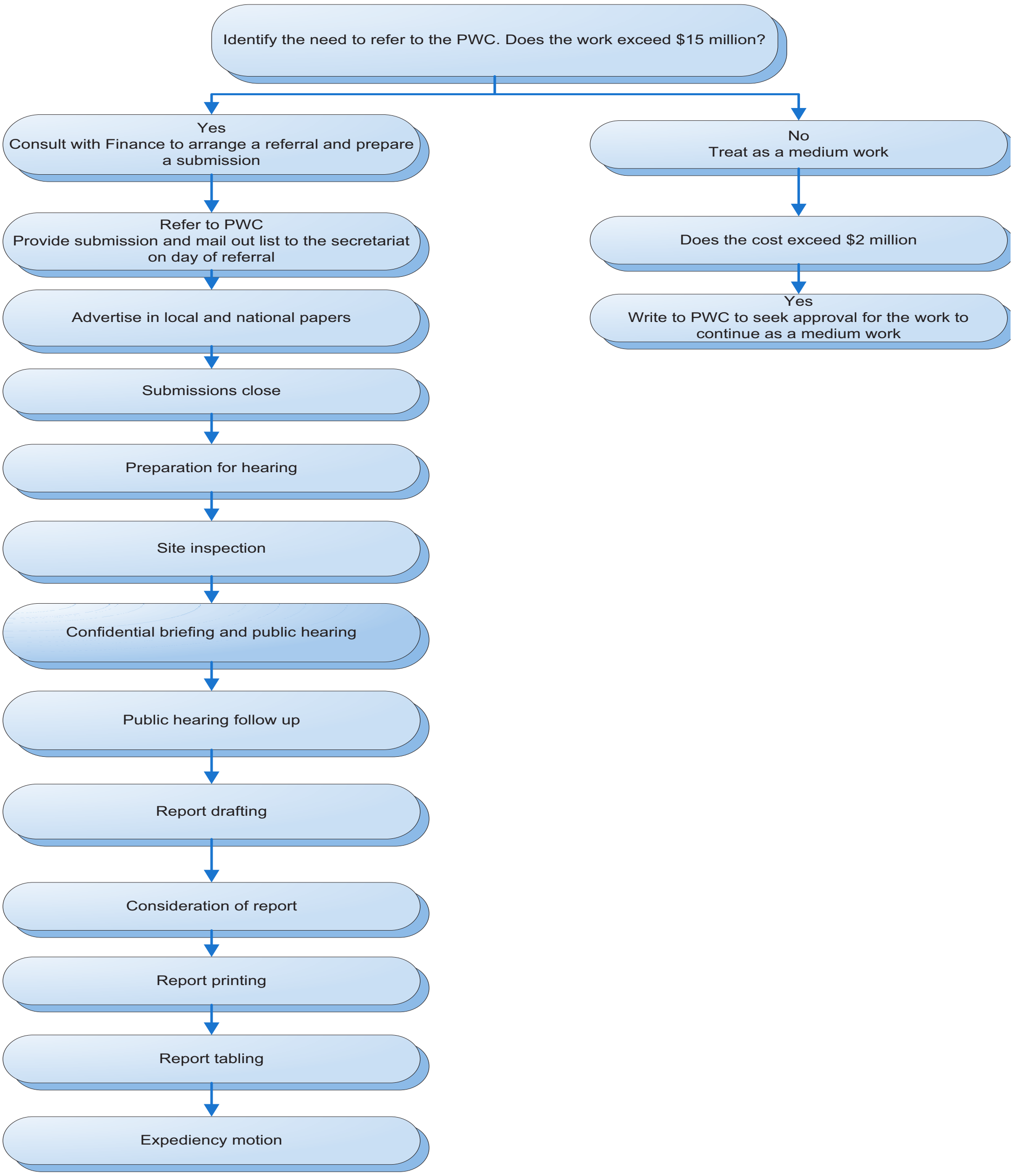
[36] This requirement is set out in subsection (7) of section 18 of the Act.

[37] Parliamentary Standing Committee on Public Works, *Manual of Procedures for Departments and Agencies*, March 2008, Edition 7.2, p. 3.

[38] The Manual has no recognised status under the PWC Act (for example, it is not given legal force under the *Public Works Committee Regulations 1969*).

## Figure 1.1

### Public Works Committee general timeline for public works referral and approval




Source: Parliamentary Standing Committee on Public Works, *Manual of Procedures for Departments and Agencies*, March 2008, Edition 7.2, p. 3.

1.10 Following the enactment of the *Public Works Committee Amendment Act 2006*, which took effect on 7 November 2006, Finance provided the Committee Secretariat with suggested amendments to the Committee's Manual. The proposed changes were accepted and, later in November 2006, a revised edition of the Committee's Manual was issued. The key changes incorporated into the Manual were to:

- clarify the definitions of 'work' and 'public work', including to highlight that public works undertaken using Public Private Partnerships (PPP) are considered a public work, but that works undertaken using pre-commitment leases are not[39];
- clearly specify where and when agencies should consult with the Committee and Finance in relation to a public work;
- reflect the change in the threshold at which public works must be referred to the Committee from $6 million to $15 million; and
- change the value of projects which agencies are expected to notify to the Committee as 'medium works' from between $2 million and $6 million to works valued at between $2 million and $15 million.[40]

## Audit approach

**1.11** In 2007, the Joint Committee of Public Accounts and Audit advised the Australian National Audit Office (ANAO) that a priority[41] of Parliament was for the ANAO to conduct a performance audit of the processes associated with the development by agencies of public works proposals that fall within the scope of the Committee. Against this background, ANAO decided to undertake two related audits.

**1.12** The first audit examined whether the Department of Defence's (Defence's) capital works projects have been submitted in accordance with the Committee's requirements for notification and review prior to entering into financial commitments for the works. The report of that audit was tabled in the Parliament in April 2008 (Audit Report No.28 2007–08, *Defence's Compliance with the Public Works Committee's Approval Processes*).

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[39] The revised Manual also included guidance as to when PPP projects should be referred to the Committee and the detail agencies should provide in their submissions for public works undertaken using a PPP.

[40] Medium works are works valued at greater than $2 million but which fall below the threshold requiring referral to the PWC. The requirement to notify the PWC of medium works is discussed further at paragraphs 3.3 to 3.4.

[41] Each year, the Joint Committee of Public Accounts and Audit consults with all other Committees of the Australian Parliament to identify the priorities of the Parliament for performance audits to be undertaken in the following financial year by the ANAO.

**1.13** The second audit, which is the subject of this report, is a broader and more in-depth cross-portfolio audit. Its objective was to assess:

- the planning and delivery of capital works projects by proponent agencies;
- the extent to which projects have delivered on what was intended; and
- the extent to which proponent agencies have complied with the requirements of the *Public Works Committee Act 1969* and approved procedures.[42]

**1.14** A focus of the audit was examination of six projects from the 58 reports released by the Committee during the tenure of the 41st Parliament (between December 2004 and September 2007), as outlined in Table 1.1.

### Table 1.1

### Audit sample projects

| Project | Proponent Agency | Reported Value | Expected Completion due |
|---|---|---|---|
| Fitout for Department of Employment and Workplace Relations in Canberra | Department of Employment and Workplace Relations | $15.5m | Feb 2007 |
| Kokoda Barracks Redevelopment, Queensland | Department of Defence | $86.7m | Nov 2007 |
| Re-development of Post-1945 Conflicts Galleries and Discovery Room for the Australian War Memorial, ACT | Australian War Memorial | $17.8m | Oct 2007 |
| RAAF Base Amberley Redevelopment Stage 2, Queensland | Department of Defence | $285.0m | Dec 2007 |
| CSIRO Entomology Bioscience Laboratory at Black Mountain, ACT | CSIRO | $14.5m | Early 2007 |
| Reserve Bank of Australia Business Resumption Site at Baulkham Hills, NSW | Reserve Bank of Australia | $38.0m | Mid-2007 |

Source: ANAO.

[42] ANAO Audit Report No.28 2007–08 (see paragraph 1.12) examined Defence's compliance from a procedural perspective whereas this current audit has examined the substance of the six individual projects included in the audit sample.

**1.15** In order to set the work of the Public Works Committee in a wider context, the audit also considered some other approaches that have been adopted internationally, and included a review of other relevant approval processes (including the two-pass/two-stage approvals processes, the Gateway Review Process[43] and agency processes for the agencies included in the audit).

**1.16** Project-specific Issues Papers were provided to agencies in September and October 2008, with a Discussion Paper circulated in November 2008. The proposed report of the audit was issued later in November 2008.

**1.17** Contemporaneous with this audit, ANAO commenced an audit of the construction of the Christmas Island Immigration Detention Centre (IDC).[44] The methodology[45] for both the 'Approval of Funding for Capital Works' audit and the audit of the 'Construction of the Christmas Island IDC' included assessing the rigour of the project cost estimates and budgets as well as the management of projects in terms of their cost, timing and scope.

**1.18** The audit was conducted in accordance with ANAO auditing standards at a cost to the ANAO of $495 000.

[43] Gateway is a project assurance methodology that involves short, intensive reviews at critical points in the project's lifecycle by a team of reviewers not associated with the project. The intention is to provide an arm's length assessment of the project against its specified objectives, and an early identification of areas requiring corrective action.

[44] This audit is expected to table in the Winter 2009 Sittings.

[45] Day-to-day management and conduct of both audits was undertaken under contract by Arup Pty Ltd, a global design, engineering, management and business consulting practice. Arup was selected following a competitive tender process.

# 2. Agency roles and responsibilities

*This chapter examines the responsibilities of proponent agencies in relation to proposed works that are referred to the Public Works Committee, as well as the various roles of the Department of Finance and Deregulation in relation to the planning, budgeting and approval of public works projects.*

## Background

**2.1** Prior to amendments to the PWC Act made in the late 1980s, the Commonwealth operated a large centralised property and public works system with in-house delivery of works programming, building design and project management.[46] Australian Government public works and property functions now take place in a largely devolved environment, where individual agencies manage their own property requirements and public works.[47] In March 2006, Finance advised the then Parliamentary Secretary to the Minister for Finance and Administration that this had increased the autonomy of agencies in their decisions regarding public works, as there is no longer a central works agency, nor a single Minister responsible for public works.

**2.2** There has also been a shift away from public building and ownership of property, in accordance with the Australian Government Property Ownership Framework. This Framework applies to all Departments of State and agencies that are subject to the *Financial Management and Accountability Act 1997* (FMA Act) and all general government sector Commonwealth authorities that are subject to the *Commonwealth Authorities and Companies Act 1997* (CAC Act) (but does not apply to Government Business Enterprises). Under the Framework, the decision to own or divest property must be driven by the necessity for that decision to support specific government objectives. Alternatively, ownership or divestment may be appropriate because it delivers the best value for money outcome for the Commonwealth.

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46 Department of Finance and Deregulation, *Land Operations and Public Works Operating Manual: Public Works Committee*, Key Issue 3.3.1, p. 4.

47 Speech by then Parliamentary Secretary to the then Minister for Finance and Administration at the 2001 National Conference of Public Works Committees, reported in the PWC's *Sixty-sixth Annual Report*, March 2003, pp. 18–29.

## Proponent agency responsibilities

**2.3** Under the devolved approach to the planning and delivery of Australian Government public works projects, proponent agencies play a leading role in the PWC approvals process. Specifically, proponent agencies:

- draft the briefing of information on the proposed works that is provided to the Finance Minister (or delegate) so as to inform the Finance Minister's (or delegate's) decision about whether to refer the proposed works to the Committee;
- prepare the Statement of Evidence addressing the matters required by the Committee's Manual (Finance is not consulted in the preparation of, and does not receive a copy of, the Statement of Evidence). The Committee's Manual notes that, in any public works inquiry, the submission from the proponent agency constitutes one of the major components of evidence received by the Committee[48];
- arrange for the Committee to undertake a site inspection[49], with these inspections often incorporating an on-site briefing;
- attend a confidential hearing with the Committee, as a precursor to the public hearing. At the confidential hearing, the Committee receives 'in-camera' evidence from representatives of the proponent agency by way of written evidence. This normally takes the form of a written explanation of estimated costs and other sensitive commercial in confidence or security related matters that form part of the proposed works;
- attend and give evidence at the public hearing[50]; and
- following the tabling of the Committee's report, the conclusions and recommendations are studied by the proponent agency and Finance. Finance obtains the proponent agency's views on any comments, qualifications or changes to the proposed work that may have been

48 Parliamentary Standing Committee on Public Works, op. cit., p. 19.

49 The Committee's Manual notes that the site inspections enable Committee members to familiarise themselves with the setting of the proposed work, the condition or extent of any existing facilities, any unusual site features or characteristics, matters concerning local geography that may have been raised in submissions and, generally, to obtain a 'feel' for a particular location (ibid., p. 29).

50 The Committee's Manual notes that, at the conclusion of evidence from other witnesses, witnesses from the proponent agency, and their technical advisers, are re-called and the Committee Chair will asks the proponent agency's lead witness to comment on issues raised in the evidence of other witnesses (ibid., p. 35).

recommended by the Committee. A statement in support of the expediency motion is then drafted by Finance (with input from the proponent agency) for the Finance Minister or his/her delegate. The statement indicates the Government's response to the Committee's recommendations and any other comments.

## Finance responsibilities

**2.4** As a central agency of the Australian Government, Finance plays a role in assisting government across a wide range of policy areas. Essential services delivered by Finance include (but is not limited to) supporting the delivery of the Australian Government Budget, the ongoing management of the Australian Government's non-Defence domestic property portfolio and key asset sales. Finance is also responsible for implementation of the Australian Government's deregulation agenda and developing and maintaining the financial framework for Australian Government agencies.[51]

**2.5** In addition, since October 1997, under various Administrative Arrangements Orders, the Finance Minister has been allocated responsibility for administering the PWC Act.[52] In relation to this responsibility, in September 2008, Finance advised ANAO that:

> Finance's present role is to facilitate the development of proposals for consideration by the PWC. Under existing frameworks, departments and agencies are responsible for the development of proposals, and the PWC is responsible for examining them.

**2.6** This advice focuses on the work of the Special Claims and Land Policy Branch within Finance's Asset Management Group in administering the PWC Act. In addition to this Branch, a number of areas of the department, across three of Finance's seven Business Groups, continue to play a role in the planning, budgeting, approval and/or delivery of certain public works projects. Table 2.1 provides further details.

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51 Additionally, Finance provides entitlements advice and support to Parliamentarians and their employees, maintains shareholder oversight for Government Business Enterprises, provides general insurance services to government agencies and promotes improved risk management. Finance also provides strategic advice, guidance and service provision for the productive application of new and existing information and communication technologies to government operations.

52 Prior to this time, the PWC Act was administered by the Minister for Administrative Services.

## Table 2.1

### Responsibilities of the Department of Finance and Deregulation relevant to public works projects

| Finance Business Group | Public Works Role |
|---|---|
| **Budget Group:** | |
| Agency Advice Units (AAUs) | AAUs provide advice to the Finance Minister, senior Ministers and Cabinet's Expenditure Review Committee on expenditure priorities and on whole of government policy for budgetary, financial and non-tax revenue issues. In particular, AAUs provide advice on the financial implications of all new policy proposals prepared by portfolio agencies. They act as a conduit for these agencies, assisting them to provide the Government with reliable financial information for decision-making.<br>AAUs will also provide advice to the Finance Minister on the policy merits of proposals. While generally not focused on implementation, such analysis typically covers the merits of a proposal and possible implementation risks (if they are significant).<br>There are two Defence AAUs in Budget Group: the Defence Security and Intelligence Branch (DSIB); and the Defence Capability Assessment Branch (DCAB). DSIB has specific overview of infrastructure projects undergoing the two pass approval. |
| Interaction with Special Claims and Land Policy Branch | Special Claims and Land Policy Branch refers each proposed referral to Finance's Budget Group for advice as to whether that Group has any issues with the proposal. Under this process, Budget Group typically only takes an interest in a proposed public work being referred to the Public Works Committee where the proposed work involves additional Budget funding. |
| Observer on Defence Infrastructure Sub-committee | Finance is involved from the start of the project's development, with a Finance representative sitting in on the Defence Infrastructure Sub-committee as an observer. Finance also ensures that the projects requiring joint Ministerial approval or Cabinet approval are identified, costed and referred for approval. |
| Defence Two-Pass Approval process for Major Capital Equipment projects | Some Defence capability proposals that are required to go through the two-pass approval process include an associated infrastructure component of the project. Finance is involved in the evaluation and quality assurance of cost and financial risks associated with Major Capital Equipment proposals. |
| Two-stage approval for non-Defence major capital works | Finance scrutinises New Policy Proposals for capital funding in relation to capital works (that is, built form outcomes involving constructions), excluding fit-outs, that are estimated to have a total cost of $30.0 million or more and are undertaken in Australia and its external territories. |

| Finance Business Group | Public Works Role |
|---|---|
| **Asset Management Group:** | |
| Special Claims and Land Policy Branch (Shareholder and Asset Sales Division) | Administers the PWC Act and associated policies. Provides a 'consultancy service' to agencies on their obligations under the PWC Act and the statutory processes involved. With input from proponent agencies, the Branch prepares the documentation and briefing for the Parliamentary process that the Finance Minister performs in relation to works proposals, including referral, expediency and exemption motions and associated speeches. |
| Property and Construction Division | Delivers services and provides advice relating to the Australian Government's non-Defence property portfolio, including construction and project delivery strategies.<br>On a case by case basis, Finance may be requested to undertake (on behalf of proponent agencies) the delivery of those non-Defence capital works, excluding office fit-outs, that involve high risk and/or high cost, national symbolic or national heritage status, highly specialised functional requirements and/or high national security or significant strategic interests of Government.<br>As an alternative to Finance delivering a project as set out above, Finance could be requested to provide specialist advice to agencies proposing and/or delivering capital works. Such advice could relate to project definition, scoping studies, risk profiles, PWC requirements, relevant legislation, due diligence and procurement strategies. |
| **Financial Management Group:** | |
| Gateway Review Unit | Administers the Gateway Review Process, which examines major projects at critical stages to provide assurance about a project's progress. It does this by:<br>• liaising with agencies to identify projects that may be subject to Gateway and reviewing Gateway Risk Assessments;<br>• facilitating the conduct of reviews including scheduling reviews and engaging reviewers;<br>• developing policy and guidance and facilitating reviewer training; and<br>• disseminating lessons learned on project management to assist agencies improve their on-time, on-budget delivery of major projects against their specified outcomes. |

Source: ANAO analysis of Finance data and ANAO Audit Report No.28 2007–08, *Defence's Compliance with the Public Works Committee Approval Processes*, 22 April 2008, pp. 28–29.

**2.7** Key aspects of Finance's existing responsibilities for the effective planning and delivery of public works relate to:

- the potential for Property and Construction Division to be requested to undertake (on behalf of proponent agencies) the delivery of certain non-Defence capital works, or to otherwise be requested to provide specialist advice[53] to agencies proposing and/or delivering capital works; and

- the two-pass/two-stage approval processes for certain capital works and the Gateway Review project assurance process (Appendix 1 illustrates the interaction of the Public Works Committee process with the Gateway Review Process and the two-stage approval process for non-Defence major capital work).

**2.8** In respect to the two-stage approval processes and the Gateway Review Process, following a June 2008 PWC hearing into increases in the budget for the Christmas Island IDC project being delivered by Finance's Property and Construction Division,[54] the Finance Minister advised the Committee in August 2008 that:

> I believe that it is important to recognise that subsequent to experiences on this and other projects, the government has implemented two processes aimed at providing improvements in cost certainty and to facilitate greater scrutiny namely; the two-stage Cabinet approval process for capital works and the Gateway Review process. While in the case of Christmas Island these processes may not have foreseen all the issues resulting from the complexity of this particular project, it is reasonable to expect that they would have narrowed the gap between the initial budget considered by the Committee and the final out-turn cost.

**2.9** As outlined in the remainder of this chapter, the available evidence is that, to date, the two-stage approval processes and Gateway have yet to have a significant effect on the planning and delivery of capital works. This reflects the relatively short period of time the new processes have been in place (compared with the long lead times for the initiation, documentation and delivery of modern infrastructure developments), as well as the need for the administering agencies to apply greater rigour to their scrutiny of infrastructure projects. In particular:

- for Defence infrastructure and facilities projects being delivered as part of a major capital equipment acquisition, Finance's Budget Group

[53] Such as in relation to project definition, scoping studies, risk profiles, due diligence and procurement strategies.

[54] The Christmas Island Immigration Detention Centre was not subject to Gateway (the project was approved prior to Gateway being introduced) or to the two-pass approval process.

focuses its attention on the more financially significant military equipment aspect;

- for non-Defence projects, Finance's Property and Construction Division identified to ANAO that five of the projects for which it was the delivery agency had progressed through one or both of the approval stages, with Budget Group advising ANAO that, as of October 2008, it was aware of only three non-Finance projects that were currently subject, or soon to be subject, to the two-stage process;
- most Gateway reviews to date have related to Information Technology projects rather than infrastructure and facility construction projects,[55] ANAO's assessment[56] of the operation of the Gateway risk assessment process (including the current selection cut-off) is that it is likely that the majority of construction projects will not be subject to the Gateway Review Process and no construction project has yet completed the full Gateway review process; and
- ANAO's examination of the six projects in the audit sample indicated that the focus of Budget Group scrutiny has been largely on the expected accounting effect (if any) of project expenditure on the Australian Government's budget position rather than assessing the robustness of the proposed works from financial and other perspectives. Analysis of infrastructure works from this latter perspective often requires a different skill set to those required for examining the accounting and Budgetary implications of proposed expenditure.[57]

**2.10** In addition, in September 2008, Finance advised ANAO that:

- the FMA Act makes Chief Executives responsible for managing the affairs of their department/agency and resources in an efficient, effective and ethical manner;

55 In October 2008, Finance advised ANAO that this is likely to be a factor of the large number of Information Technology projects coming forward to government in recent years.

56 This assessment was discussed with Finance in May 2008.

57 In November 2008, Finance advised ANAO that, current New Policy Proposals often focus on budget as a risk when it is more correctly a consequence of realisation of a risk event. Finance further commented that, for capital works projects, risk categories generally have consequences on time, cost, reputation and quality and that these categories include: scope certainty; user changes; land requirements; design complexity; time pressure; buildability; contracting environment; contract strategy; environmental (flora, fauna, indigenous and European heritage); geotechnical; geographic; social impact; political (local and State government, community agitation); market forces; logistic support; and architecture.

- to be involved in the verification of design parameters, delivery processes and cost estimation would require Finance to have a detailed knowledge of the operational requirements and an intimate understanding of the operating environment of all agencies, and the development of such capacity would be costly and challenging to maintain; and
- whilst there is scope for Finance within its current role and responsibilities to promote better practice by agencies through the provision of information and feedback from the Committee and its Secretariat so as to help improve the quality of information provided to the Committee, implementation of the improvement is currently not part of Finance's function.

**2.11** By way of comparison, following time and cost overruns on various projects, the United Kingdom's (UK) *Achieving Excellence in Construction* initiative was launched in March 1999 to improve the performance of central government departments, their executive agencies and non-departmental public bodies as clients of the construction industry.[58] This initiative aimed to promote improved construction procurement performance and value for money on construction projects, including maintenance and refurbishment.[59]

**2.12** The *Achieving Excellence in Construction* initiative has a number of dimensions, including the setting of annual performance targets, a review of progress against the targets and updating the *Construction Procurement Guidance Notes* previously published by the Office of Government Commerce (OGC) (which, as is discussed further at paragraph 2.13 developed the Gateway Review process that has been adopted by the Australian Government). This guidance was updated to reflect current best practice and requirements identified in the review of progress with the initiative. It includes publications that address:

- the key roles and responsibilities involved in construction procurement projects, including providing a recommended framework for project organisation that can be adapted to individual circumstances;

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58 Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Initiative into action*, 2007, p. 5.

59 ibid.

- the decision points and processes involved in the delivery of construction projects, setting the project procurement process in the context of OGC Gateway reviews;
- the key principles of risk and value management in the context of construction projects, together with a description of the practical steps that need to be taken over the project lifecycle;
- how to determine appropriate procurement routes that will deliver best value for money;
- the need to base decisions on a whole-life approach rather than the up front capital cost of the construction;
- the principles and practice of performance evaluation, given that measuring the performance of construction projects is seen in the UK as being essential for ensuring that planned improvements in quality, cost and time are achieved; and
- thorough consideration of sustainable development and illustrations of the ways in which sustainable construction can be delivered.

## Gateway Review Process

**2.13** The Gateway Review process has been used in the UK since the year 2000, and in Victoria since 2003. The Victorian model is based largely on the initiative underway in the UK, through the OGC. Gateway is a project assurance methodology involving short, intensive, high level reviews by an independent expert team at critical points ('gates') in a project's lifecycle.

**2.14** In November 2005, the Australian Government endorsed the adoption of the OGC Gateway Review Process.[60] ANAO understands that Gateway, as implemented by the Australian Government, does not provide an approval to proceed with a project, or with a particular phase of a project—it is the responsibility of the relevant agency to determine what action will be taken in respect of recommendations made in a Gateway review.

**2.15** Gateway applies to new projects undertaken by agencies operating under the FMA Act which satisfy certain financial and risk thresholds. The current financial thresholds are:

- $10 million and over for information technology (IT) projects; and

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[60] Department of Finance and Administration, *Guidance on the Gateway Review Process—A Project Assurance Methodology for the Australian Government*, Canberra, August 2006, p. 2.

- $20 million and over for other procurement and infrastructure projects.[61]

**2.16** Risk is assessed using the Gateway Assessment Tool (GAT). The GAT provides a standard set of high-level criteria and multiple choice questions to be answered by the relevant agency in relation to a proposed project, to determine the level of project risk (high, medium or low).[62] The GAT takes into account factors such as the effects on stakeholders; the complexity of the project scope; the nature of any procurement processes to be undertaken; the degree of change required in the delivering agency; and identified capability to deliver the project. On the basis of answers provided by the agency, an indicative risk rating is assigned to the project, which is then confirmed by the Gateway Unit[63] in Finance.[64]

**2.17** Gateway was phased in from the 2006–07 Budget, focusing initially on a cross-section of projects that satisfied the financial thresholds and were assessed as high risk.[65] Since the 2006–07 Budget, all projects that meet the financial thresholds have been expected to complete the GAT, with projects deemed high risk being required to participate in Gateway. From the 2008–09 Budget onwards, those projects that satisfy the financial thresholds and are assessed as medium risk were to be subject to the same process as high risk projects.[66] However, in November 2008, Finance advised ANAO that:

> The decision to apply Gateway to High Risk projects in the first instance was, in part, based on a desire to effectively manage the high risk projects, so that a quality approach could be taken at an early stage in the program. In 2008–09, the Gateway methodology continued to be applied to High Risk projects, as a practical approach to managing the project volume which was four times the volume originally forecast in 2006. It was also decided to maintain a focus on high risk projects whilst a range of new Gateway policy improvements were being considered by the Government. The 2009–10 Budget Operational Rules advise agencies that the Gateway methodology must be applied to High Risk Projects. This decision will be reviewed following the implementation of the

61 These financial thresholds relate to the total value of the project, regardless of the timeframe taken to deliver the objectives. Source: ibid., p. 10.

62 ibid.

63 The Gateway Unit located in Finance provides guidance, support and additional information on the Gateway methodology to the Gateway Review Teams and FMA agencies as required. The Gateway Unit does not undertake Gateway reviews.

64 Department of Finance and Administration, op. cit., p. 38.

65 ibid.

66 ibid.

new policy improvements, which will be a priority for Finance in the foreseeable future.

**2.18** In order to reinforce that Gateway Reviews are intended to assist the delivery agency rather than enable additional scrutiny by Finance, at the time of the audit the Gateway Unit in Finance did not receive copies of Gateway Review Reports as they are completed. Rather, it received copies of the reports as follows:

- for Gates 0–4, the Gateway Unit received the previously completed review report at the completion of the next Gateway review for a particular project. That is, the review report for a Gate 1 review was not provided to the Gateway Unit until after the completion of the Gate 2 review. Finance advised ANAO that the Gateway Unit obtained copies of these reports to enable it to undertake quality assurance on the reporting process and highlight potential reporting improvements to the incoming Gateway review team; and
- for Gate 5, the Gateway Unit received the final review report three months after the completion of the Gate 5 review. Finance advised ANAO that the Gateway Unit obtained copies of this report to enable it to undertake quality assurance on the reporting process, and that the period of elapsed time in obtaining the report was consistent with the Gateway Unit's approach of not holding detailed contemporaneous information about Gateway projects.

**2.19** In December 2008, Finance advised ANAO that, drawing on best practice from the United Kingdom and Victoria and to respond to issues raised in the Gershon Report,[67] the Government had agreed to introduce improvements to Gateway Review Process so as to further assist in the effective delivery of high risk projects. The three improvements comprised:

- the introduction of a mandatory Gate 0 Business Needs Review such that Gate 0 will be applicable to all proposals seeking Government approval that meet the financial and risk thresholds;
- the introduction of an enhanced notification process for Gateway in order that, in the event a project is experiencing problems, early

[67] In April 2008, the Minister for Finance and Deregulation engaged Sir Peter Gershon to lead an independent review of the Australian Government's use and management of information and communication technology (ICT). The report was provided to the Minister in August 2008 and released in October 2008.

intervention to rectify these problems can occur and key stakeholders can be provided with early notice of these problems; and

- the provision of Gateway review reports to Finance's Gateway Unit at the conclusion of each review, to facilitate an early understanding of issues and to recommend improvements arising from reviews, as well as to enable earlier compilation and dissemination of lessons learned.

**2.20** These changes will not impact on the process by which decisions are made about whether a project is to be the subject of one or more Gateway Reviews. Under these arrangements, as of June 2008, since the introduction of Gateway:

- 33 public works projects had been referred to the Committee between the 2006–07 Budget (when Gateway was introduced) and 30 June 2008;
- 12 of these 33 projects had been reported to Finance as meeting the financial thresholds and which had therefore been expected to complete a GAT, with a further project referred to the Committee in 2001 also completing a GAT (following project delays and after its budget increased); and
- of the 13 infrastructure projects that have completed a GAT, two were assessed as meeting the 'high risk' threshold. ANAO examined the Gateway review process undertaken for one of these two projects (which had originally been considered by the PWC in 2001 prior to the introduction of Gateway).[68] The other project had been exempted from PWC scrutiny.

[68] In its September 2001 report, the Committee recommended that the project proceed at the estimated cost of $16 million. Tenders received in 2003 for the construction of the project exceeded the approved funding for the project such that the then Government decided that the project as referred to the Committee would not proceed, and other options would instead be pursued. Several alternative options for delivering the necessary infrastructure at Rumah Baru were pursued, however none of the options were found to be suitable. The Rumah Baru project was reconsidered in the context of the 2007–08 Budget. The proposal was a slightly reduced-scope version of the project approved by the Public Works Committee in 2001. Given the length of time elapsed since the initial proposal, estimated construction costs for the project increased significantly, with the new project estimated (as at December 2006) to cost $25 million. Accordingly, funding of $25.7 million was provided for the project in the 2007–08 Budget. In February 2008, the Public Works Committee was advised by the Attorney-General's Department of the change of scope and the significantly increased cost estimate for the project since its original approval by the Committee in 2001. The Committee responded in March 2008, noting the budget increase and requesting to be kept informed of other significant developments with the project. The Committee did not require the amended project to be re-referred.

## Two-pass and two-stage approval processes

**2.21** In 2004–05, a new mandatory two-pass approval process was introduced for Defence capital acquisitions. A similar process was introduced following the 2007–08 Budget, for non-Defence major capital works valued at $30 million or more. Table 2.2 compares the two processes, which are discussed in more detail in the following sections. Both processes are administered by Finance's Budget Group.

### Table 2.2

**Comparison of Defence two-pass and Non-Defence two-stage approval processes: Infrastructure Construction Projects**

| | Defence Two-Pass | Non-Defence Two-Stage |
|---|---|---|
| 1st pass/stage | Government considers alternatives. Approval to proceed with detailed analysis and costing of broad capability proposals. | In-principle approval for a project and funding to fully develop the scope and an accurate cost estimate. |
| 2nd pass/stage | Formal approval of a specific capability solution to an identified capability development need. | Agreement to full funding to commence construction, based on detailed scope and costing. |
| Number of infrastructure projects scrutinised | 5[A] | 6 comprising:<br>• 5 projects for which Finance's Property and Construction Division is the delivery agency; and<br>• 1 project being delivered by the Australian Federal Police. |
| Note A: These infrastructure projects are scrutinised through the Public Works Committee approval process. They are the infrastructure components of Defence capital acquisition projects that have passed through the two-pass process. | | |

Source: ANAO analysis.

### Defence two-pass approval process

**2.22** The *Defence Procurement Review 2003* (the Kinnaird Review) found that:

> …continuing delays in the delivery of major defence equipment mean that the ADF has failed to receive the capabilities it expects, according to the schedule required by the Government.

**2.23** The Kinnaird Review made ten recommendations for reform. In September 2003, the then Government announced its broad acceptance of each of those recommendations, including strengthening the existing two-pass approval system for major capital equipment projects[69] by:

- allocating additional funding at first pass approval to allow Defence to undertake a detailed study of capability options; and
- mandating the early involvement of the Defence Science and Technology Organisation and the (then) Department of Finance and Administration to provide external evaluation and verification of project proposals.

**2.24** In its announcement, the then Government stated that the strengthened two-pass approval system would facilitate early engagement with industry and provide a better basis for project scope and cost. Expected benefits outlined by the Kinnaird Review also included the provision of a precise and understandable process for the procurement of defence capabilities, which would ensure that government would be presented with robust proposals.

**2.25** As recommended by the Kinnaird Review, a Capability Development Group was established within Defence in February 2004. The Group is responsible for managing capability proposals through the two-pass approval process. At the First Pass stage, the Government considers alternatives and may approve the preparation of more detailed analyses and costing, with a view to subsequent approval of a specific capability. At the Second Pass stage, the Government may agree to fund the acquisition of a specified capability system with a defined budget, schedule and level of performance, and a budgeted whole-of-life cost. At this point, approved proposals are passed to the Defence Materiel Organisation (DMO) for procurement action.

**2.26** In March 2004, the Cabinet Handbook was amended to include a description of requirements for submissions to the National Security Committee, incorporating the strengthened two-pass approval system.[70] The new system was also incorporated into the *Defence Capability Development Manual*, first published in February 2005 and revised in February 2006.

**2.27** First-pass approval is, in effect, approval for Defence to proceed with more detailed analysis and costing of broad capability proposals.[71] It is the

[69] Capital equipment projects with anticipated cost exceeding $20 million or projects having individual items that exceed $1 million.

[70] Defence records examined by ANAO state that the Kokoda Barracks Redevelopment project included in the audit sample was the first major asset development project to be developed under the two-pass approval process.

[71] Department of Defence, *Defence Capability Development Manual 2006*, p. 30.

point at which Government considers alternatives and approves a capability development option(s) to proceed with more detailed analysis and costing, with a view to subsequent approval of a specific capability.[72]

**2.28** Second-pass approval is formal approval by Government of a specific capability solution to an identified capability development need.[73] It is the point at which Government agrees to fund the acquisition of a specific capability system with a well-defined budget and schedule, and to allocate future provision for through life support costs.[74]

### *Interaction with Public Works Committee approval*

**2.29** Some of the Defence capability proposals that are required to go through the two-pass approval process include an associated infrastructure component of the project. Where the estimated cost of the infrastructure component exceeds the financial threshold, it is required to be referred to the Committee. ANAO understands that, since the introduction of the Defence two-pass approval system, there have been five referrals[75] (with a total estimated cost of $591.45 million) to the Committee of infrastructure projects related to Defence capital acquisition projects which have been through the two-pass process.

**2.30** From discussions with Finance's Budget Group, ANAO understands that the infrastructure components of projects which have been through the Defence two-pass approval process are not referred to the Committee until the capital acquisition component of the project has received both first and second-pass approval, as shown in Figure 2.1. Budget Group further advised ANAO that the focus of the two-pass process is on the military capability being acquired, and not any related infrastructure aspects. ANAO is currently undertaking a performance audit of the Defence two-pass approval process.

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72 ibid, p. 29.

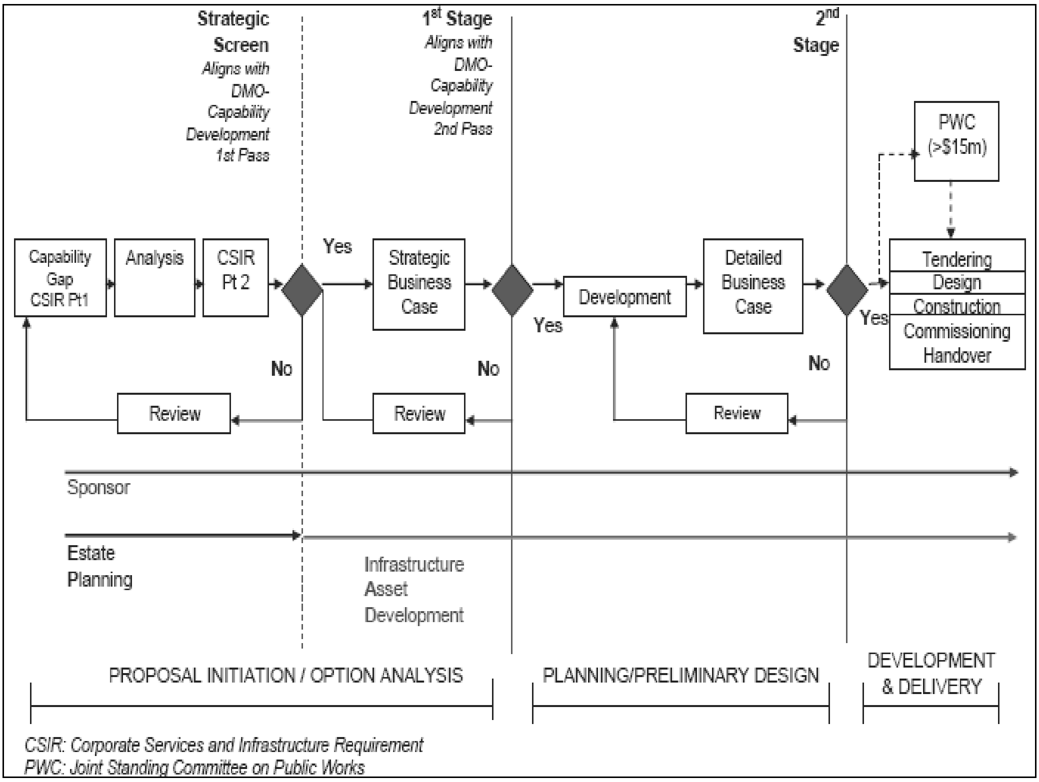
73 ibid, p. 30.

74 ibid.

75 These five projects are: Australian Super Hornet Facilities Project, RAAF Base Amberley, Qld (PWC Report No. 8/2008); Multi Role Helicopter Facilities (PWC Report No. 5/2008); C-17 Heavy Air Lift Infrastructure Project (PWC Report No. 12/2007); Facilities for Troop Lift Helicopter, RAAF Base Townsville, Qld (PWC Report No. 15/2006); and Tactical Unmanned Aerial Vehicle Facilities Project, Gallipoli Barracks, Enoggera, Queensland (PWC Report No. 12/2006).

## Figure 2.1

### Defence Asset Development Process




Source: ANAO Audit Report No.28 2007–08, *Defence's Compliance with the Public Works Committee Approval Processes*, p. 28.

**2.31** In some instances, the public works aspects supporting a Defence acquisition are included as part of a 'project' or 'program of projects' relating to the redevelopment of one or more bases. This was the case, for example, in relation to the RAAF Base Amberley Redevelopment Stage 2. The Statement of Evidence provided to the Committee by Defence advised that there were three projects making up the proposal (see Table 2.3).

## Table 2.3

### RAAF Base Amberley Redevelopment Stage 2 Scope of Works

| Project and Identified Need | Scope |
|---|---|
| **Project C8797: Multi Role Tanker Transport:** In December 2004, a contract was signed for the supply of five air-to-air refuelling aircraft. The first aircraft is planned for delivery at the end of 2008. The aircraft are scheduled to enter service in 2009. No. 33 Squadron will be re-equipped with the new aircraft. The facilities required for the aircraft to be located at RAAF Base Amberley are addressed within the proposal, with No. 33 Squadron to be relocated from RAAF Base Richmond. | New aircraft parking apron with an aircraft washpoint.<br>New Squadron Headquarters, Maintenance Complex and Ground Support Equipment shelter.<br>Extension to the refuelling system with hydrant points on the apron.<br>Upgrades to the main runway and parallel taxiway.<br>New office facility for the Logistic Management Unit.<br>Simulator facility (included in the acquisition contract). |
| **Project A3077: 9th Force Support Battalion:** 9th Force Support Battalion provides strategic heavy lift vehicles to convey tanks, armoured vehicles, major construction plant, and bulk stores. For historical reasons, elements of 9th Force Support Battalion are currently located in Townsville, Randwick, Moorebank, Richmond and Puckapunyal. With the exception of 176 Air Despatch Squadron, which will remain collocated with the RAAF's Air Lift Group at RAAF Base Richmond, these elements are to be relocated and consolidated at RAAF Base Amberley. | New combined Battalion Headquarters and Logistic Supply Company office and stores building.<br>New office, stores and maintenance facilities for 26 Transport Squadron.<br>New area fuel and vehicle washpoint.<br>New office and stores facility for 37th Force Support Company and a separate Petrol Platoon complex. |
| **Project R7005: Upgrading Engineering Services Infrastructure:** The main engineering trunk services at Amberley are for the most part over 40 years old and require major upgrading and extension. The proposed works will provide a network of services and roads that meet current needs and also provide the basic infrastructure required to underpin future development. Key works include increasing the capacity of the electrical supply to the Base, providing a commensurate increase in emergency power capacity, as well as improving water supply pressure and reliability. The balance of the works will address shortcomings in the existing communications, stormwater, sewer and trunk road systems. | Upgrading of the electrical reticulation, central emergency power station and services supervisory systems.<br>Upgrading of the water, sewerage and stormwater reticulation (including rehabilitation of the Sewerage Treatment Plant).<br>Upgrading of the communications infrastructure and networks.<br>Providing new link roads and an upgrade of an existing road. |

Source: Department of Defence, *RAAF Base Amberley Redevelopment Stage Two Queensland—Statement of Evidence to the Parliamentary Standing Committee on Public Works*, June 2005.

**2.32** As noted in Table 2.3, Defence advised the Committee that facilities proposed for the Multi Role Tanker Transport aspect of the RAAF Base

Amberley Redevelopment Stage 2 project included a simulator facility that was included in the acquisition contract for the Multi Role Tanker Transport aircraft (which had been signed in December 2004).[76] The Statement of Evidence advised that the simulator facility would:

> accommodate a range of training activities for aircrew training on the Multi Role Tanker Transport. The proposed facility will include space for the simulator equipment, rooms for equipment that control the simulator, training rooms, working accommodation for staff, computer rooms, storage rooms and amenities for staff and trainees.[77]

**2.33** However, the Statement of Evidence further stated that the outturn estimate of $285.6 million for the three projects in Table 2.3 did not include the estimated $12 million outturn cost of the simulator facility.[78]

**2.34** The Committee recommended that the proposed redevelopment proceed at the simulator-exclusive estimated outturn cost of $285.6 million and the expediency motion subsequently passed by the Parliament also referenced the amount of $285.6 million. On this basis, the simulator facility did not obtain the necessary PWC endorsement as part of the RAAF Base Amberley Redevelopment Stage 2 project. ANAO has been unable to identify another referral to the Committee that included the simulator facility. Accordingly, as the then applicable referral threshold was $6 million, it would appear that the simulator facility that was included in the December 2004 air-to-air refuelling aircraft acquisition contract proceeded without having been scrutinised by the Committee and being included in the necessary expediency motion. In October 2008, Defence advised ANAO that:

> Defence contends that the simulator facility was included in the referral and this intent was clear to the Committee.[79]

**2.35** In addition, a consistent approach has not been adopted in respect to referring infrastructure and facility works included in acquisition contracts to the Committee. For example, in September 2002, the Committee reported on

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76 Department of Defence, *RAAF Base Amberley Redevelopment Stage Two Queensland—Statement of Evidence to the Parliamentary Standing Committee on Public Works*, June 2005, p. 7.

77 ibid., Attachment 4.

78 ibid., p. 4. The confidential cost estimate provided to the PWC stated that the total project costs were $285.6 million but also disclosed the $12.0 million estimate for the simulator taking total project costs including the simulator to $297.6 million.

79 As outlined at paragraphs 2.38 and 2.39, as the acquisition contract involving construction of the simulator facility had been signed in December 2004 prior the RAAF Base Amberley Stage 2 Redevelopment being referred to the Committee. Such circumstances represent a breach of the PWC Act.

facility modifications required to support the introduction of Airborne Early Warning and Control (AEW&C) aircraft at RAAF Williamtown in NSW. In December 2000, a contract had been signed with the Boeing Company for the supply and associated support of four AEW&C aircraft under the $3.4 billion Project Air 5077 (referred to as Project Wedgetail). Defence's June 2002 Statement of Evidence provided to the Committee stated that costs of infrastructure being provided under the acquisition contract were included in the budget, as follows:

> The budget for this project is $149m. This includes management, design, construction costs, furniture, fittings and equipment together with appropriate allowances for contingency and escalation (but excludes any Goods and Services Tax liability). Of the total cost, about $19m will be works contracted directly to Boeing, to deliver the AEW&C Support Centre…[80]

**2.36** Similarly, the scope of Project Land 907 (which is to deliver the ABRAMS Main Battle Tank capability to the Australian Army to replace the ageing Australian Leopard AS1 tanks) includes six gunnery and one driver training simulators and a logistic package that includes facilities. Robertson Barracks in the Northern Territory is to be the base for the majority of the tanks and support vehicles and equipment. In December 2004, Defence split the facility requirements into two main elements: Robertson Barracks and Mount Bundy; and Puckapunyal and Bandiana.[81] Of these projects, the Robertson Barracks/Mount Bundy element was to be managed as part of a broader Robertson Barracks upgrade project, with an initial budgeted cost to Project Land 907 of $10.428 million, revised in February 2006 to $11.2 million.[82] For the Puckapunyal/Bandiana phase of the project, Defence provided an initial estimate of $3.4 million, revised in February 2006 to $3.5 million.[83]

**2.37** Public Works Committee consideration of the Robertson Barracks Replacement Tank Facilities project has occurred as follows:

- on 25 May 2006, the Committee approved delivery of elements of the project that were essential to support the arrival of the new tanks in

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80 Department of Defence, *RAAF Base Williamtown Redevelopment Stage 1 and Facilities for the Airborne Early Warning & Control Aircraft, Williamtown NSW—Statement of Evidence to the Parliamentary Standing Committee on Public Works*, June 2002, p. 26.

81 ANAO Audit Report No.1 2007–08, *Acquisition of the ABRAMS Main Battle Tank*, 17 July 2007, Canberra, p. 69.

82 ibid.

83 ibid.

Darwin in early 2007 and advised Defence that these works were not required to be subject to a full Committee inquiry[84]; and

- the scope of the Robertson Barracks Redevelopment, Robertson Barracks Replacement Tank Facilities and Hardened and Networked Army Projects proposed works was referred to the Committee on 13 March 2008. The program of works considered by the Committee in that context did not include the works it had approved in May 2006, but included extension of three existing repair bays for the 1st Armoured Regiment to allow for the additional length of the new tank; a new vehicle shelter, office, ablutions and hardstands for parking and turning circles of 14 new Heavy Tank Transporters for the 1st Combat Services Support Battalion; and upgrade of the Range Tower Control at the Mount Bundy Training Area to meet the acoustic and structural requirements of the facility during tank firing.[85] The estimated outturn costs of the program of works advised to the Committee included $6.715 million for the Robertson Replacement Tank Facilities project.[86]

**2.38** The inclusion of public works (infrastructure and facilities) aspects of projects in equipment acquisition contracts presents challenges for Defence in complying with the PWC Act. For example, in its June 2008 report of referrals tabled in March 2008, the Committee reported in relation to the Multi Role Helicopter Facilities project that:

- on 6 May 2008, Defence had advised it that, in December 2007, the DMO had entered into a contract for the design and construction of two simulators and their housing facilities;
- subsequent legal advice obtained by DMO at the request of the Committee had confirmed that the entering into of this contract may have been a clear breach of the PWC Act; and

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84 Department of Defence, *Robertson Barracks Redevelopment, Robertson Barracks Replacement Tank Facilities and Hardened and Networked Army Projects—Statement of Evidence to the Parliamentary Standing Committee on Public Works*, May 2007, p. 3.

85 ibid., pp. 7–8.

86 ibid., p. 19.

- the Committee had received assurances from DMO at a private briefing that measures had been put in place to prevent future breaches.[87]

**2.39** However, under the two-pass approval process, there remains a risk that equipment acquisition contracts that include an infrastructure and/or facilities component will be signed prior to the Public Works Committee inquiry being completed. In October 2008, Defence advised ANAO that:

> Defence approached the provision of these Defence Capability Program related facilities projects with the intention of meeting the operational requirement of the projects and also meeting the Public Works Committee requirements. We believe we met both requirements, albeit in Defence's different approaches to providing facilities.
>
> As noted in paragraph 2.38, DMO recently revised its procurement instructions to ensure the Public Works Committee requirements are recognised in Defence materiel acquisition planning. Defence believes the risk of breaching the PWC Act is being mitigated.

## Major non-Defence capital works two-stage approval process

**2.40** In the context of the 2007–08 Budget, the then Government agreed to a two-stage approval process for decision-making on new policy proposals for major non-Defence capital works, similar to the two-pass approval process adopted for major Defence capital acquisitions. For the purposes of the two-stage approval process, 'major capital works' are defined as projects involving construction that are estimated to cost $30 million or more (excluding fit-outs).[88]

**2.41** In the first stage of the approval process, the relevant portfolio Minister seeks in-principle approval for a project from Cabinet on the basis of a business need and broad order of costs, and funding to fully develop the project's scope and an accurate cost estimate, for further consideration by Cabinet.[89]

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[87] In this respect, Defence provided ANAO with a copy of a Departmental Procurement Policy Instruction of 10 July 2008 that provides officials with information and advice on procurements and contracts that may involve a construction element. The Instruction outlines the referral requirements of the PWC Act and requires that procurement officers consider the application of Commonwealth legislation, policy and relevant thresholds when procurements involve a construction element and the construction element is not being delivered by the Infrastructure Division. The application of this advice to the DMO contracting for the delivery of a training simulator is used as a specific relevant example.

[88] Department of Finance and Administration, *Estimates Memorandum 2006/34*; and Department of Finance and Administration, *Annual Report 2006–07*, Canberra, p. 46.

[89] ibid.

**2.42** In the second stage of the approval process, the relevant portfolio Minister seeks Cabinet agreement to full funding to commence construction, based on the project scope being developed to functional design brief standards, full costing of the project scope[90] and an analysis of project benefits, risks, timetable, contingencies and any offsets.[91]

**2.43** In July 2008, Finance's Property and Construction Division identified to ANAO that five of the projects for which it was the delivery agency had progressed through one or both of the approval stages. These projects were:

- Newcastle Law Courts (Stage 1);
- One State Circle (Stage 1);
- Villawood Detention Centre (Stage 1);
- Anzac Park East (Stage 1 endorsement subject to tenant); and
- Darwin Law Courts (Stage 1, but did not progress to Stage 2).

**2.44** In respect to those non-Defence projects for which Finance was not the delivery agency, in October 2008, Finance's Budget Group advised ANAO that it was aware of three projects that had been, or were expected to be, examined under the two-stage process since it had been introduced. These were:

- Majura Development for the Australian Federal Police, for which first stage approval was obtained in the 2007–08 Budget with the second stage expected to be considered in the 2009–10 Budget;
- CSIRO Lindfield Building Extension, which is expected to move through the two-stage process in the 2009–10 Budget; and
- a project for the National Archives of Australia, which Finance advised would be covered 'in due course'.

**2.45** As Budget Group does not maintain a register of those projects that have been examined under the two-stage process, or the results of its scrutiny, Finance was unable to authoritatively advise ANAO that this list was complete. In the interests of promoting continuous improvement in the planning and delivery of capital projects, there would be benefit in Finance

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90 Any proposals for additional funding for a project following second stage approval must be sought by the relevant portfolio Minister from either the Finance Minister (for increases of $10 million or less) or the Prime Minister (for increases greater than $10 million). Source: Department of Finance and Administration, *Estimates Memorandum 2006/34*.

91 Department of Finance and Administration, *Estimates Memorandum 2006/34*; and Department of Finance and Administration, *Annual Report 2006–07*, Canberra, p. 46.

maintaining robust records of each project that has been considered under the two-pass/two-stage approval process so as to inform periodic reviews of lessons learned from the scrutiny of projects under these processes. In this respect, it is relevant to note that the two-stage approval process, as well as Gateway reviews, are viewed as important initiatives in providing improvements in cost certainty and to facilitate greater scrutiny of projects (see further at paragraph 2.8).

*Interaction with Gateway Review Process*

**2.46** Some new policy proposals for major capital works that are subject to the two-stage approval process may also be required to complete a risk assessment as part of the Gateway Review Process, where the estimated cost of the project exceeds the relevant financial threshold. A risk assessment must be completed prior to the relevant portfolio Minister seeking first-stage in-principle agreement to the project.[92] If the project is assessed as 'high risk', a Gate 1 Business Case Review must be completed at least six weeks prior to the relevant portfolio Minister seeking second-stage approval for the project to proceed.[93]

## Lessons learned

**2.47** The then Government's decision to adopt Gateway established a requirement for Finance to disseminate observations arising from Gateway reviews which highlight opportunities for improvements in project management practice, on a non-attributable basis.[94] The purpose of the 'lessons learned' reports is to assist agencies in improving their project management practices.[95]

**2.48** To date, one 'lessons learned' report has been published. The *2007 Lessons Learned Report*, published in August 2007, was based on reviews completed during the 2006–07 financial year since Gateway Reviews commenced in August 2006.[96] In November 2008, Finance advised ANAO that the next Lessons Learned publication will be published in the first quarter of 2009.

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92 Department of Finance and Deregulation, *Estimates Memorandum 2007/50*.

93 ibid.

94 <http://www.finance.gov.au/gateway/index.html#lessons> [accessed 19 September 2008].

95 ibid.

96 The majority of these reviews were Gate 1 Business Case and Gate 2 Procurement Strategy reviews.

**2.49** The *2007 Lessons Learned Report* stated that the Gateway reviews conducted between August 2006 and June 2007 had found that agencies approach the management of major projects in a structured and outputs-focussed manner, but that:

> aspects of project planning and management could benefit from adopting better practices. The absence of this better practice increases the risk of projects failing to realise their intended benefits and failing to deliver on time and on budget. The Lessons Learned articulated in this report highlight opportunities identified for the adoption of such practices.[97]

**2.50** However, as outlined in paragraph 2.20, to date there have been only two public works projects that have been subject to one or more Gateway reviews. In addition, a similar process for identifying 'lessons learned' has not been established for identifying and promulgating to agencies the lessons learned from the two-stage approval process. At the time of ANAO's audit, Finance did not have in place processes to maintain a comprehensive record of all projects that had been subject to the two-stage approval process (see paragraph 2.45).

**2.51** Outside the administration of the Gateway Review process and other than in circumstances where agencies seek additional Budget funding for the delivery of projects, Finance does not have a role in monitoring proponent agency performance in delivering public works projects, or in promoting the implementation of improved practices where this is seen as beneficial. In these respects, Finance advised ANAO that individual proponent agencies are best placed to ensure that Public Works Committee recommendations on a particular project are implemented and that, where relevant, they are considered for future projects. Finance further advised ANAO that greater integration of the roles Finance undertakes with respect to non-Defence capital works may give rise to compromised objectivity and perceptions of a conflict of interest (given that, under the current frameworks and resourcing arrangements, scrutiny of projects and follow-through of lessons learned are agency responsibilities). In addition, Finance advised ANAO that it would examine:

- the benefits of record keeping of projects passing through the two-stage approval process;

[97] Department of Finance and Administration, *Gateway Review Process Lessons Learned*, August 2007, p. 2.

- the current frequency of lessons learned reports from Gateway Reviews;
- the future effectiveness of the two-stage and Gateway Review processes in improving the planning and delivery of capital works; and
- liaising with Defence to address the potential under its current arrangements for the infrastructure component of equipment projects to inadvertently 'miss' Committee scrutiny.

**2.52** Work in the areas flagged by Finance will be of benefit. In addition, in 2007–08, Finance's Property and Construction Division reorganised its branch structures to better align its service delivery of assigned non-Defence capital works to the project lifecycle. Finance advised ANAO that these changes were modelled on the UK OGC initiatives. Another aspect of the UK's *Achieving Excellence in Construction* initiative worth considering in the Australian Government context is an enhanced role for Finance:

- driving forward improvements in the management of large, complex or novel projects involving procurement as well as seeking to assist public sector organisations in the successful delivery of projects (through a more comprehensive program of Gateway Reviews for infrastructure projects); and
- developing operational guidance and providing advice to support construction and property procurement and management.

**2.53** In the latter respect, in November 2008, Finance advised ANAO that its Property and Construction Division is resourced around supporting specific capital projects and property outcomes but that it is not resourced to provide whole of government guidance material or analysis of New Policy Proposals for works that are not being delivered by Finance.[98] In addition to enhanced whole of government guidance and the improvements flagged at paragraph 2.51, there would be benefit in Finance examining opportunities to allow the better sharing of information and expertise within the department, given the existing organisational arrangements for discharging Finance's various roles in relation to the planning, budgeting, approval and delivery of infrastructure projects

[98] See further at footnote 57 in relation to the current focus of analysis of New Policy Proposals on budget as a risk rather than as the consequence of the risk event.

# 3. Project budgets and estimates

*This chapter examines the development and reporting of financial information on project budgets and cost estimates for projects that are referred to the Committee. A robust estimate of project costs is important to the effective operation of the Committee given: works estimated to cost more than a specified threshold ($6 million up to November 2006 and, at present, $15 million) are required to be referred to the Committee for its consideration and report; and in considering and reporting on a public work, the Committee is required to have regard to the cost-effectiveness of the proposal as well as the current and prospective public value of the work.*

## Public Works Committee requirements

**3.1** Typically, the Public Works Committee inquiry and reporting process occurs after project initiation and business case development has occurred, but before the project enters its delivery stage. This timing is a consequence of the requirements under the PWC Act that:

- work not commence until the Committee's report has been presented to both Houses of the Parliament and the House of Representatives has resolved that it is expedient to carry out the work (Section 18(7) of the Act); and
- work be referred to the Committee when all particulars substantially affecting its cost have been determined (Sections 18(8) and (9) of the Act).

**3.2** The requirement in sections 18(8) and (9) of the Act for the estimated cost to be made when all particulars of the work substantially affecting its cost have been determined necessitates that a certain amount of design work be undertaken to clarify aspects such as the scope of work prior to the project being referred to the Committee. However, it is possible for proponent agencies to seek the Committee's approval for contract documentation for project delivery to be prepared before the Committee has completed its inquiry and reported to the Parliament. [99]

[99] This process is referred to as 'concurrent documentation'. The Committee's Manual (pp. 10–11) advises that: 'Concurrent documentation should only be sought when it can be justified by the necessity for a project to be completed by a particular time and when the deadline cannot be met by other means. Sponsoring agencies should consult with the committee before the resources required for concurrent documentation are committed. The committee requires a letter stating the reasons for requesting approval of concurrent documentation. Application for concurrent documentation can only be made following the public hearing.'

## Dividing projects—notification of medium works

**3.3** Over some years, the Committee has, including in its Annual Reports, raised concerns about agencies dividing a public work into component parts so as to have each component part cost less than the threshold at which a referral to the Committee must occur. In this respect, the Committee's Manual states that:

> The committee has for many years been aware that agencies may, on occasion, divide a proposed work into several components costing less than the threshold value each, in order to avoid referral of a work to the committee. Avoidance of scrutiny in this manner is not acceptable to the committee and referring agencies should take care that such a situation does not arise.[100]

**3.4** Accordingly, the Manual advises proponent agencies that they should notify the Committee of any proposed works with an estimated cost greater than $2 million, but which fall below the threshold for referral to the Committee, currently $15 million. Such projects are known as 'medium works'. The notification of medium works is required to be provided to the Committee 'well before tenders are called for the work'.[101] Finance's internal procedures state that the Committee has requested that agencies provide details of medium works through Finance. The Committee may inquire into a proposed medium work if a motion is moved to refer the work to the Committee by any Member or Senator.

**3.5** In this respect, the Australian War Memorial (the Memorial) proactively approached the Committee (on 4 November 2005) in relation to the project to redevelop the Post-1945 Conflicts Galleries and Discovery Room, seeking advice as to whether the project needed to be referred to the Committee. The request was based on the Memorial's belief that the project consisted of several packages of work mainly for gallery redevelopment, each of which fell beneath the then threshold for referral to the Committee of

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[100] op. cit., p. 12.

[101] ibid.

$6 million.[102] The Memorial has advised ANAO that its approach: was in no way a reflection of any apparent wider practice of agencies splitting projects to avoid Committee scrutiny; was based on the Memorial's opinion that most of the project related to creative development of exhibitions and did not constitute construction works; and followed earlier involvement with the Committee on similar projects. Following consideration of the request by the Committee, the then Committee Chair advised the Memorial on 10 November 2005 that the combined works packages constituted a single project and would be subject to the Committee's scrutiny.

## Combining projects into a single referral

**3.6** Program Management is the process of managing multiple, inter-dependant projects, and should not be confused with project management. The UK's OGC has observed that programs are related to the management of change, and strategic vision. Projects, by way of comparison, have definite start and finish dates, a clearly defined output and defined sets of financial and other resources. Individual projects can be managed under a wider, strategic program of works.

**3.7** Issues in relation to the packaging of works have arisen from time to time in deciding whether projects require referral to the Public Works Committee. For example, in July 2003 legal advice was obtained on whether the proposed construction of various navigation aids[103] by the Australian

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102 The Committee was informed that there were four packages of work and equipment supply that were independent of each other and delivered by different contractors, consultants, producers and suppliers, namely:

- Primary Works Construction ($5.4 million)—which would be a lump sum contract to cover the creation of the new architectural gallery spaces and discovery room; construction of new plant rooms; fire compartmentalisation code compliance; replacement of inadequate mechanical and electrical systems; construction of new visitor facilities; and refurbishment of staff back of house areas;
- Secondary Works Construction ($3.5 million)—which would be a lump sum contract to cover the construction of all exhibition structures, graphic treatments, showcases, set pieces and object supports for the new Post 1945 conflicts galleries and discovery room;
- Multimedia Equipment, Production and Lighting ($2 million)—there would be a number of contracts with multimedia producers, equipment suppliers and lighting designers to create the different effects and experiences throughout the galleries and the new discovery room; and
- Consultants Fees ($2.1 million)—there were five consultancy agreements which cover the primary works architectural design, exhibition design for the new galleries and the discovery room, project management and quantity surveying for the whole project.

103 The legal adviser was informed that five new floating buoy structures held in place by chains and anchors would be installed, and one existing buoy structure altered, at a total cost of $322 875 (excluding GST), and that nine fixed structures (consisting of piles driven into the seabed with a platform constructed on top to accommodate the marine aids to navigation) would be installed at a cost of nearly $6.36 million (excluding GST).

Maritime Safety Authority (AMSA) in the Lads Passage/Fairway Channel in the Great Barrier Reef required referral to the Committee. Whilst AMSA treated the proposal as one project, with one contract being entered into for the construction and installation of each of the structures, it was concluded that the following factors meant that the series of aids did not constitute one work within the meaning of the PWC Act:

- the Channel already operates as a shipping route and the installation of the navigation aids is to enhance safety only;
- none of the aids is dependent on the other (each would be independent, free-standing and mark one particular 'danger spot' such that safety would be increased in that part of the Channel); and
- the existence of one contract, while a strong indicator of there being one project, was a commercial reality because economies of scale made it significantly cheaper to install a number of aids at the same time, even if they were not near each other. Similarly, one contract had previously been used to install navigation aids in separate areas.

**3.8** By way of comparison, in relation to the projects in the audit sample, for the RAAF Base Amberley Redevelopment Stage 2, Defence advised the Committee that the proposal incorporated three distinct projects, with individually defined scopes, budgets and timeframes. Defence's Procurement Plan (as approved in September 2003) stated that:

> Each of the three projects have unique characteristics which provide compelling rationale for delivering the projects individually, with a delivery mechanism tailored to the particular circumstances. It is recommended that the three projects be delivered separately…

**3.9** Defence secured first pass approval for each project on the basis of individual Estate Capability Proposals. In addition, Detailed Business Cases were prepared for each project, separate project teams were created and different procurement strategies were established. However, the three projects were 'packaged' as a program of works that was referred to the Committee once for consideration. In October 2008, Defence advised ANAO that:

> Defence disagrees with the premise that the projects should have been referred separately to the Committee. Government approval was sought and obtained for one project. The three elements of the referred works were delivered at the same time, at one base, by one Defence project team. The single referral gave the Committee a full appreciation of the proposed works.

**3.10** The PWC Act does not draw any distinctions between 'projects' and 'programs' of work. Similarly, the Committee's Manual does not specifically address the issue of multiple projects being 'packaged' in a single referral, stating that:

> …A public work is a work proposed to be undertaken by the Commonwealth…Currently all public works over $15 million must be referred to the committee unless exempted…[104]

**3.11** In October 2008, Finance advised ANAO that:

> Finance proactively advises agencies regarding the requirement not to split projects to avoid PWC scrutiny. Finance does not agree with the premise that projects should not be combined, as there are at times efficiencies for both the Committee and agencies in this approach, especially where co-dependencies exist.

**3.12** Although not a specific requirement under the PWC Act, individual projects being referred to the Committee separately could provide benefits in terms of enhancing scrutiny by the Committee. This is particularly the case in circumstances whereby proponent agencies have sought first stage approval on an individual project basis, and/or where there is no chain of dependency between individual projects (as was the case in respect to the RAAF Base Amberley Redevelopment Stage 2). In December 2008, Defence advised ANAO that:

> Given the number and complexity of its projects, Defence has considerable practical experience in making these judgements. Each project or program of works is assessed on its merits, with the aim of presenting the PWC with the most complete view of the proposed works. The presentation of the works at Amberley in a single referral provided the PWC with a comprehensive view of the proposed development works. Defence notes that this approach did not attract criticism from the PWC.

## Estimating accuracy

**3.13** There is a recognised tendency towards optimism bias in construction projects in relation to the risk of cost increases and time schedule delays.[105]

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[104] op. cit., p. 6.

[105] See, for example, The British Department for Transport, *Procedures for Dealing with Optimism Bias in Transport Planning*, Guidance Document, June 2004 and Department of Transport and Regional Services' Bureau of Transport and Regional Economics, *Risk in cost-benefit analysis*, Report 110, 2005, p. 5.

This risk is heightened in an environment of strong growth in construction activity levels, increases in construction costs and shortages of skilled labour.

**3.14** In the context of capital works, distinguishing between budgets, estimates and costs is important. A 'budget' refers to a funding allocation to deliver the proposed works. By way of comparison, the 'cost' of those works will not be known until they have been delivered.

**3.15** Although the final cost is not known until after completion of works, at any point an 'estimate' can be made of the final cost. Any such estimate has a level of uncertainty attached to it, and that uncertainty should reduce as the project advances through planning, into delivery, and towards completion. In this respect, it is desirable that budgets and estimates be established with sufficient rigour such that, subject to sound project management and cost planning, the overall estimate is able to be maintained during the various stages of project design development—while detailed estimate items may increase as a consequence of improved definition, the allowance for risk (contingency) should also be able to be appropriately reduced, allowing the overall project estimate to be maintained.[106]

**3.16** The importance of carefully managing budgets, estimates and costs was recognised in Finance's *Lessons Learned Report* of Gateway reviews completed between August 2006 and June 2007, which noted that:

- the project budget should be clearly documented, including funding sources and the underlying assumptions and updated as required; and
- management of the project budget should include project specific financial reporting, forecasts and management of costs against scope and deliverables.[107]

**3.17** Estimates are often developed at specific milestones in the planning process. This is clearly seen in the context of processes such as Gateway, the objective of which is 'to help achieve project objectives and deliver projects on time and within budget'.[108] Gate 1, for example, reviews the Business Case, including consideration of affordability and value for money, implying that the likely cost of the project has been estimated with some level of confidence.

[106] Evans & Peck, *A Review of the reliability of Cost Estimation of QDMR Projects funded under AusLink*, 27 June 2007, p. 12.

[107] Department of Finance and Administration, op cit., p. 5.

[108] Australian Government, Department of Finance and Administration, Financial Management Group "Gateway Review Process" October 2006.

Gate 2 reviews the Procurement Strategy, including consideration of options and updating the Business Case, implying that an estimate has also been updated, probably with an increased level of confidence. Each involves estimates based on differing levels of detail and increasing levels of confidence. At specific points in the development process, agency budgets sufficient to cover the estimated cost should be established or reviewed.

**3.18** Against this background, the level of confidence attaching to estimates at different stages of a project is not always clear. Research by Finance's Property and Construction Division, which informed the introduction of the two-stage approval process, found that typical orders of accuracy for project cost estimates associated with the key stages of project development are:

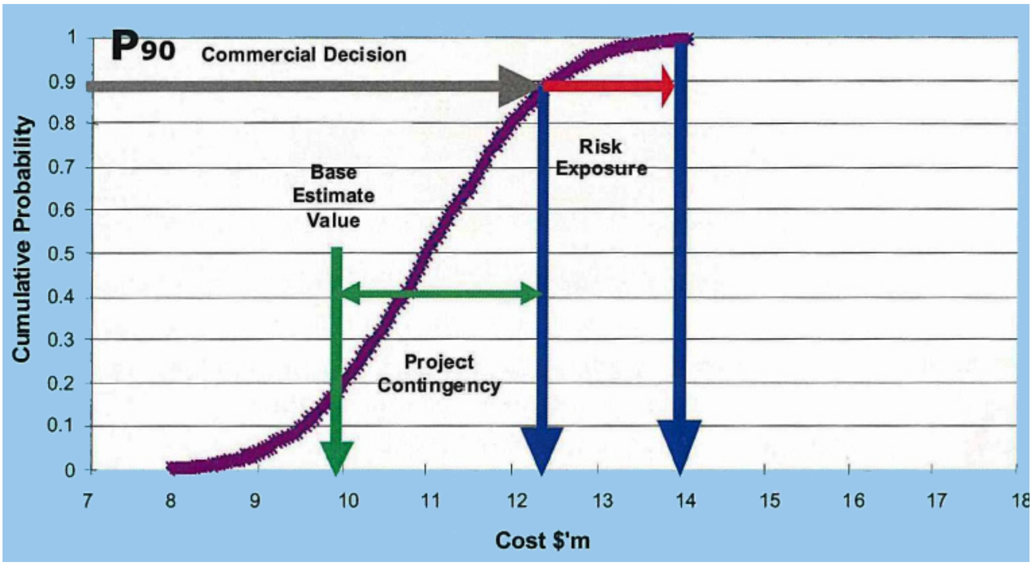
- conception/initial feasibility: plus or minus 50 per cent (that is, an estimate of $100 million implies a high degree of confidence that the cost at completion will lie between $50 million and $150 million);
- concept/preliminary design: plus or minus 30 per cent;
- detailed design: plus or minus 15 per cent; and
- construction commencement: plus or minus 10 per cent.

**3.19** Recent advice to the Department of Infrastructure, Transport, Regional Development and Local Government (DITRDLG—in the context of developing a best practice estimating standard for land transport projects) is that project owners/managers often look for a P90 figure for capital budgets (that is, the contingency allowance[109] on top of the base estimate is sufficient to ensure that there is a 90 per cent chance that the total estimate will not be exceeded). Figure 3.1 illustrates the use of probabilistic risk analysis to make allowances for risk when developing project estimates to a P90 confidence level.

[109] Risk is a measure of uncertainty and, as outlined further below commencing at paragraph 3.43, a contingency allowance is used to cover risk. The two basic requirements to set a contingency allowance are the risk profile inherent in the project and the level/probability of the risk occurring. This latter issue can be addressed either through a deterministic approach (that is, manually applying a percentage) or probabilistic approach (that is, using ranges and a computer program such as @Risk).

## Figure 3.1

**Probabilistic analysis of risk when calculating project estimates**




Source: Evans & Peck, *Best Practice Cost Estimation for Publicly Funded Road and Rail Construction*, 19 June 2008, p. 33.

**3.20** The objective of using a P90 value for a project estimate is that, subject to good project management and cost planning, the overall estimate should be maintained (for nine out of ten projects) during the various stages of project design development. As a result, while the detailed estimate items may increase as a consequence of improved definition, the allowance for risk should be able to be reduced (see Figure 3.2).[110] This is because the level of uncertainty associated with a project is usually inversely proportional to time such that, as a project progresses and definition improves, the level of uncertainty (and allowance for risk) decreases.[111]

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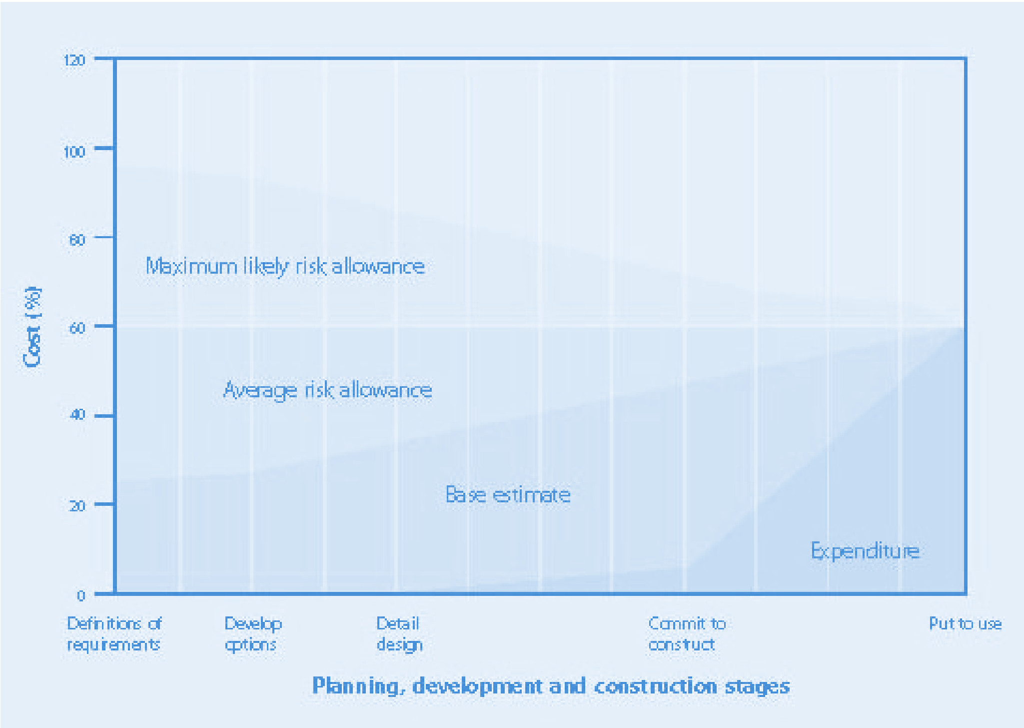
[110] Evans & Peck, op. cit., p. 12.

[111] For example, this means that a project at an early stage of development should have a substantially higher contingency allocation than a project that has been designed in detail and is commencing construction.

## Figure 3.2

### Change in base estimate, risk allowance and expenditure with time




Source: Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Risk and Value Management*, 2007, p. 21. <http://www.ogc.gov.uk/ppm_documents_construction.asp>

**3.21** None of the evidence provided to the Committee in relation to the projects examined in detail as part of this audit, or the Statements of Evidence submitted to the Committee in respect of other projects it reported on between 25 March 1998 and 18 March 2008, included information on the order of accuracy for the project estimate. In each instance, the Committee was provided with a single 'point' estimate of project costs—there was no reporting of an estimate range and/or of the confidence level attaching to the estimate.

**3.22** The above circumstances highlight the importance of clarity in communicating, at each stage of a project, the purpose of any estimate, and the level of confidence attaching to that estimate. Without this clarity, the potential for misunderstanding, and therefore misinterpretation of the estimate, is increased. An approach which minimises this risk is outlined in a forthcoming book by Ross Garland[112] which tracks the development of project estimates

112 *Project Governance—A practical guide to effective project decision making,* Ross Garland, to be published in February 2009.

through strategic assessment, business case development, and into procurement and delivery. Figure 3.3 reproduces a schematic from that book, which summarises the basis for progressive estimates, suggests levels of confidence attaching to each, links these with key approvals and Gateway process gates, and suggests wording by which the project status and estimate might be communicated to, and by, Government. A similar approach is outlined in the Victorian Department of Treasury and Finance's recent publication on Investment Lifecycle Guidelines.[113]

## Figure 3.3

### Progressive development of project estimates

| project lifecycle | Strategic Assessment | Preliminary Assessment | Business Case Development | Procurement | Build | Service Delivery |
|---|---|---|---|---|---|---|
| key project documents | • Strategic business case | • Preliminary business case<br>• Concept design | • Final business case<br>• Procurement strategy<br>• Detailed design | • Updated final business case<br>• Bid evaluation report | • Contract<br>• Project completion report | • Benefits realisation plan<br>• Business case |
| major milestones | • Project est.<br>• Project Owner appointed<br>• Governance est. | • Advisors appointed | • Procurement model decided<br>• Decision to approach market taken | • EOI issued<br>• Request for tenders issued<br>• Contract award | • Construction start<br>• Commissioning complete | • Commence operational service<br>• Close project |
| estimates & accuracy | • No estimate or based on past projects.<br>• +/- 100% | • Preliminary Estimate based on concept design<br>• +/- 50% | • Pre-market Estimate based on detailed design<br>• +/- 15% | • Contract price<br>• +/- variations | • Actual outturn<br>• +/- 0% | |
| accompanying government announcement | "...Investigating various options for the development of [...]. Preliminary estimate available in approx. [...] months." | "...Preliminary Estimate based upon concept design. More detailed estimates will be developed before any investment decision is made." | "...Pre-market Estimate developed as part of final business case for project. Decision to proceed subject to market providing value for money in response to request for tenders." | "...[company name] has committed to deliver the project at a price of [contract price] which represents a value for money outcome in line with the government's business case." | | |
| key approvals | ↓ Strategic decision to proceed | ↓ Funding to develop the final business case | ↓ Final business case; commitment to fund; procurement model | ↓ Investment decision | | |
| Gateway process gates | | ↑ Business justification Gate 1 | ↑ Delivery strategy Gate 2 | ↑ Investment decision Gate 3 | ↑ Readiness for service Gate 4 | ↑ Operational review and benefits realisation Gate 5 |

Source: Reproduced with the permission of Ross Garland from his forthcoming book, *Project Governance—A practical guide to effective project decision making*.

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[113] See <http://www.lifecycleguidance.dtf.vic.gov.au/subsection.php?section_ID=1&subsection_ID=2> [accessed 30 October 2008].

## Recommendation No.1

**3.23** ANAO *recommends* that the Department of Finance and Deregulation consult with the Public Works Committee on the merits of the Committee being provided with greater clarity concerning the level of confidence attaching to project estimates including, as appropriate, information on the purpose of the estimate, its order of accuracy and how these factors are addressed in the project budget.

*Agency responses*

**3.24** The Memorial disagreed with the recommendation with all other responding agencies agreeing to or noting the recommendation. Finance, Defence and the Memorial provided comments as follows:

- Finance commented that, subject to resources, it would consult with the PWC and agencies on the merits of potential changes to the PWC Manual that would result in agencies providing greater clarity in their Statements of Evidence to the PWC in respect to the accuracy of estimates. Finance noted that the PWC Manual currently does not make any requirement of agencies in relation to the order of accuracy of project costs;
- Defence commented that it agreed with this recommendation assigned to Finance and advised that it would work with the central agencies to address it; and
- in disagreeing with the recommendation, the Memorial commented that the Committee being provided with greater clarity concerning the level of confidence attaching to project estimates is a matter for the Committee but that the Memorial considered this would not improve agency financial and project management.

## Confidential Cost Breakdown

**3.25** The Committee's Manual advises agencies that the public Statement of Evidence should include a 'broad outline of project costs including GST'.[114] The Manual also reminds agencies that the Statement of Evidence becomes public once it has been received by the Committee, and as such any commercial-in-confidence material should be provided in the Confidential

[114] op. cit., p. 21.

Cost Breakdown.[115] In relation to the Confidential Cost Breakdown, the Manual further states that:

> Agencies must provide a table showing a breakdown of the major cost components of the proposed work. In order for the secretariat to be able to prepare its briefing materials for members, the confidential costs document should be forwarded to the secretariat as a separate document, on the day of referral, at the same time as the statement of evidence. As the document may contain commercial-in-confidence information, the breakdown is kept confidential: only members and secretariat staff view this material. In cases where there are significant delays in the process, some costs may change. If this occurs, it would be expected that the Committee is informed prior to the confidential cost briefing. This can be done in consultation with the Secretariat.
>
> The table of cost estimates should include, but not necessarily be limited to:
>
> - cost of the building(s);
> - land costs (if applicable);
> - cost of any external works and services, such as civil, electrical and mechanical works;
> - miscellaneous items (for example, demolition, remediation, decontamination);
> - relocation costs (if applicable);[116]
> - cost provisions for phasing of construction;
> - fees for project management, consultancies or other professional services related to the work;
> - GST;[117]
> - contingency and escalation allowances; and
> - total Estimated Outturn cost at current prices.[118]

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115 ibid.

116 For example, within the six projects examined in detail as part of the audit, DEEWR's Brindabella Park Fitout project included relocation costs in the cost estimate and the Reserve Bank included its relocation costs within the cost estimate for its Business Resumption Site project (although they were not shown as a separate line item as they should have been). The Australian War Memorial and CSIRO did not include any allowance for relocation costs in their project cost estimates.

117 The only project in the audit sample where the estimate included any amount for GST was the Reserve Bank's Business Resumption Site, where Irrecoverable GST was included (recoverable GST was not included).

118 op. cit., pp. 24–25.

**3.26** For the six projects in the audit sample, the level of detail provided through the Confidential Cost Breakdown varied, as did the format and contents. For the majority of projects, the cost breakdown was provided on a single page. By way of comparison, for the RAAF Base Amberley Redevelopment Stage 2, the Confidential Cost Breakdown provided data at a number of levels, as follows:

- an overall Cost Plan was provided separating the total project cost of $285.6 million into each of the three constituent projects. Components of each project were identified, with amounts allocated against them, together with management and design amounts and a contingency allowance for each project. This page also identified the simulator facility for the Multi Role Tanker Transport aircraft as a separate turnkey project with a value of $12.0 million, giving an overall estimate of $297.6 million;
- Component Cost Plans were provided for each of the three constituent projects, providing further detail in support of the overall Cost Plan; and
- for some of the larger sub-components of each project, an Element Cost Plan was provided outlining further detail of the amounts making up the project estimate.

**3.27** Only one[119] of the cost breakdowns examined by ANAO informed the Committee of the level of project scope and design development that underpinned the estimate. For some projects, ANAO also identified inconsistencies between the cost breakdown provided to the Committee and the underlying agency cost plans. For example, in relation to the Kokoda Barracks Redevelopment project, the total estimated cost of $86.7 million, as presented to Committee was consistent with the estimate of cost contained within Defence's Detailed Business Case, approved by the Defence Infrastructure Sub-committee in March 2005. However, the breakdown of costs differed between the approved Detailed Business Case and cost estimate provided to Committee. This is illustrated in Table 3.1. Of particular note is that:

[119] The Reserve Bank's breakdown referred to the 'Cost Plan based on Concept Design', with the concept design described by the plans and drawings and Statement of Evidence provided to the Committee. In December 2008, the Bank commented to ANAO that the project delivered conformed closely to the concept design.

- the Detailed Business Case of March 2005 contained a sum of $56.967 million for the sub-total construction costs. The PWC cost report contained a sum of $72.7 million for the same sub-total construction costs. In October 2008, Defence advised ANAO that the $16.003 million increase in the sub-total for construction costs was because Defence distributed the $15.152 million for 'on-costs'[120] in the Business Case; and
- in the estimate contained within the approved Detailed Business Case of March 2005, a sum of $14.805 million was allocated for 'Defence costs including project contingency and escalation'[121] but this amount was reallocated in the Confidential Cost Breakdown against various project elements.

[120] Defence further advised ANAO that 'on-costs' were defined as those costs in addition to direct construction trade costs and included: the Managing Contractor's work fee; the Managing Contractor's management fee; the Design Consultant's fee; and the Managing Contractor's contingency.

[121] In October 2008, Defence advised ANAO that the Defence costs included: Project Consultant Fee for the Project Manager/Contact Administrator; contingency; and escalation (for reimbursable costs).

## Table 3.1

### Comparison of internal estimates and those provided to PWC

| | PWC Confidential Estimate ($m) July 2005 | Detailed Business Case ($m) March 2005 |
|---|---|---|
| **Construction costs:** | | |
| Regional Training Centres | 16.400 | 11.952 |
| Field Training Facility | 0.100 | 0.070 |
| Information Systems Infrastructure | 4.200 | 3.320 |
| Services Infrastructure | 15.400 | 11.402 |
| Multi-Use Centre | 4.500 | - |
| Messing | 8.900 | 7.141 |
| Fitness Centre | 0.900 | 0.720 |
| Trainee/Living-in Accommodation | 20.600 | 17.027 |
| Medical Centre | 1.200 | 0.891 |
| Q Store and Armoury | 0.200 | 0.100 |
| Workshop Facilities | 0.200 | 0.135 |
| Environmental Manager Facilities | 0.100 | - |
| CSI-CAN and Resource Centre | - | 2.888 |
| Military Museum and Visitors Centre | - | 0.700 |
| Land Manager | - | 0.150 |
| Temporary Facilities including Decanting | - | 0.200 |
| **Subtotal Construction Costs** | **72.700** | **56.697** |
| **Management and Design Costs:** | | |
| Managing Contractors Fees | 7.600 | - |
| Design Consultants Fees | 1.100 | - |
| Project Management/Contract Administration | 0.500 | - |
| **Subtotal Management and Design Costs** | **9.200** | **-** |
| Contingency | 4.800 | - |
| Oncosts | - | 15.152 |
| Defence costs including Project Contingency and Escalation | - | 14.805 |
| **Project Total** | **86.700** | **86.700** |
| Note: Figures may not add due to rounding | | |

Source: ANAO analysis of Defence data.

**3.28** Similar to the Kokoda Barracks redevelopment, in relation to the RAAF Base Amberley Redevelopment Stage 2, the aggregate amounts allocated in the Confidential Cost Breakdown provided to the Committee to two of the three constituent projects agreed with the capital cost estimates included in the respective Detailed Business Cases (the amounts for Project A3077 differed by $2.5 million (see Table 3.2)). However, there was not a high degree of consistency between amounts making up the Business Case estimates and the information provided to the Committee in the Confidential Cost Breakdown (see also Table 3.2).[122] In relation to the differences between the cost estimates in the Detailed Business Cases and information provided to the Committee in for both the RAAF Base Amberley Stage 2 Redevelopment project and the Kokoda Barracks Redevelopment project, in December 2008 Defence advised ANAO that:

> For most projects, there will be differences in the cost information included in the project business cases and the information provided to the PWC. The two Defence projects audited by ANAO were early examples of projects being completed using the project development approval process introduced in 2004. Since 2005, Defence has put considerable effort into developing refined scope and cost information for inclusion in the project business case, for subsequent project approval, and for consideration by the PWC. This work has included refining cost information and specifically how contingencies and escalation allowances are calculated and reported.
>
> Generally, four months or more will elapse between the completion of the costs in a business case and the completion of costs for presentation of a project to the PWC. In these circumstances, the business case costs are reviewed and updated and the latest information is provided to the PWC for its inquiry. This review process will give rise to differences in the detail of the costs in Defence's business cases and in the cost information provided to the PWC. The second reason for these differences is Defence used different templates in 2005 for presenting cost plans in business cases to the PWC.

[122] Similarly, while the total estimated cost of $86.7 million, as presented to the Committee, for the Kokoda Barracks Redevelopment was consistent with the estimate of cost contained within Defence's Detailed Business Case, the breakdown of costs differed between the approved Detailed Business Case and the cost estimate provided to the Committee.

## Table 3.2
### Comparison of internal cost estimates with those provided to the PWC

| | PWC Confidential Estimate ($m) June 2005 | Business Cases ($m) Feb 2005 |
|---|---|---|
| **Project C8797: MRRT Facilities Relocation** | | |
| Apron and Airfield Pavements | 47.995 | 37.890 |
| No 33 Sqn HQ & Maintenance Complex | 50.654 | 40.866 |
| Hydrant Refuelling | 5.881 | 4.734 |
| Logistic Management Unit | 5.579 | 4.771 |
| Management and Design | 10.139 | |
| Contingency | 12.452 | |
| Estimated Escalation to Dec 07 | | 14.580 |
| Defence Costs including Project Contingency | | 12.912 |
| On Costs (Managing Contractor, Design Consultants) | | 16.947 |
| | **132.700** | **132.700** |
| **Project A3077: 9th FSB Facilities Relocation** | | |
| HQ 9th Force Support Battalion | 16.621 | 9.800 |
| 26 Transport Squadron | 27.387 | 36.500 |
| Area Fuel point | 1.612 | 1.300 |
| 37 Force Supply Company | 8.678 | 10.200 |
| Petrol Platoon | 7.927 | 9.200 |
| Management and Design | 2.042 | |
| Contingency | 5.233 | |
| | **69.500** | **67.000** |
| **Project R7005: Base Infrastructure Upgrade** | | |
| Electrical Reticulation | 14.000 | 14.740 |
| Water reticulation | 4.029 | 6.410 |
| Sewerage reticulation | 2.817 | 3.150 |
| Stormwater reticulation | 20.015 | 21.220 |
| Communications | 9.633 | 9.930 |
| Trunk Roads (inc Landscaping and…) | 13.245 | 9.220 |
| Management and Design | 10.867 | |
| Contingency | 8.794 | |
| Defence Costs including Project Contingency | | 7.400 |
| On Costs | | 5.250 |
| Escalation to Start Construction at Nov 05 | | 6.080 |
| | **83.400** | **83.400** |
| **Total Project Costs** | **285.600** | **283.100** |

Source: ANAO analysis of Defence data.

## Land acquisition

**3.29** An area where practices in preparing confidential estimates for the Committee have been inconsistent related to the treatment of the costs of acquiring land on which building works will be undertaken. In relation to land acquisitions, the Committee's Manual states that:

- the technical information included with the proponent agency's Statement of Evidence should include 'details of land acquisition (if required); and
- the confidential cost breakdown should include 'land costs (if applicable).[123]

**3.30** In October 2008, Finance commented to ANAO that there should be consistency in including land purchase costs in the cost estimate.[124] However, proponent agencies have taken different approaches to the inclusion or exclusion of costs related to the acquisition of land on which construction activities are to be undertaken. For example:

- the June 2004 Statement of Evidence provided to the Committee for the development of a new collection storage facility for the National Library of Australia[125] stated that the estimated cost of $9.9 million (excluding GST) <u>included</u> land purchase, with the Committee being advised that the preferred site had been identified, but the block had not been released for sale by the ACT Government at the time of submission[126];
- in relation to the project for new housing for the Defence Housing Authority at McDowall, Brisbane[127], the November 2004 Statement of Evidence to the Committee stated that the budget of $17.5 million (including GST) did not include the cost of land acquired in February 2003 for $4.3 million[128];
- the March 2005 Statement of Evidence for construction of a new Consulate-General building in Bali, Indonesia[129] advised the Committee

[123] op. cit., pp. 20 and 24.

[124] See further at paragraph 3.84.

[125] PWC Report 9/2004.

[126] National Library of Australia, *Development of a New Collection Storage Facility for the National Library of Australia—Statement of Evidence to the Parliamentary Standing Committee on Public Works*, June 2004, pp. 17 and 19.

[127] PWC Report 2/2005.

[128] Defence Housing Authority, *Submission to the Parliamentary Standing Committee on Public Works—New Housing for Defence Housing Authority At McDowall, Brisbane, Queensland*, November 2004, pp. 2 and 15.

[129] PWC Report 8/ 2005.

that the proposed site was freehold property and that Ministerial approval to purchase the land had been received in December 2003 with the total price of the land has been agreed at IRp 12 002 300 000 (AUD $1.873 million at 1 February 2004 Exchange Rates)[130]; and

- the September 2003 Statement of Evidence provided to the Committee in relation to the Construction of a Respecified Immigration DetentionCentre on Christmas Island project[131] advised that Centre was to be constructed on land that had been resumed in 2002.[132] The Confidential Cost Breakdown provided to the Committee identified that the $276.2 million (excluding GST) outturn estimate for the project included a budget allocation of $58 million for the then Department of Transport and Regional Services for completed infrastructure works, which included $10 million relating to land costs.

**3.31** There was one instance in the audit sample where land was acquired for the purpose of the project. Specifically, in respect to the Reserve Bank's Business Resumption Site project, following a site assessment exercise[133], the Reserve Bank decided in August 2004 to purchase Lot 6008 at Norwest Business Park within the Baulkham Hills Shire, approximately 25 kilometres from the Sydney CBD. Settlement was to occur in February 2005. The May 2005 Statement of Evidence provided to the Committee disclosed that the Reserve Bank had already purchased the land at Norwest Business Park for the purposes of constructing the Business Resumption Site. The Committee visited the site prior to the public hearing.

**3.32** The estimate of costs provided to the Committee did not include the $6.861 million cost of purchasing the land (comprising the purchase price of $6.58 million, plus other costs such as legal and site assessment). In this respect, the Reserve Bank advised ANAO in October 2008 that:

> As land is neither an 'architectural or engineering work', the acquisition of the land on which the Business Resumption Site was to be built did not form part

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[130] Department of Foreign Affairs and Trade, Overseas Property Office, *New Consulate-General Building Bali, Indonesia—Statement of Evidence for Presentation to the Parliamentary Standing Committee on Public Works*, March 2005, p. 10.

[131] PWC Report 15/2003. ANAO is currently undertaking a separate audit of the management of that project.

[132] Department of Finance and Administration, *Proposed Christmas Island Immigration Reception and Processing Centre—Statement of Evidence to the Parliamentary Standing Committee on Public Works,* September 2003, p. 8.

[133] The Norwest Business Park was selected by the Bank for its location and infrastructure benefits.

of the works for PWC purposes in terms of the Act and, accordingly, was not included in the cost of the proposal that sought PWC approval. An exception to this treatment is associated with the clearing of land and the development of land for use as urban land or otherwise (PWC Manual of Procedures). This is not applicable to the land acquired for the Business Resumption Site project and it would not have been appropriate to include these costs in the PWC proposal. The purchase of land was approved under powers contained in *The Reserve Bank Act 1959*.

## Agency internal costs

**3.33** The adoption of effective project governance arrangements, including appropriate internal reporting and accountability arrangements and the allocation of sufficient resources is important to project success. In these respects, the conclusions of Finance's *Lessons Learned Report* of Gateway reviews conducted between August 2006 and June 2007 included that:

- project governance arrangements should be clearly documented to clarify the structure, roles, responsibilities, authority and decision making boundaries and reporting obligations/needs;
- agencies should develop and document the project's resourcing strategy as fully as possible, including covering all skill sets, identifying key resources and tasks, and identifying known skills shortages; and
- agencies should regularly revisit their resourcing strategy to ascertain whether resources allocated to project functions are adequate, appropriately skilled and experienced, and at the appropriate level. In particular, the Project Manager should be qualified, experienced and dedicated to the project and have appropriate authority and access to resources in order to deliver on the approved Business Case and Project Management Plan.[134]

**3.34** Where an agency's internal planning, management and oversight costs are not included in the project budget, and in the monitoring of overall project costs against the budget, these costs will not be visible.[135] Not including such costs in the project budget and estimate can also have adverse consequences when there are choices to be made about whether to in-source, or contract for, the delivery of important project management roles.

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[134] Department of Finance and Administration, op. cit., p. 4.

[135] See further at paragraph 3.84.

**3.35** Against this background, the proponent agencies in the audit sample adopted different approaches to budgeting for internal project planning, management and delivery costs. Some agencies, such as Defence and the Commonwealth Scientific Industrial Research Organisation (CSIRO), have dedicated in-house resources for such functions, reflecting their ongoing program of infrastructure works.

**3.36** Defence's Infrastructure Asset Development Branch manages all traditionally procured capital works projects. However, neither of the estimate of costs provided to the Committee for both the Defence projects examined by ANAO disclosed any estimate relating to Defence's internal costs of managing and oversighting the three projects (such as those relating to staff of Infrastructure Asset Development Branch).[136] However, the available evidence is that the estimates provided to the Committee included amounts relating to internal Defence management costs (albeit not identified as such in the Confidential Cost Breakdown provided to the Committee), as follows:

- the Detailed Business Cases underpinning the projects that constituted the RAAF Base Amberley Redevelopment Stage 2 allocated a total of $20.3 million to 'Defence Costs including Project Contingency' and a further $22.2 million to 'oncosts' (as shown in Table 3.2, these amounts were attributed against other cost items in the estimate provided to the Committee); and
- the Detailed Business Case for the Kokoda Barracks project included a sum of $14.8 million for 'Defence costs including project contingency and escalation' and a further $15.2 million for 'oncosts'. However, the Detailed Business Case approved by Defence in March 2005 excluded design phase costs for the project that had been included in an earlier (September 2004) Detailed Business Case.[137] In October 2008, Defence advised ANAO that:

  The Detailed Business Case incorrectly included project development costs which were excluded from the capital cost of the project approved by Cabinet

[136] In addition, the outturn estimate of $86.7 million provided to the Committee for the Kokoda Barracks project had been reduced from $92 million in the September 2004 Detailed Business Case as a result of Defence excluding design phase costs from the estimate.

[137] The scope for the project remained the same as for the September 2004 Detailed Business Case (15 discrete elements) over a similar timeframe (both Detailed Business Cases involved expected completion in December 2007, although the commencement of construction was moved from August 2005 to October 2005). The most significant change related to the project estimate, which was reduced from an outturn estimate of $92 million to $86.7 million as a result of design phase amounts being removed from the project.

and later referred to the Public Works Committee. The appropriateness of this practice is supported by Finance *[legal]* advice.

**3.37** Similar to Defence, CSIRO operates a Property Services Unit which is staffed and funded to support and manage the delivery of a capital works program. CSIRO advised ANAO that the Property Services Unit costs are treated as organisational support overhead costs and are not broken down to individual activities. Accordingly, it was unable to advise ANAO of the cost of in-house resources involved in the Bioscience Entomology Laboratories project.

**3.38** The Committee had been advised that the works would be delivered through a lump sum construction contract approach. Tenders received by CSIRO for delivery through that approach were well in excess of the project budget. As part of its management response to this situation, CSIRO decided to move to a 'construction management' approach so as to mitigate risks with the project perceived by tenderers due to its specialist nature. Among other things, the construction management approach involves increased principal (CSIRO) involvement in day-to-day decision making for staged packaging, review and refinement of design and cost management.

**3.39** For the Reserve Bank's Business Resumption Site project, in addition to the usual responsibilities, staff from relevant areas were involved to provide a good understanding of business requirements, with the project coordinated by a specialist project administrator employed by the Bank on contract. In addition to the project administrator, various professional services providers were engaged, including a project manager/architect (who was the contract administrator and who coordinated the services of the other professional services providers in support of the construction process) and a quantity surveyor (who prepared costings for the construction component and also was responsible for checking progress and variation claims). The project estimate provided to the Committee included external project management costs but did not include provision for internal project management costs. The Reserve Bank has estimated the internal marginal costs of managing and oversighting the project were $419 000 in labour costs.

**3.40** In relation to the Post-1945 Conflicts Gallery and Discovery Room Redevelopment project, internal costs comprised a significant component of the overall budget. Specifically, the Australian War Memorial's budget allowance for its own staffing costs and related overheads relating to the project was $2.52 million (with actual costs of $2.51 million as of May 2008). In this respect, it is worth emphasising that the Memorial identified and reported internal agency costs regularly to its governing Council as they were part of the total project cost performance monitored by Council, and that the project required effective project management as it combined structural work on a building of historic and heritage nature, with exhibitions that involved 'cutting-edge' technology and displays of large iconic objects, and the results have been rated highly by visitors.

**3.41** The estimate for the project provided to the Committee was $17.8 million. The Committee was advised that this estimate excluded amounts for GST, relocation costs, the Memorial's internal costs of managing and oversighting the project and stakeholder consultation costs, but the evidence provided to the Committee did not quantify these exclusions. At the time the project was presented to the Committee, the Memorial's internal project budget was $20.3 million (14 per cent higher than the estimate provided to the Committee), with that difference relating to the budget allowance for the Memorial's own staffing costs and related overheads.[138] On the issue of its internal resourcing costs, the Memorial has commented to ANAO that:

> The estimate of costs was consistent with the Committee's guidelines and with the Memorial's previous submissions to the Committee and most recent submission in October 2008. On all occasions the exclusion of internal resourcing costs has not been an issue for the Committee. It is unclear why ANAO believe that the Memorial's close and consistent following of Committee guidelines is suddenly cause for criticism in this audit when clearly the Committee hold no such views.
>
> A comment in relation to internal resourcing costs; the $2.5 million formally administered as part of the budget for this project was that which could be appropriately (and justifiably to external audit) capitalised for asset valuation purposes. This should be kept in mind when forming a recommendation relating to the future inclusion of such costs as part of a Committee submission.

**3.42** As noted at paragraph 1.17, contemporaneous with this audit, ANAO is undertaking an audit of the construction of the Christmas Island Immigration Detention Centre (IDC). Finance is the proponent agency for this project. The estimate for detention facility works of $197.7 million included $3.3 million relating to Finance's internal resourcing costs of managing the delivery of the project.

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[138] The Memorial advised ANAO that relocation costs were less than $5 000 and that the total cost of stakeholder consultation was less than $20 000.

## Contingencies

**3.43** When estimating the cost of a project, there is uncertainty as to the precise content or specification of all items in the project estimate, how work will be undertaken and by whom, what work conditions will be encountered when the project is executed, and so on. These aspects all constitute elements of project risk. Some project managers refer to these risks as 'known-unknowns' because the estimator is aware of them, and based on past experience, can estimate their probable impact. The sum total of these estimated costs can be referred to as the cost contingency or contingency budget.

**3.44** To promote the effective identification, assessment and quantification of project risks and their management, Defence's Infrastructure Asset Development Branch has developed definitions for various types of contingencies and how they are applied to projects. Specifically:

> Design contingency-used to fund additional work or items not yet fully designed or is inadvertently omitted from the design documentation.
>
> Construction contingency-funds any additional works necessitated by latent conditions encountered once construction has commenced.
>
> Defence contingency-used to pay for any variations that may be necessitated by change in functional requirements from Defence. This may occur because of changes to functional standards that were not present when the project was originally scoped. As the project progresses, the risk of this occurring becomes less, and money may be reallocated to deferred works in the later stages of the project.

**3.45** Allocating sufficient cost contingency to cover foreseeable project eventualities is a key project management skill. It is also a key cost management and quantity surveying skill. Allocating a project contingency is not an exact science; given the factors that determine contingencies, the range of projects and different locations, it is reasonable for contingency allowances to differ among projects. It is therefore important that Commonwealth agencies pursuing capital programs are sufficiently experienced, or engage suitably qualified resources, in the field of cost estimation, including contingency assessment.

**3.46** For example, in relation to the six projects in the audit sample, the Reserve Bank relied on its quantity surveyor's estimate, with the concept stage cost plan prepared by the quantity surveyor including total contingencies of

10 per cent of the unescalated construction component of $26.25 million[139] (comprising a design contingency of 5 per cent—$1.31 million, and a construction contingency of 5 per cent—$1.38 million).[140] The final cost of the project was $3.04 million less than the estimate provided to the Committee, with savings principally accruing due to design and construction risks not being realised. Consequently, much of the $2.69 million in contingencies was not required.

**3.47** In respect to the 29–31 Brindabella Business Park fit-out project, a May 2006 risk assessment undertaken by DEEWR identified eight risks, of which six related to project timing issues. The other two risks related to difficulties in obtaining sub-contractors that complied with the National Code of Practice for the Construction Industry and the risk that project costs could exceed $1 500 per square metre (equivalent to $16.2 million for the building fit-out). Against this background, the Confidential Cost Breakdown provided by DEEWR to the Committee included a fee contingency of $78 000 and a contractor contingency of $1.155 million. In aggregate, the contingency amounts represented 8.2 per cent of the total estimate. There was little likelihood of this provision proving insufficient, given the nature of the risks identified by DEEWR and the inherent nature of a fit-out project being undertaken in a newly constructed building.

**3.48** Similarly, in respect to the RAAF Base Amberley Redevelopment Stage 2, the available evidence was that Defence applied a level of contingency, based upon the projected risk[141] and the preferred procurement method applicable for each project. As a result:

- projects such as A3077, involving a 'greenfield' development, a lump sum contractor, a clearly defined scope and low level projected risk

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139 Equivalent to seven per cent of the total project estimate of $38 million.

140 In October 2008, the Reserve Bank advised ANAO that: 'The Reserve Bank adopted a carefully considered approach to cost contingency, recognising the unique and the highly technical nature of the facility and its key features. At the time, there was no ready example of a similar facility with the level of resilience required using the innovative technology proposed. The [*Business Resumption Site*] was not just another two-storey office building in the suburbs of Sydney. Uncertainty about the timing of key site services posed cost risks that needed to be covered. For example, while the developer and relevant suppliers had made certain commitments, or provided indications of likely delivery, at the time of tender the site lacked certain utilities and infrastructure. Several key components had to be imported with the attendant lead time and quality assurance challenges.'

141 A risk management and value management workshop undertaken in October 2004 had concluded that Project A3077: 9th FSB and 21 Construction Squadron Facilities Relocation was 'well considered and reasonably low risk'; Project C8797: Air to Air Refuelling Relocation was 'reasonably low risk' and that the 'project is well considered'; and Project R7005: Base Infrastructure Upgrade involved comparatively more risks but that this was 'seen to be reasonable given the complexity and interconnectedness of the project' with the result that the project was described as 'reasonably low-risk' and 'well considered'.

would usually warrant a lower level of contingency, with Defence allocating 7.5 per cent; and

- the inherent risks and potential variability associated with the upgrading of existing facilities and services were recognised and Defence selected managing contractor arrangements for both the Base Infrastructure Upgrade (R7005) and the Air-to-Air Refuelling Relocation projects (C8797). Managing contractor arrangements provide proponent agencies with greater flexibility but they also demand higher levels of cost contingency, with Defence allocating 10.5 per cent contingency for R7005 and 9.4 per cent for C8797.

**3.49** By way of comparison, for its Entomology Bioscience Laboratories project, CSIRO allowed $824 000 for contingency and cost escalation, representing 5.7 per cent of the total project estimate provided to the Committee (see further at paragraph 3.57). Even had the $824 000 allowance only related to risk, a contingency provision of this magnitude was not adequate for the proposed project being referred to the Committee given:

- the complexity of the project, involving construction of specialist laboratory facilities;
- the estimate was not based on a project-specific costing. Instead, CSIRO had advised Finance that the estimate was based on benchmarked costs for new and refurbished facilities based on CSIRO's direct knowledge and experience, with allowances made for the extent of servicing, fees, contingencies, escalation and applied locality factors;
- whilst concept design work had been undertaken, with sketch plans available to the Committee, the Committee had been advised in the public hearing that detailed design and documentation had not yet been undertaken but would commence once Parliamentary approval was obtained;
- whilst a preliminary geotechnical review based on previous experience in the area and available geological and topographical data had been undertaken, the Statement of Evidence from CSIRO advised the Committee that:

> The current proposal is to construct the new laboratory building with strip and pad footings founded within the fanglomerate. A detailed site specific detailed geotechnical investigation is currently being

carried out in order to complete the design of the footings and pavement systems.[142]

## Latent conditions

**3.50** Latent conditions are generally defined as physical conditions on the site (excluding weather conditions) which differ materially from the physical conditions which should reasonably have been anticipated by the contractor at the time of tender.[143] Accordingly, prior to commencing construction activity, latent conditions are difficult to mitigate and to value.

**3.51** The difficulties in estimating contingencies for latent conditions were well demonstrated by the project to redevelop the Australian War Memorial's Post-1945 Conflicts Galleries and Discovery Room. The project required structural modifications to the Memorial building, which is of historic and heritage nature. The Statement of Evidence provided to Committee stated:

> Most of the entire west wing floor is to be lowered approximately one metre so that the entire space can achieve the maximum height for the large objects. Floor level will be at grade with the external landscape. This lower tier will house large exhibitions, and will be finished in similar manner to ANZAC Hall.…
>
> …The modifications [to the structure] include the deletion of columns and penetrations in walls, as well as changes to the floor structure.[144]

**3.52** In this respect, in its opening statement to the public hearing on this project, the Memorial advised the Committee that:

> …We expect to have some interesting latent conditions, but we will deal with those as we have previously in modifying the building.[145]

**3.53** The Confidential Cost Breakdown provided to the Committee indicated that the Memorial had allocated a sum of $545 000 for Primary Works Contingency. This sum represented approximately 10 per cent of the estimated

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142 Commonwealth Scientific Industrial Research Organisation, *Proposed CSIRO Entomology Bioscience Laboratory at Black Mountain, Canberra, ACT—Statement of Evidence To the Parliamentary Standing Committee on Public Works*, May 2005, p. 10.

143 See, for example, AS 2124—1992, General conditions of contract, clause 12.1.

144 Australian War Memorial, *Redevelopment of Post 1945 Conflicts Galleries and Discovery Room—Statement of Evidence to the Parliamentary Standing Committee on Public Works,* December 2005, pp. 10 and 14.

145 Commonwealth of Australia, Official Committee Hansard, Joint Committee on Public Works, Reference: Redevelopment of Post-1945 Conflicts Gallery and Discovery Room for the Australian War Memorial, Canberra, Australian Capital Territory, Friday 10 February 2006, Canberra, PW4.

cost of the Primary Building Works (including primary works services) of $5 952 000.[146] The Memorial has advised ANAO that:

> The contingency for latent conditions relating to the primary works elements of the Memorial's project was established on the basis of building work undertaken on the Memorial building during a previous project.
>
> The contingency for latent conditions for this project was therefore based on: careful analysis of previous work undertaken on the building and previous costs associated with latent conditions. Qualified and highly experienced Project Manager and Quantity Surveyor consultants were involved in this analysis.

**3.54** However, the allowance made for latent conditions did not prove sufficient. The Memorial's actions in relation to managing the additional cost of latent conditions and other related construction variations (design changes related to exhibition development and enhancement) involved the internal reallocation of $1.035 million of project budget funds. In this respect, the Memorial further advised ANAO that:

> The project experienced significant latent conditions that exceeded the initial contingency. This is not an unusual result in an historic, depression-era building. However, the Memorial handled this additional cost within the overall project budget and not to the detriment of the outcome achieved.

**3.55** Defence's Kokoda Barracks Redevelopment project also made a relatively modest allowance for contingency given the risks relating to latent conditions. That project included the construction of six new assets, extension to four existing assets, upgrading of 13 existing assets, OH&S rectification of six assets, new and upgraded infrastructure services, and the removal and disposal of in the order of 26 redundant facilities. The Confidential Cost Breakdown provided to the Committee by Defence included $4.8 million in contingency funds for the redevelopment project, which represented 5.5 per cent of the total project estimate. This level of allowance was low given the complexity of the proposed works on an existing and operational site. In this respect, ANAO noted that the Contract Administrator's February 2008 report to Defence stated that:

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[146] The Memorial has commented to ANAO that, 'at the commencement of the Request for Tender (RFT) process for primary building works, a 15 per cent contingency was allowed. At the completion of the RFT process, the primary building works contract included a provisional sum for latent conditions ($150 000), a contingency for building works of approximately $500 000, and an overall project contingency of $500 000. The contingency for primary building works at the commencement of this phase of the project was 10 per cent; however, this percentage does not include the overall project contingency of $500 000 which could, and eventually was, applied to the building works.'

> The major obstacle early in the project related to unidentified in-ground services. This caused several unplanned interruptions to water, power and communications across the site. [*The Contract Administrator*] assisted in identifying and mapping these unidentified services, which in time reduced the number of disruptions to the Base.

**3.56** However, in October 2008, Defence advised ANAO that it did not agree that there was any shortcoming in its approach for the Kokoda Barracks redevelopment:

> Contingencies are reviewed and revised during each major step in the design development process. At each step in the development process funds required for cost risks are moved between project element costs and contingency—this is a dynamic process as cost risks are 'retired' or emerge. The contingency reflected the assessed risks.

## Escalation

**3.57** Escalation can be defined as the increase in the cost of a specific good or service over a defined period of time. Cost escalation should not be included in, or confused with, contingency. Contingency is an allowance to cover risk. Cost escalation, by way of comparison, is the forecasting of price and cost movements over time. However, for the Entomology Biosciences laboratories project CSIRO combined allowances for risk (contingency) and cost escalation over time.

**3.58** In the context of capital projects, escalation can be difficult to accurately forecast. The impacts of insufficient allowance for escalation may lead to a need to seek additional funding, which in turn can cause project delays; impaired functionality due to a reduction in the scope of work; and/or compromised service provision arising from facilities constructed with a reduced scope of work.

**3.59** Various methods of allowing for the escalation in capital costs are available to Commonwealth agencies but there is no uniform standard across the construction industry or within government. Agencies audited as part of this audit did not demonstrate a consistent approach to calculating, allocating or reporting against escalation.

**3.60** Some agencies made sufficient provision for cost increases over the expected duration of the project. For example, the Confidential Cost Breakdown provided to the Committee by the Reserve Bank for its Business Resumption Site project reported that $2.49 million had been allocated for escalation, which represented 8.62 per cent of total estimated construction costs. The approach taken to developing the escalation provision was considered and conservative, with the Bank's concept stage cost plan stating that escalation had been applied to indicate the forecast end cost, assuming a construction start of January 2006 and construction finish of late December 2006.

**3.61** Appropriate allowance for cost escalation was also made in respect to the 29–31 Brindabella Business Park fitout project. Specifically, DEEWR included an escalation provision of $341 000 in the Confidential Cost Breakdown provided to the Committee. This figure represented 2.3 per cent of the total estimate. As the project had a short timeframe, with work to be completed for occupation between December 2006 and February 2007, the amount allowed for cost escalation was reasonable.

**3.62** In respect to its project to redevelop the Post-1945 Conflicts Galleries and Discovery Room, the Australian War Memorial's December 2005 Statement of Evidence to the Committee stated that the estimate of $17.8 million was inclusive of escalation costs.[147] The Memorial advised ANAO that its Confidential Cost Estimate was prepared in November 2005 by a professional Quantity Surveyor based on their knowledge of the Canberra building market and many years of experience in the industry. However, the Confidential Cost Breakdown provided to Committee, did not contain a separate provision for escalation. On this issue, the Memorial advised ANAO that:

> The Memorial is unable to ascertain the allowance for escalation in the PWC confidential cost estimate as there was no identified line item for it. However, the following and more detailed pre-tender primary building works cost estimate contained a two to three per cent escalation.

**3.63** In terms of the two to three per cent the Memorial advised had been allowed for escalation on the primary building works, it is relevant that, according to Rawlinsons *Australian Construction Handbook*, building prices in Canberra had risen by six per cent in the twelve months to December 2005. Similarly, in September 2006 the maximum contract amount for various key contracts were increased by the Memorial to reflect, among other things, Consumer Price Index increases at an 'industry standard' of 4.825 per cent. The Memorial advised ANAO that:

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[147] Australian War Memorial, op. cit., p. 24.

> The Memorial's Confidential Cost Estimate was prepared in November 2005. It was anticipated that the rise in Canberra building prices in the twelve months to December 2005 was taken into account by the Memorial's consultant Quantity Surveyor in the preparation of this estimate.

**3.64** Shortcomings were also evident in CSIRO's approach to cost escalation for the Entomology Bioscience Laboratories project. In October 2008, CSIRO advised ANAO that the estimated cost escalation rate for 2004 and 2005 used for this project had been based on professional advice (quantity surveyors and CSIRO's engagement with other consultants on other CSIRO capital projects) in 2005. However, the amount allowed for cost escalation and risk represented 5.7 per cent of the project budget, implying annual escalation of no more than 2.5 per cent[148], whereas building cost indices specified in the Rawlinsons *Australian Construction Handbook* showed at that time that, over the 18 months to March 2005, building costs in Canberra had increased by 9.7 per cent. At that time, Rawlinsons expected that skilled labour and all trades would remain in demand in Canberra such that further increases were expected. Indeed, the Canberra Building Price Index for the March 2007 quarter was 11.3 per cent higher than the March 2005 quarter (the most recently available data as at May 2005). This analysis indicates that an allowance of 2.5 per cent per annum was insufficient to address cost escalation, let alone risk.

**3.65** Inconsistent approaches to cost escalation were particularly evident in relation to the three projects included in the RAAF Base Amberley Redevelopment Stage 2.[149] The rates of cost escalation that were used were specified in the Detailed Business Cases for two of the projects, with considerable differences in the rates being used.[150] Neither the individual Detailed Business Cases, nor the consolidated paper provided to the Defence Infrastructure Subcommittee, addressed the reasons for costs being expected to increase at significantly different rates for the three projects that comprised the Stage 2 Redevelopment (see Figure 3.4). By way of comparison, the Detailed

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148 Assuming the full amount allowed in the project budget for contingency and escalation ($824 000 or 5.7 per cent of the budget) related to cost escalation.

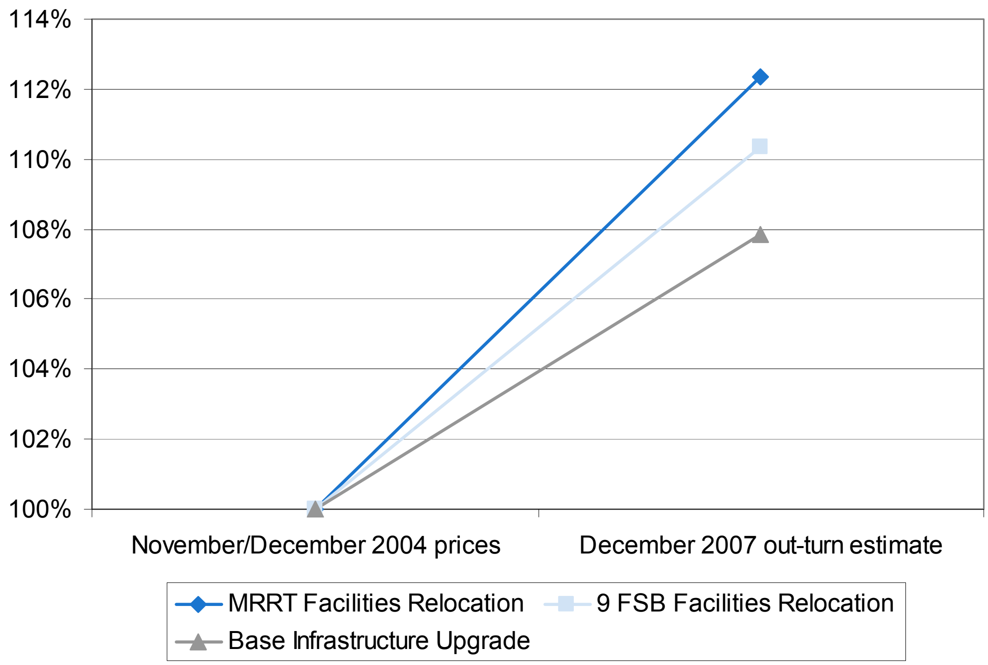
149 Notwithstanding that the Committee's Manual requires the amount allowed for cost escalation to be separately identified in the Confidential Cost Breakdown, for the RAAF Base Amberley Stage 2 Redevelopment, Defence included its escalation allowances in the construction costs for each element of the project.

150 For Project C8797, escalation was based on the Managing Contractor's cost estimator's forecast of 9 per cent per annum from January 2005, reducing to 5 per cent per annum to December 2007. For Project A3077, a rate of 6 per cent per annum was used from December 2004 until the planned release of tenders in July 2005, with a rate of 5 per cent per annum being used during construction from July 2005 until completion in December 2007. For Project R7005, the escalation rates used were not specified.

Business Case for the Stage 3 Redevelopment stated that Defence had applied quarterly escalation using *Australian Construction Price Indicators*, BIS Shrapnel, November 2005 for Queensland.

### Figure 3.4

**Rate of cost escalation: projects included in RAAF Base Amberley Redevelopment Stage 2**




Source: ANAO analysis of Defence data.

**3.66** An inconsistent approach to calculating and reporting allowances for cost escalation was further demonstrated by Defence's approach to the treatment of escalation throughout the development of the Kokoda Barracks Redevelopment project.

**3.67** Escalation was not referenced directly in the Statement of Evidence provided to the Committee by Defence for that project. In addition, the Confidential Cost Breakdown provided to the Committee did not contain a specific line item for escalation. However, the original Detailed Business Case (as approved in September 2004) contained two line items for escalation within the outturn estimate of $92 million. These two line items, totalling $12 million, comprised:

- estimated escalation to start construction at Aug 2005—$6.8 million; and
- estimated escalation based on Dec 2007 completion—$5.2 million.

**3.68** The September 2004 Detailed Business Case stated that:

> Escalation is based on the Australian Institute of Quantity Surveyors/WESTPAC 'BRIX' Building Survey 'Predicted Average Movement in Building Prices' covering the twelve months to June 2005 extrapolated beyond that date at 7.5 per cent per annum.

**3.69** The revised Detailed Business Case endorsed in March 2005, with an outturn estimate of $86.7 million, stated that escalation had been calculated using the same methodology documented in the September 2004 Detailed Business Case. However, the Detailed Business Case of March 2005 did not contain a separate line item for escalation, and it is unclear (based on the Detailed Business Case) what provisions had been made by Defence for cost escalation. Instead, the March 2005 Detailed Business Case contained a line item for 'Defence costs including project contingency and escalation' totalling $14.805 million. Defence documentation associated with the Incentive Scheme developed for the Managing Contractor stated that an escalation allowance of $12.52 million was included in the Target Cost of $74.69 million.

**3.70** In October 2008, Defence advised ANAO that the $12.52 million escalation included in the Managing Contractor's cost plan represented the summation of escalation applied as a reimbursable cost to each of the project elements. Defence further advised ANAO that it has refined its approach to calculating escalation since 2005, but still relies on advice from industry experts and that it has now developed a consistent approach to estimating cost escalation and contingency allowance for each project. Defence also provided ANAO with its definition of escalation allowance, as follows:

> An escalation allowance is used to offset the expected rise in the cost of trade works over the construction period. Defence adopts regional escalation rates on advice from the project's cost planner who bases the forecast on the relevant Building Cost Index.

## Value for money and whole-of-life costs

**3.71** The PWC Act empowers the Committee to examine various elements of a construction project that relate to its value for money. Specifically, section 17(3) of the Act provides that in considering and reporting on a public work, the Committee shall have regard to a number of issues, including the present and prospective public value of the work.

**3.72** Obtaining value for money in construction projects involves optimising the combination of whole-of-life facility costs and quality to meet user requirements.[151] As future costs associated with the use and ownership of an asset are often greater than the initial acquisition cost[152], it is important in planning the construction of major facilities to consider the ongoing maintenance and whole-of-life cost of those facilities.[153] According to the UK's OGC:

> Long-term costs over the life of an asset are more reliable indicators of value for money than initial construction costs. This is because:
>
> - money spent on a good design can be saved many times over in the construction and maintenance costs. An integrated approach to design, construction, operation and maintenance with input from constructors and their suppliers can improve health and safety, sustainability, design quality; increase buildability; drive out waste; reduce maintenance requirements and subsequently reduce whole-life costs. It is important to take a whole-life approach to the asset, whether or not the same team is responsible for design, construction, operation and maintenance; and
> - investment in a well-built project can, in turn, achieve significant savings in running costs. This means that the department should be prepared to consider higher costs at the design and construction stages in the interests of achieving significant savings over the life of the facility. It is essential to consider long-term maintenance very early in the design phase; most of the cost of running and maintaining and repairing a facility is fixed through design decisions made during the early part of the design process.[154]

**3.73** Based on information provided by agencies proposing public works, Finance produces all the necessary documentation in connection with the initial referral to the Committee and, if appropriate, the subsequent expediency motion. Consistent with the Committee's Manual, to date, this information has

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151 Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Whole-life costing and cost management*, 2007, p. 4.

152 ANAO Better Practice Guide–*Life-cycle costing*, December 2001, p. 3.

153 ANAO Audit Report No.37 1999–2000, *Defence Estate Project Delivery*, Canberra, 4 April 2000, p. 37.

154 Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Whole-life costing and cost management*, 2007, p. 5.

not included whole-of-life facility costs. Nevertheless, consistent with its statutory role in considering the present and prospective public value of referred works, in the course of some of its inquiries the Committee has examined the impact of design and construction costs on facility operating costs.

## Interrelationship with the Commonwealth Procurement Guidelines

**3.74** The Commonwealth Procurement Guidelines (CPGs) are issued by the Minister for Finance and Deregulation under Regulation 7 of the *Financial Management and Accountability Regulations 1997*, and establish the core Commonwealth procurement policy framework. The CPGs apply to all agencies subject to the FMA Act, and certain bodies subject to the CAC Act.[155]

**3.75** Revised CPGs took effect in January 2005. Amongst other matters, the changes to the CPGs gave effect to the government procurement provisions of the Australia-United States Free Trade Agreement (AUSFTA). Some of the major changes to the revised procurement requirements were:

- a general presumption of open tendering, with selective and limited tendering available only in specific circumstances;
- the specification of time limits and other procedures for tender processes; and
- the classification of procurements over a specified value as covered procurements, to which mandatory procurement procedures apply.[156]

**3.76** The mandatory procurement procedures are a set of rules and procedures, outlined in Division 2 of the CPGs, which must be followed by agencies when conducting a covered procurement.[157] For procurements below the relevant threshold, the general procurement principles apply.

**3.77** For procurements other than procurements of construction services, the threshold for the mandatory procurement procedures is $80 000 for FMA Act agencies and $400 000 for CAC Act agencies. The threshold for construction services procurements was set at $6 million. This threshold was consistent with the then applicable threshold at which the PWC Act required public works to

[155] The Government Procurement chapter of the AUSFTA lists 33 CAC Act bodies that are subject to the CPGs.

[156] ANAO Audit Report No.21 2006–07, *Implementation of the revised Commonwealth Procurement Guidelines*, Canberra, 31 January 2007, pp. 25–26.

[157] ibid., p. 8.

be referred to the Committee. In respect to the inconsistency between this threshold in the CPGs and the now-current PWC referral threshold of $15 million, in July 2008 Finance advised ANAO that:

> The CPGs threshold for construction (above which the mandatory procurement procedures had to be followed) was initially set at $6m to match the PWC threshold at the time. This was done in an attempt to rationalise the number of thresholds in the CPGs across the board.
>
> When the PWC threshold was raised to $15m, the threshold for construction in the CPGs could not be raised to the same level, because the AUSFTA threshold is $9.6m. The Parliamentary Secretary at the time therefore raised the 'construction threshold' for the mandatory procurement procedures to $9m and agencies were advised through Finance Circular 2007/02—Commonwealth Procurement Guidelines—Threshold for Procurement of Construction Services. This threshold will be referenced in revised CPGs, expected to be issued by the Finance Minister under FMA Regulation 7(1) during August 2008.
>
> However, the threshold for applying the mandatory procurement procedures to construction does not of course impact on obligations to refer to PWC relevant projects over $15m. The revised CPGs will not contain any reference to PWC as Finance is proposing to the Finance Minister that the current part 3 of the CPGs (which is the part of the CPGs that currently references the PWC) be deleted in its entirety. That will fix the issue of the redundant reference identified by the ANAO.

**3.78** The CPGs state that value for money is the core principle underpinning Australian Government procurement and that, in a procurement process, this principle requires:

> a comparative analysis of **all** relevant costs and benefits of each proposal throughout the whole procurement cycle (whole-of-life costing).[158]

**3.79** Accordingly, whilst not required under the PWC Act to provide the Committee with whole-of-life facility cost estimates, agencies subject to the CPGs should, as part of their own consideration, be preparing whole-of-life cost estimates. The principles and techniques of value management are aimed at achieving the required project quality at optimum whole-of-life cost during the process of developing a project.[159] Accordingly, providing the whole-of-life

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[158] Department of Finance and Administration, *Commonwealth Procurement Guidelines—January 2005*, Financial Management Guidance No. 1, p. 10.

[159] Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Risk and Value Management*, 2007, p. 8.

cost information to the Committee could be expected to assist its scrutiny of the value of proposed public works.[160]

### Information provided to the Committee

**3.80** Approaches to whole-of-life costs varied between the five agencies included in the sample of audit projects. In respect to Defence, each of the Detailed Business Cases for the component projects of the RAAF Base Amberley Redevelopment Stage 2 program of works, as well as the Detailed Business Case for the Kokoda Barracks Redevelopment project, included analysis of the estimated additional annual operating costs expected to arise as a result of the proposed works. For each project, amounts were estimated for facility operations, depreciation, energy costs, garrison support and information systems.

**3.81** Whilst some other agencies in the audit sample also undertook analysis of ongoing operating costs, Defence was the only agency to explicitly advise the Committee of the results of this analysis. For example, although not quantifying the additional annual operating costs[161], Defence's Statement of Evidence for the RAAF Base Amberley Redevelopment Stage 2 advised that:

> There will be no revenue directly derived from the proposal. There will be an increase in annual operating costs resulting from the new facilities and extended engineering infrastructure. These increased costs will outweigh the savings expected from reduced energy and maintenance costs.[162]

## Better practice guidance

**3.82** Variable approaches to preparing project estimates have also been found to exist in other areas of public administration. For example, in November 2006, the then Deputy Prime Minister and Minister for Transport and Regional Services announced that a review of estimating practices would be undertaken in response to significant increases in the estimated cost of major AusLink land transport projects in Queensland. A key recommendation in the review report was that the Department of Infrastructure, Transport, Regional Development and Local Government define a set of estimating standards that must be met as part of State funding submissions.

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160 Updated CPGs, to take effect from 1 December 2008, have been issued by the Finance Minister. The updated CPGs includes similar guidance and requirements to that outlined in paragraphs 3.74 to 3.79.

161 Which were quantified at $10.1 million per annum for the RAAF Base Amberley Stage 2 Redevelopment and $2.6 million per annum for the Kokoda Barracks Redevelopment.

162 Department of Defence, op. cit., p. 9.

**3.83** The recommendation was implemented in June 2008 when *Best Practice Cost Estimation for Publicly Funded Road and Rail Construction* was finalised. It notes that:

> Delivery of public infrastructure is all about the delivery of public value and best use of scarce public resources. There is an obligation to use public resources efficiently and effectively. One way of achieving this is to have consistently accurate cost estimates supporting funding proposals. These principles underpin good financial management of projects and good public administration.
>
> To a government organisation, poor estimating can resulted in unexpected higher costs, less efficient and effective use of public resources, loss of reputation and credibility for the agency and government.

**3.84** The *Best Practice* document specifies:

- the format of financial reporting of projects, showing all elements presented in a consistent manner. In particular, the standard states that the structure of a project cost estimate should include the following key components:
  - base estimate, comprising separate disclosure of construction costs and owner costs (internal staff costs, project management and design fees as well as land acquisition costs,[163] levies and other charges);
  - a contingency allowance that is applied to the base estimate to cover a specified level of risk in the project implementation;
  - cash flow analysis applied to the base estimate plus contingency based on a project program; and
  - escalation that is applied to the cash flow and which takes account of increased costs through the period from the date of the estimate to the completion of construction;
- the degree of rigour that is expected in preparation of the financial data, including the base estimate, contingency allowances for risk and cost escalation provisions;
- the way changes in projects are to be dealt with; and

[163] Compared to the inconsistent approaches outlined in respect to land acquisition costs for projects referred to the Committee (see paragraphs 3.30 to 3.32), the *Best Practice* document states that 'Owner's costs must include the estimated cost of land acquisition'.

- checklists for guidance in preparation and review of submissions.

**3.85** Similarly, a recent report to the Secretary of State for Transport in the United Kingdom on the Targeted Program of Improvements (TPI—a program established to provide greater focus on the delivery of major highway schemes) advised that:

> a large increase in estimates has been reported over the last 18 months for schemes yet to begin construction. Around half of this is because construction industry inflation is running at about twice the Retail Price Index, as assumed by the Treasury. The other half is divided roughly equally between inadequate initial estimates on the one hand and scope changes and time delays on the other.[164]

**3.86** The review's recommendations for improving estimates included a new stage by stage investment management process (including a clearer definition of the basis and level of each estimate) and greater clarity on how to provide for inflation.

**3.87** In addition, in October 2008 Defence advised ANAO that it has developed a robust cost plan template and could assist Finance to develop a similar template for application to all proposed public works projects that are to be referred to the Committee.

## Recommendation No.2

**3.88** ANAO *recommends* that the Department of Finance and Deregulation enhance the provision of project financial information to the Public Works Committee by:

(a) developing guidelines (that include a definition of key terms and guidance on the calculation and treatment of separate allowances for project cost contingency and cost escalation) for the preparation of estimates of costs that underpin the briefing provided to the Finance Minister, as well as the Statement of Evidence and Confidential Cost Breakdown provided to the Committee; and

(b) examining the merits of asking proponent agencies to provide whole-of-life estimates as part of their Statement of Evidence so as to assist the Committee in assessing the value for money of a proposed work.

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[164] Mike Nichols, Chairman & Chief Executive of The Nichols Group, *Report to Secretary of State for Transport: Review of Highways Agency's Major Roads Programme*, March 2007, p. ii.

*Agency responses*

**3.89** The Memorial disagreed with the recommendation with all other responding agencies agreeing to or noting the recommendation. Finance, the Reserve Bank, Defence and the Memorial provided comments as follows:

- Finance commented that, subject to resources, it will:
  - undertake the development of general guidance to agencies on key terms and on the calculation of project allowances for escalation and contingency; and
  - consult with agencies on the feasibility and costs (together with the merits) of providing to the PWC whole-of-life estimates as part of Statements of Evidence
- the Reserve Bank requested that Finance consult with agencies, including those subject to the *Commonwealth Authorities and Companies Act 1997*, to ensure that any arrangements subsequently developed do not impede the expeditious preparation of PWC submissions for works that support the effective operation of specialised activities;
- Defence commented that it agreed with this recommendation assigned to Finance and advised that it would work with the central agencies to address it; and
- in disagreeing with the recommendation, the Memorial's stated view was that, at such an early stage of design, all-of-life estimates would have limited validity.

# 4. Project outcomes

*This chapter outlines the outcomes of the six projects examined in detail in terms of timelines, the scope of works and outturn cost. It also examines agency practices in assessing the benefits obtained from public works projects and lessons learned for future projects, as well as adherence to Public Works Committee requirements for significant changes in projects to be advised to the Committee.*

## Introduction

**4.1** The Australian Government introduced the Gateway Review Process to improve the on-time and on-budget delivery of major projects undertaken by agencies subject to the FMA Act.[165] In addition, staged approval processes have been introduced for major Defence capital acquisitions, new policy proposals for major non-Defence capital works and, most recently (June 2008) Information Technology and Communications (ITC) enabled project proposals.

**4.2** Measuring construction projects' performance is essential for ensuring that planned improvements in cost, time and quality are achieved, comparing achieved performance with that of similar projects and identifying potential for doing things better.[166] Measurement also provides valuable feedback on the extent to which initiatives such as staged approvals and Gateway reviews have assisted to improve the on-time and on-budget delivery of major projects. In addition, providing information to the Committee where the project budget, cost, timeframe or scope has changed significantly from that which has previously been considered by the Committee can serve a number of important purposes, including:

- helping to promote compliance with the referral requirements of the PWC Act because fundamental changes to a project may mean that there is a new project that requires referral to the Committee[167];

[165] The Memorial commented to ANAO that it is a *Commonwealth Authorities and Companies Act 1997* (CAC Act) entity and is not subject to the FMA Act or the Gateway Review Process.

[166] UK National Audit Office, *Modernising Construction*, Report by the Comptroller and Auditor-General, HC 87 Session 2000-01, 11 January 2001, p. 7 and Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Improving performance: Program evaluation and benchmarking*, 2007, p. 4.

[167] For example, in relation to the Christmas Island Immigration Detention Centre, legal advice to Finance concluded that changes to the contract delivery methodology, together with the changes in the scale, design and cost of the project, resulted in the project that was respecified in 2003 being a different project to that which was exempted in 2002 from Public Works Committee consideration. As a result, the respecified project was referred to the Committee.

- encouraging rigour in agency development of the project scope, timing and estimate that is advised to the Committee; and
- drawing the Committee's attention to areas that might warrant closer scrutiny in future inquiries.

**4.3** The six projects included in the audit sample were selected to give a cross-section of agencies, project values, and project types of projects that were at or near completion. Based on the Statements of Evidence provided to the Committee, each of the six projects should have been completed before the end of calendar year 2007; however, construction had not been completed for three projects (RAAF Base Amberley Stage 2 Redevelopment,[168] Defence's Kokoda Barracks Redevelopment and CSIRO's Entomology Bioscience Laboratories project).

## Project timing

**4.4** The Committee's Manual advises that:

> When arranging for the referral of a proposal to the Committee it is advisable that agencies develop a realistic and detailed work plan for the Parliamentary approval process, compatible with the overall project work plan…[169]

**4.5** For each of the six projects examined by ANAO, the proponent agency had made allowance in its project timetable for referral of the proposed works to the Committee, it's inquiry process and the resulting expediency motion to be moved in the House of Representatives. For each project, the Public Works Committee referral, inquiry and reporting process proceeded either in accordance with, or slightly ahead of, the proponent agency's desired timetable. For example, the Reserve Bank had requested approval for concurrent documentation in order to expedite the establishment of its business continuity arrangements, the early completion of which would also result in significant rental savings. However, separate Committee approval of concurrent documentation was not given because the Committee had finished its inquiry and the expediency motion had been passed by the House of Representatives earlier than the Bank had expected.

**4.6** In most instances, once the expediency motion was passed by the House of Representatives, the proponent agency proceeded to implement the project delivery strategy outlined in the Statement of Evidence provided to the

[168] In relation to the simulator and a new electricity substation.

[169] op. cit., p. 10.

Committee. For example, for its Business Resumption Site project, after the public works expediency motion was passed, the Reserve Bank commenced an early works package to reduce construction time.[170] The tender process for the construction contract was undertaken as the early works package was being delivered. The early works package was completed in January 2006 and the construction contract was awarded also in January 2006, with work commencing the following month. A 12-month construction period ensued (consistent with the Statement of Evidence provided to the Committee), with occupation of the new building commencing in July 2007 (also in accordance with the Statement of Evidence to the Committee).

**4.7** By way of comparison, there were three projects in the audit sample that had experienced significant delays against the timetable advised to the Committee, as follows:

- The Statement of Evidence for Defence's Kokoda Barracks Redevelopment stated that, subject to Parliamentary approval, the redevelopment could commence in the latter half of 2005 with completion by January 2008.[171] However, Defence's Contract Administrator's February 2008 Project Review No. 4 report stated that construction activities commenced in November 2005, one month later than the Detailed Business Case timeline and that, at that time, the project was 15 weeks behind the original target program, with a revised contractual completion date of 16 April 2008. Key factors in the delay were reported as relating to approved delay claims for asbestos removal and additional theatre seating works. In October 2008, Defence advised ANAO that all key (that is, living in accommodation and training) facilities were completed on or ahead of the January 2008 completion date advised in the Statement of Evidence.
- The Statement of Evidence for the RAAF Base Amberley Stage 2 Redevelopment advised the Committee that each project element would be complete by December 2007. The Managing Contractor for the Engineering Services infrastructure project completed its work in

[170] The early works package involved site clearing, excavation, shaping and compaction in preparation for letting the main works contract.

[171] Department of Defence, *Redevelopment of Kokoda Barracks, Canungra, Queensland—Statement of Evidence to the Parliamentary Standing Committee on Public Works*, Canberra, April 2005, p. 5. The revised Detailed Business Case approved in March 2005 was premised on Parliamentary approval being obtained in September 2005, allowing construction to commence in October 2005 for completion by December 2007. As it eventuated, Parliamentary approval was obtained in August 2005, one month earlier than the critical milestone identified in the Detailed Business Case.

November 2007, however, as of October 2008, the local supply authority had not yet completed the new electricity substation. The other two projects were completed in February 2008 (9th Force Support Battalion) and March 2008 (Multi Role Tanker Transport). In October 2008, Defence advised ANAO that there were a number of reasons for the slippage from December 2007 to March 2008, mainly relating to weather, the delays incurred in completing the docking system to be installed in the Multi Role Tanker Transport hangar, completion of the Energex substation and complexity in some parts of the redevelopment. In addition, Defence advised ANAO that there has been a significant delay (to late 2009) in the completion date for the simulator facility project for the Multi Role Tanker Transport project;[172]

- In relation to CSIRO's Entomology Bioscience Laboratories project, there has been a significant delay in the commencement and delivery of works. Specifically, in the Statement of Evidence provided to the Committee, CSIRO stated that construction would commence early in 2006 with completion in 2007.[173] However, the project schedule has been delayed by nearly two years as a result of:
  - CSIRO's 2006 review of its 2003–2008 Capital Infrastructure Plan in which all previously approved projects were evaluated and reprioritised; and

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172 In October 2008, Defence advised ANAO that the simulator facility was included in the RAAF Base Amberley Stage 2 Redevelopment. A 'Simulator Heads of Agreement' was signed by Defence in December 2004, prior to the redevelopment being referred to the Committee. In November 2008, Defence provided ANAO with a copy of relevant contractual documentation and advised ANAO that: 'The Simulator Heads of Agreement document is designed to provide a memorandum or terms of reference for EADS to seek information related to the conduct of a procurement process relating to the simulator. At the time of its creation, *[the contractor]* had no contractual obligations or entitlement to construct or deliver any simulator related facilities. The Heads of Agreement terms of reference also do not create or provide any obligations to seek construction of any simulator facilities. The reference in the documentation relating to construction costs may be considered comparable to services that might be obtained through a quantity surveyor to obtain some confidence in estimated costs. As such it would be properly construed as an intangible and not akin to commencement of any construction contract obligation. The Contract Change Proposal which introduced the simulator related scope to the contract (and subsequently the facilities turnkey solution) was effected on 31 March 06. This is of course post November 2005 when the project expediency motion was passed in Parliament.'

173 op. cit., p. 19. In respect to the project schedule, the Committee's report noted that it had: 'sought assurance that the project would be completed within the projected time-frame, including all relevant statutory approvals processes. To this end, the Committee requested that CSIRO provide a project schedule including approvals and other major project milestones. A project schedule was forwarded to the Committee by the CSIRO on 8 July 2005.' (Source: The Parliament of the Commonwealth of Australia, Parliamentary Standing Committee on Public Works, *Proposed CSIRO Entomology Bioscience Laboratory at Black Mountain, Canberra, ACT,* Canberra, August 2005, p. 15.)

– tender prices for the proposed lump sum construction contract coming in well above budget, leading to a changed delivery approach (to construction management) and a reduced scope of works.

**4.8** In addition to the changed timing for delivery of works, at the time ANAO audit fieldwork was completed (October 2008), parts of the refurbishment works for Building 101 and Building 135 that had been included in the Statement of Evidence provided to the Committee had not been commenced. Specifically:

- the conversion of existing laboratory spaces into offices for the ground and first floor of Building 101, as well as the ground floor of the North Wing of Building 101. In October 2008, CSIRO advised ANAO that it was 'committed' to these works, they were undergoing design development but a contractual delivery method and timing had yet to be decided; and
- refurbishment of the ground floor of Building 135 and the construction of new laboratories on the first floor of Building 135. In October 2008, CSIRO advised ANAO that a decision had yet to be made about whether these works would be undertaken and, if so, when.

**4.9** In October 2008, CSIRO advised ANAO that, the extent of the refurbished areas is being continually evaluated to respond to budgetary pressures and that, once it had completed a review of the function of its Agri Business Laboratories at Black Mountain (which encompasses the Entomology Buildings), it will advise the Committee of any proposed changes.[174]

## Financial outcomes

**4.10** Two of the three completed projects in the sample (the Reserve Bank's Business Resumption Site and the Fitout of 29–31 Brindabella Business Park for DEEWR) had been delivered with no increase to the project budget and with the final outturn cost being less than the budget.

**4.11** As discussed at paragraphs 3.40 to 3.41, at the time its Post-1945 Conflicts Gallery and Discovery Room Redevelopment project was presented to the Committee, the Australian War Memorial's internal project budget was $20.3 million. The Committee was advised that the project estimate advised to it of $17.8 excluded amounts for GST, relocation costs, the Memorial's internal

[174] See further at paragraph 4.41.

costs of managing and oversighting the project and stakeholder consultation costs. The evidence provided to the Committee did not quantify these exclusions. The Memorial has advised ANAO that its relocation costs were less than $5 000 and that the total cost of stakeholder consultation was less than $20 000. The budget allowance for the Memorial's own staffing costs and related overheads was $2.52 million.

**4.12** During the course of delivering the project, the funding allocated to it was increased by $3.8 million to meet additional costs of latent building conditions and (largely) to provide for enhancements to the quality of the exhibition, comprising $2.05 million in sponsorship support and $1.75 million in additional Australian Government funding provided in the 2006–07 Budget for the Brisbane Bridge display. This brought the project budget to $24.1 million, with actual final costs being one per cent above budget at $24.4 million. The Memorial has advised ANAO that, if additional funding through sponsorship had not been made available, the Memorial would have stayed within available funding.

**4.13** In relation to the three projects that had not been completed at the time of audit fieldwork:

- as of October 2008, CSIRO's Construction Manager was forecasting a cost to complete the project of $15.02 million (including a contingency allowance of $443 846), compared with an approved budget of $14.5 million. The budget did not include any provision for the works identified in paragraph 4.8 that had not been commenced at the time of audit fieldwork, and the forecast cost to complete also did not include amounts for these works;
- significant savings against budget (in the order of $10 million by February 2008) were achieved by Defence in the letting of trade packages for the Kokoda Barracks Redevelopment. These savings allowed for some new facilities not included in the original scope to be undertaken as well as improvements to be included in a number of scope elements to improve their amenity for the users. In October 2008, Defence advised ANAO that expenditure to that date was $82.2 million, with an estimated $4.3 million expected to be paid to complete the project (a final figure will not be known until the defects liability period is completed in March 2009). On this basis, the project is likely to be completed slightly below the budget of $86.7 million advised to the Committee; and

- in October 2008, Defence advised ANAO that the latest forecast cost to complete the RAAF Base Amberley Stage 2 Redevelopment project was \$262.5 million, some \$23.1 million under the aggregate amount presented to the Committee (these amounts exclude the simulator facility for the Multi Role Tanker Transport project, which Defence advised ANAO in December 2008 has a forecast cost to complete of \$12.4 million). Defence further advised that the final project cost was still to be determined as the project cannot be financially completed until the defects liability period expires, the incentive scheme is finalised, all defects liability issues are actioned and the Energex substation is completed.

## Monitoring expenditure and estimates to complete against the project budget

**4.14** Agency approaches to monitoring project costs and the estimate to complete against budget varied. An example of better practice in this area was the approach taken by the Australian War Memorial. The Memorial played a major role in budget management even though a consultant Quantity Surveyor and Project Manager were engaged on the project. Specifically, key elements of the Memorial's approach involved:

- several preliminary cost estimates, a Bill of Quantity and five formal cost reports being compiled by the contracted Quantity Surveyor at various stages prior to the procurement of building works (construction) and exhibition development works. Following the completion of procurement for these elements, detailed budget/cost reports were compiled by the consultant Quantity Surveyor and Project Manager on a monthly basis and submitted as part of the agendum papers for Project Control Group (PCG) and regularly held budget/scope reconciliation processes; and

- the Memorial monitoring project expenditure to date and the forecast cost to complete for all aspects (both external costs and internal overheads) irrespective of whether the funding came from the Memorial's own cash allocations, the New Policy Proposal funding for the Brisbane Bridge display or sponsorship funds provided by third parties. The Council of the Memorial reviewed progress against the budget on a quarterly basis and senior management (Corporate Management Group) and the Memorial's Chief Finance Officer reviewed progress against the budget on a weekly basis. An Executive

Officer was also part of the Memorial's project team and undertook day-to-day financial monitoring and reporting requirements.

**4.15** Effective identification and management of financial and other risks was a feature of the Reserve Bank's Business Resumption Site project. Monthly reports were prepared addressing project stages and timing, construction progress and, in relation to project costs:

- the estimate provided to the Committee;
- the price of each component following the award of tenders;
- the forecast cost to complete; and
- any variances.

**4.16** The final project cost was $3.04 million less than the budget provided to the Committee, with savings principally accruing due to design and construction risks not being realised, meaning much of the $2.69 million in contingencies was not required.

## Value management

**4.17** Value management is a systematic review of the essential functions or performance of a capital project to ensure that value for money is being achieved. It takes an overall view of the function of the capital asset being delivered as well as the associated capital and life-cycle costs. Value management can be applied to any capital project regardless of size or timeframe and at all stages throughout the life cycle of the project from inception to completion. In these respects, the OGC, in its *Achieving Excellence in Construction* series of guides, outlines that:

> Value management is about enhancing value and not about cutting cost, although this may be a by-product. The principles and techniques of value management aim to achieve the required quality at optimum whole-life cost during the process of developing a project. The principles centre on the identification of the requirements that will add demonstrable value in meeting the business need. Workshops led by value management facilitators are often used to identify value to the business. These workshops should involve stakeholders (or their representatives) and members of the integrated project team.
>
> Value management aims to maximise project value within time, cost and quality constraints. However, it should be recognised that improving whole-life project value sometimes requires extra initial capital expenditure. The key

differences between value management and cost reduction are that the former is:

- positive, focused on value rather than cost, seeking to achieve an optimum balance between quality, whole-life cost and time;
- structured, auditable and accountable; and
- multidisciplinary, seeking to maximise the creative potential of all project participants (including the client) working together as an integrated project team.[175]

**4.18** Benefits to agencies of undertaking value management processes throughout the life of capital works projects include improved definition and articulation of value; clearer brief and improved decision making; enhanced value and benefits for end-users; reduced cost; greater value for money; increased productivity; efficiency; collaboration; and stakeholder engagement. However, there was variable application of value management techniques by proponent agencies to the projects examined during this ANAO performance audit.

**4.19** Some agencies engaged professional value management facilitators at early and/or key points in the project development and management process. For example, following the expediency motion being passed by the Parliament, and prior to approaching the market for a main works contractor for its Business Resumption Site project, the Reserve Bank contracted a firm to facilitate and coordinate a value management workshop. The workshop was attended by Bank staff and key representatives from the consultant team for the project. The purpose of the workshop was to build a shared understanding amongst the project team of core requirements and the project scope and to either confirm current proposals or make recommendations for change. A series of actions were agreed and implemented.

**4.20** Similarly, during 2004, as part of the design development process for the Bioscience Entomology Laboratories project, CSIRO undertook a formal value management exercise with a contracted external facilitator. This workshop focused on the refurbishment of Building 101 (the project also involved some refurbishment of Building 135 and construction of a new building), with the prime objective of seeking to identify ways of reducing the project cost to meet the budget while maintaining the design function and original purpose of the project. However, CSIRO did not undertake a further

[175] Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Risk and Value Management*, 2007, p. 8.

formal value management exercise after the receipt of tenders, with the tendered prices being well in excess of the project budget. The high tender prices have led to a change in project delivery method and reconsideration of the project scope.

**4.21** In respect to value management, Defence advised ANAO in October 2008 that:

> The most value from value management is obtained in the planning phase. Value management reviews are also undertaken *[by Defence]* at the 50 per cent design and again at the 90 per cent design. The value of any value management reviews diminishes the more the design is defined.
>
> During the delivery phase, value management reviews are not usually conducted unless an expected design problem arises. *[In relation to the RAAF Base Amberley Stage 2 Redevelopment project]*, a value management review was conducted post the development of the Detailed Business Case. There were no reviews during the delivery phase.

**4.22** For example, for the RAAF Base Amberley Redevelopment Stage 2, as part of the development of the Detailed Business Cases for the three component projects, Defence conducted workshops for the purposes of risk management and value management (design critique and design optimisation). A moderator was appointed to stimulate discussion, and a formal report of the process and outcomes was finalised. The stated purpose and function of the value management workshop was to provide a forum to critically assess the effectiveness of the design solution, not to cut cost.

**4.23** In this regard, ANAO considers there would be value in the Department of Finance and Deregulation seeking to promote enhanced outcomes within capital works projects by requiring proponent agencies to include information on value management and other techniques to maximise project value in the Statement of Evidence to be provided to the Public Works Committee.

## Benefits realisation

**4.24** It is considered better practice in construction projects for a post implementation review, also referred to as a post occupancy evaluation, to be carried out when the facility has been in use long enough to determine whether the business benefits have been achieved.[176] These reviews seek to

[176] Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Improving performance: project evaluation and benchmarking*, 2007, p. 5.

assess whether the expected business benefits have been achieved from the investment in the facility that was justified in the business case[177] by examining:

- the achievement to date of business case objectives;
- whole of life costs and benefits to date against those forecast, together with other benefits realised and expected and ways of maximising benefits and minimising whole of life cost and risk;
- continued alignment to the business strategy;
- the effectiveness of improved business operations; and
- business and user satisfaction.[178]

**4.25** In addition to measuring stakeholder satisfaction, it is also advisable following project completion for agencies to conduct 'post project reviews' or 'lessons learned review'. A post project review is carried out after project completion and focuses on how well the project was managed.[179] Consultants, contractors and other suppliers engaged in delivery should form part of the review process. It considers how well the construction project performed against key performance indicators such as cost, time and quality measures. It also considers lessons learned from the approach taken to project governance. These lessons should be documented in a Lessons Learned Report and fed back into the agency's standards for managing projects.

**4.26** A consistent practice of conducting post implementation reviews or their equivalent was not evident in the agencies audited. At one end of the spectrum, at the time of the audit, the Australian War Memorial had:

- undertaken an extensive stakeholder engagement process throughout the planning and delivery of the project;
- held a staff debrief on the redevelopment project which concluded that lessons learned from previous projects had been implemented in the set up and carriage of this project, particularly with reference to the

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177 In terms of the Gateway process, a Gate 5—Benefits Realisation Review takes place after the agency has carried out a post occupancy review. The Gate 5 review makes use of findings from that internal review, together with an assessment of organisational learning, as evidence of good practice (but may or may not include a full review of plans for the future). Source: Department of Finance and Deregulation, *Gateway Review Process—A Handbook for Conducting Gateway Reviews*, August 2006, p. 78.

178 Ibid., pp. 5–6.

179 Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Improving performance: project evaluation and benchmarking*, 2007, p. 5.

relationship of Gallery Development and the wider Memorial (particularly in the curatorial areas); and

- conducted an evaluation report following the completion of works with the aim of measuring the success of the project, through increased visitor numbers and increased satisfaction levels. The Evaluation Report stated that:

> A remedial evaluation of the new Conflicts 1945 to today galleries was conducted during December 2007 and January 2008. In all, 423 visitor surveys, 139 visitor observations, 341 self completion surveys, attendance counts and staff interviews were completed and form the basis of this report.
>
> During the preview period [the galleries were opened for a period time, prior to the official opening, to test way finding, visitor reactions, etc] over 98 000 people visited the Memorial and approximately 40 per cent, or 39 000 visited the new galleries.
>
> When asked to rate the overall quality of the displays, nearly all respondents (99 per cent) said they were good or very good. The majority of respondents said that the galleries had met or exceeded their expectations, and 99 per cent said they would recommend the Conflicts 1945 to today galleries to family and friends.

**4.27** In respect to its Business Resumption Site project, in October 2008, the Reserve Bank advised ANAO that:

> A Post Occupancy Evaluation is planned for early in the new year as commissioning and testing is now complete and departments have tested their plans at the facility. Note that, as the Bank is not a large organisation, responses from all key departments about the facility's fitness for purpose were made known in a most timely way, consistent with the Bank's direct and robust internal lines of communications. The transition group of relevant heads of department, established to oversee the transition to BRS operations, ensured that concerns were identified early and rectified quickly. There is a high degree of satisfaction with services provided by the building, as there has been from the start of its operations.

**4.28** In relation to the 29–31 Brindabella Business Park Fitout project, DEEWR's Project Management contract included 'Stakeholder satisfaction' as one of three Key Performance Indicators. The target for this Key Performance Indicator was 'Obtain an average result of 'met expectations' or greater in a survey of the Department's Property and other selected Departmental stakeholders'. However, in October 2008, DEEWR advised ANAO that a formal survey was not undertaken due to Machinery of Government changes, although a post occupancy stakeholder satisfaction survey was 'informally' carried out through a staff briefing and feedback session.

**4.29** In respect to the RAAF Base Amberley Stage 2 Redevelopment project,[180] in October 2008 Defence advised ANAO that:

> A formal post project review has not been undertaken, nor is it intended to undertake a post project review. Given the program of works at Amberley and continued involvement of key stakeholders, the lessons learnt are being effectively transferred between projects as part of our business process improvement process. For standalone projects, post occupancy evaluations incorporating post project reviews are conducted when considered necessary. Defence is currently developing policy on the use of post occupancy evaluations.[181]

## Recommendation No.3

**4.30** ANAO *recommends* that proponent agencies undertake a post implementation review or reviews of each public works project that has proceeded through the Public Works Committee process. The review should address:

(a) the extent to which expected business benefits have been achieved or are expected to be achieved;

(b) user and/or client satisfaction with the delivered project; and

(c) whether there are lessons that could usefully be applied either within the agency or more broadly across the Commonwealth (in the latter case, providing the results to the Department of Finance and Deregulation would be appropriate).

### *Agency responses*

**4.31** The Memorial agreed with qualification to the recommendation with all other responding agencies agreeing to or noting the recommendation. Finance, DEEWR and the Memorial provided comments as follows:

- Finance commented that it supports the post implementation review of projects in order to improve the future management of capital works

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[180] Similar advice was provided in relation to the Kokoda Barracks Redevelopment project.

[181] In respect to the RAAF Base Amberley Stage 2 Redevelopment project, Defence advised ANAO in October 2008 that post occupancy evaluations had not yet been, but will be, conducted for the 9$^{th}$ Force Support Battalion and Multi Role Tanker Transport projects.

projects, but notes that the decision to conduct a post implementation review is the responsibility of the relevant agency;

- DEEWR stated that, while it did not undertake a formal stakeholders satisfaction survey in relation to the Brindabella Business Park fitout, the department gauged user and/or client satisfaction with the delivered project through briefings, face-to-face feedback sessions, project email updates and a dedicated staff online feedback mechanism. In addition, DEEWR advised ANAO that, for future public works projects, it will undertake a post implementation review or review of each project that will incorporate the requirements of this recommendation; and
- the Memorial commented that a post implementation review is existing Memorial practice but that, in its view, the review would be of limited, if any, value to other agencies as it is entirely focused on Memorial-specific exhibition redevelopment.

## Reporting to the Public Works Committee

### Implementation of Committee recommendations

**4.32** The Committee is empowered to make any recommendations it sees fit within the bounds of the Act. In this respect, the draft revision of Finance's internal procedures Manual notes that:

> As a scrutineer of public expenditure, the Committee may make any recommendation it deems necessary to ensure that the proposed works deliver the best value for money. This may include recommending that a work does not proceed, or recommending that it proceed pending the fulfilment of certain conditions.

**4.33** For the period between 25 March 1998 and 18 March 2008 (Report 1/1998 to Report 4/2008), the Committee recommended in 29 per cent of instances that the agency report back to it with further information. In this same period, the Committee recommended in 57 per cent of the reports that the agency undertake specific actions, such as implementing certain strategies, developing guidelines or providing the Committee with further information. Three of the six projects in the audit sample were included in those reports where the Committee had made recommendations relating to further action by the proponent agency (see Table 4.1).

## Table 4.1

### Outcome of Committee recommendations for audit sample projects

| Project | Committee Recommendation | Outcome |
|---|---|---|
| Fitout of New Leased Premises at 29–31 Brindabella Business Park | DEEWR advise the Committee of the progress regarding the Green Lease Schedule that was intended to achieve an Australian Building Greenhouse Rating (ABGR) of 4.5. | In October 2008, DEEWR advised ANAO that the lessor would not agree to the include a Green Lease Schedule in the lease but that the accommodation has been designed and constructed to achieve a 4.5 star ABGR.<br>The Committee has not been advised of the outcome. |
| Entomology Bioscience Laboratories at Black Mountain | CSIRO take all necessary steps to identify and ensure the safe removal and disposal of hazardous materials (in particular, asbestos) from the site of the proposed works. | In October 2008, CSIRO advised ANAO that it 'manages all hazardous waste through approved processes. An asbestos register for the site was provided by the contractor. Demolition materials were tested and disposed of by approved contractors. CSIRO requested and received a copy of a receipt from an approved disposal site.' Copies of the supporting evidence was provided to ANAO by CSIRO. |
| | CSIRO continue discussions with the National Capital Authority to resolve outstanding design issues. | CSIRO received works approval from the National Capital Authority on 3 November 2006. |
| Redevelopment of Kokoda Barracks, Canungra | Defence continue consultation with the Department of Environment and Heritage regarding any heritage issues that may arise from the redevelopment of Kokoda Barracks. | In July 2008, Defence advised the Committee that the project was substantially complete and that no further heritage issues arose during the course of the project. |

Source: ANAO analysis of agency records and agency advice to ANAO.

## Reporting of significant project changes

**4.34** The Committee's Manual states:

> …If there is cause, during the development of the project, to depart significantly from the accepted concept in scope, purpose, function, design, space or cost,[182] the sponsoring agency must advise the committee of the

[182] The Manual does not require significant changes in the project timetable to be advised to the Committee but it is often the case that delays in a project will, due to cost escalation, result in the project budget and estimate increasing and/or a reduction in the scope of works.

details of any such changes, and where necessary, seek its concurrence. Where changes are made that do not significantly alter the original concept of the project, the sponsoring agency must advise the committee of the changes and the reasons for them.[183]

**4.35** There have been some instances where proponent agencies have advised the Committee of changes to the project. However, in each instance, there was a considerable delay between the project changes occurring and advice being provided to the Committee (on some occasions, the project has either been completed or was close to completion).

**4.36** For example, in July 2007, during the course of the Committee inquiry into the RAAF Base Amberley Redevelopment Stage 3 project, Defence advised the Committee that several items identified under RAAF Base Amberley Redevelopment Stage One were not delivered, and had subsequently been included as part of the RAAF Base Amberley Redevelopment Stage 3 and C-17 Heavy Lift Aircraft projects.[184] Defence advised that:

> RAAF Base Amberley Redevelopment Stage One was approved by Parliament in September 1998 at an out-turned cost of $73.3m.[185] The Project consisted of new and refurbished operational, training, domestic support, logistics support and aircraft maintenance facilities, including a Gymnasium.
>
> The Stage One Redevelopment was developed and delivered prior to the introduction of a 'two-pass' process into Defence's infrastructure development. The two-pass process is comprised of a Strategic Business Case, which provides an indicative scope and cost estimate of +/-30%, and a Detailed Business Case, which further develops and refines this scope and provides a cost estimate +/-10%.
>
> Due to the lack of the two-pass process and subsequent lack of detailed design in order to provide accurate costs estimates, the budget for RAAF Base Amberley Redevelopment Stage One was not sufficient to deliver all scope items identified, and a priority list was created. The Gymnasium facility did not rank high enough on this priority list to warrant inclusion into the Stage One scope of works, and was subsequently not delivered under RAAF Base Amberley Redevelopment Stage One.

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183 op. cit., p. 38.

184 Department of Defence (Supplementary Submission), Joint Standing Committee on Public Works inquiry, RAAF Base Amberley Redevelopment Stage 3, Queensland, 5 July 2007.

185 The actual amount advised to the Committee in the Statement of Evidence for the 1st Stage, and reflected in the Committee's recommendation that the 1st Stage proceed, was $73.7 million.

> Due to the requirement for ADF personnel to maintain prescribed physical fitness standards, this function has been identified for inclusion into the RAAF Base Amberley Redevelopment Stage Three project. This project has gone through the two-pass process, and all scope items are expected to be delivered within the budget.
>
> Other elements not delivered by RAAF Base Amberley Redevelopment Stage One include the Explosive Ordnance Aprons and the Air Movements Terminal. These two elements form part of the requirement for the operation of the C-17 Heavy Lift Aircraft, and have therefore been included in the C-17 Heavy Lift Aircraft Infrastructure Project.[186]
>
> Defence has employed the two-pass process on a number of major capital facilities projects successfully, on time and within budget.

**4.37** Finance has also recently advised the Committee of changes to the project budget for the Christmas Island Immigration Detention Centre project it is delivering. This advice to the Committee resulted from a 2007 internal audit[187] which found that Government-approved increases to the project budget in December 2004 ($59 million) and August 2006 ($60 million) had resulted in anticipated final expenditure of $396 million and a revised delivery date of December 2007 (compared to March 2006 at the time of the Committee's inquiry into that public work), but that these variations had not been reported to the Committee as required by the Committee's Manual. In response to the internal audit review, Finance wrote to the Committee on 10 January 2008 advising that, in accordance with the Manual, it was writing to inform the Committee of the increases to the project budget and that:

> This information has been provided for consideration by the PWC so that it may provide its concurrence to the changes in cost.[188]

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[186] Contemporaneous with the referral of the RAAF Base Amberley Redevelopment Stage 3 project to the Public Works Committee, the C-17 Heavy Air Lift Infrastructure Project was also referred to the Committee. At an out-turn estimate of $268.2 million (plus GST), this project involved the provision of facilities and infrastructure at five RAAF bases to support the introduction of four C-17 Globemaster III heavy lift aircraft. As RAAF Base Amberley was to be the 'home-base' for the aircraft, the majority of the proposed facilities and infrastructure works related to RAAF Base Amberley. Defence advised the Committee that construction was expected to commence early in 2008 and be completed in 2011.

[187] As part of Finance's 2007–08 Internal Audit Work Plan, a follow up review of the Christmas Island IDC construction project was undertaken. The objectives of the review were to consider the actions taken by Finance's Asset Management Group to address the findings of the previous Internal Audit review and to consider the accuracy, completeness and adequacy of project documentation held, in preparation for the (then) upcoming ANAO performance audit of this construction project.

[188] The Parliament of the Commonwealth of Australia, Parliamentary Standing Committee on Public Works, Report 7/2008, *Update Report: The Christmas Island Immigration Detention Centre Project,* Appendix A, Department of Finance and Deregulation Letter to the Public Works Committee, Canberra, September 2008.

**4.38** In June 2008, the Committee announced that it would receive a briefing from Finance and the Department of Immigration and Citizenship on the development of the Christmas Island Detention Centre. The Committee's conclusions set out in its September 2008 update report on this project included that:

> The Committee also notes that the Government approved the final project cost increase in August 2006, yet it was not until January 2008, some eighteen months later, that Finance wrote to the Committee to seek its concurrence for the cost increase.
>
> The PWC of the 40th Parliament was presented with a project in 2003 that was poorly costed in the first place and then inadequately managed. That Committee examined the evidence presented before it in good faith.
>
> The Committee has expressed its concerns about the project to the Auditor-General, whose agency, the Australian National Audit Office, is currently undertaking an audit of the project in terms of its compliance with the *Public Works Committee Act 1969*.[189]

**4.39** In addition, in February 2008, the Committee was advised by the Attorney-General's Department[190] of the change of scope and significantly increased cost estimate for a project for freight and passenger facilities at Rumah Baru, West Island, Cocos (Keeling) Islands since its original approval by the Committee in 2001.[191] The Committee responded in March 2008, noting the budget increase and requesting to be kept informed of other significant developments with the project. The Committee did not require the amended project to be re-referred.

## Audit sample projects

**4.40** For the six projects in the audit sample, there were four where ANAO analysis was that the reporting of project changes to the Committee was warranted. Specifically:

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189 ibid., p. 8.

190 Responsibility for this project moved in November 2007 from the Department of Infrastructure, Transport, Regional Development and Local Government to the Attorney-General's Department as part of the administration of Australia's External Territories.

191 As the estimated cost of the revised scope project exceeded the Gateway financial threshold for infrastructure projects, a Gateway Assessment Tool was required to be completed for the project. This project was one of the two infrastructure projects that, at the time of the audit, had been subject to the one or more Gateway reviews (see further at paragraph 2.20).

- there were some delays (from December 2007 to February and March 2008) with completion of works for the 9th Force Support Battalion relocation and Multi Role Tanker Transport relocation, but there has been a significant delay (to late 2009) to the expected completion date for the simulator facility associated with the Multi Role Tanker Transport relocation (see paragraphs 2.32 to 2.34);
- Defence's Kokoda Barracks Redevelopment, where cost savings had allowed additional works to be undertaken, including additional refurbishment works on the combined mess, works to the chapel, works to upgrade the AFL oval and upgrade of the entry to the guardhouse pass office for the monitoring station;
- the Australian War Memorial's project to redevelop the Post-1945 Conflicts Galleries and Discovery Room in relation to changes to the project budget and cost. In particular, the final project budget of $24.12 million was $6.32 million higher than that advised to the Committee with final actual costs of $24.38 million. The budget increase was as a result of the original project budget and estimate of costs advised to the Committee not including $2.5 million in the Memorial's internal costs in relation to the project, and funding allocated to the project being increased by $3.8 million (comprising $2.05 million in sponsorship support and $1.75 million in additional Australian Government funding provided in the 2006–07 Budget for the Brisbane Bridge display); and
- CSIRO's Entomology Bioscience Laboratory project in relation to project timing, delivery method and cost pressures and their impact on the budget and/or scope. In particular:
  - there was a significant delay in the project being undertaken, with completion of work not expected before March 2009 compared to the early 2007 completion date advised to the Committee[192];
  - the project delivery method had been changed from a lump sum construction contract to a contract management contract (as a result of the lump sum construction tender prices received being well in excess of the available budget); and

[192] See footnote 173.

– parts of the refurbishment works for Building 101 and Building 135 that had been included in the Statement of Evidence provided to the Committee had not been commenced. Whilst CSIRO advised ANAO it is committed to these works, as at October 2008, the forecast cost to complete was $519 036 greater than the $14.5 million project budget, with neither the budget nor the forecast cost to complete including any allowance for these particular works.

**4.41** CSIRO commented to ANAO in October 2008 that the Committee's Manual does not stipulate a timeframe for subsequent advice to the Committee, there is no definition of 'significant' and, in any event, CSIRO's view was that the changes did not significantly alter the original scope or intent of the project. CSIRO further advised ANAO that the extent of the refurbished areas is being continually evaluated to respond to budgetary pressures and that, once it had completed a review of the function of its Agri Business Laboratories at Black Mountain (which encompasses the Entomology Buildings), it will advise the Committee of any proposed changes. In November 2008, CSIRO further advised ANAO that:

- it is working with the Construction Manager and users to ensure that the scope reflects revised scope and budget considerations;
- as at October 2008, works had commenced within Building 101 (with demolition underway for approximately one month) and minor works had also been underway within Building 135; and
- it is continuing to monitor the project and adjust commitments and that, should it increase the budget it would, as necessary, advise the Committee of any significant increase or change.

**4.42** In respect to its project, the Memorial advised ANAO that:

> The Memorial advised the Committee that the cost of the project was estimated at $17.8 million. The Memorial advised the Committee that the cost of internal agency overheads was not within the $17.8 million (the $2.51 million of internal costs were monitored throughout the project at meetings of the governing Council). The Memorial formally advised the Committee that additional funding was hoped to be achieved through separate sponsorship. $3.8 million was successfully gained and applied to enhancing the quality of exhibitions.
>
> The evidence within the Committee-related documentation details a clear intent in relation to the budget for this project: the intent was for a project of

> $17.8 million; plus the internal agency overheads, notified to the Committee; and with whatever additional funding could be secured through the Memorial's sponsorship efforts. If the Committee was at all unclear as to the Memorial's intention with regard to the project budget, it would reasonably be expected that a request for further detailed information or a comment would have been made. It is the Memorial's opinion that the Committee was very satisfied with reporting, evidence and the extent of detailed information provided to them in relation to the project budget. The Memorial had previously presented several projects to the Committee and the Hansard record provides evidence of the Committee's high regard for the Memorial's submissions. The Memorial's reporting to the Committee in relation to budget was entirely consistent with previous and subsequent submissions (the Memorial referred a project to the Committee in October 2008).
>
> If sponsorship funding had not become available, the Memorial would have completed the new galleries within the notified budget. The Memorial would have continued to seek sponsorship to enhance the exhibitions later. As it turned out, timely additional funding was obtained and the Memorial managed the project to within one per cent of the increased budget approved by its Council. This is compelling evidence of the Memorial's successful financial management of the project despite substantial latent conditions impacting the building works.
>
> The Memorial is strongly of the opinion that there was not requirement to report amounts of sponsorship funding or internal agency-overhead costs beyond the information detailed in the Statement of Evidence to the Committee, the Confidential Cost Estimate, and evidence recorded in the Official Committee Hansard. The project experienced a legitimate funding increase of $3.8 million. The Committee was aware of the Memorial's intention to seek additional funding through sponsorship (as recorded in the Hansard evidence) and to apply this to the project. This was not a change to the project scope and the Memorial does not believe any further reporting to the Committee was warranted.

**4.43** Finance does not, at present, play a role in monitoring or coordinating the reporting of project changes to the Committee. By way of comparison, Finance's internal procedures note that the Committee has requested that agencies provide details of medium works through Finance (see paragraphs 3.3 to 3.5). Given existing arrangements have not resulted in timely advice (if any) of project changes being provided to the Committee, benefits would be expected to result from a more active role by Finance in this area, whilst recognising that under current frameworks and resourcing arrangements proponent agencies are responsible for the planning and delivery of capital works projects.

## Recommendation No.4

**4.44** ANAO *recommends* that the Department of Finance and Deregulation assess the merits of promoting adherence to the referral requirements of the *Public Works Committee Act 1969* and procedures promulgated by the Committee for the reporting to it of significant project changes by facilitating the provision to the Committee by proponent agencies of project finalisation reports concerning whether projects have proceeded in accordance with scope, purpose, function, design, space, cost and timetable advised to the Committee.

*Agency responses*

**4.45** The Memorial disagreed with the recommendation with all other responding agencies agreeing to or noting the recommendation. Defence and the Memorial provided comments as follows:

- Defence commented that it agreed with this recommendation assigned to Finance and advised that it would work with the central agencies to address it; and
- the Memorial commented that post implementation reviews are standard Memorial practice. Its view was that a more useful recommendation might be to have advice available within a central agency as to the advantages and disadvantages of different procurement strategies and options that might be applied. The Memorial observed that there are a range of possibilities depending on the project, experience levels and economic circumstances.

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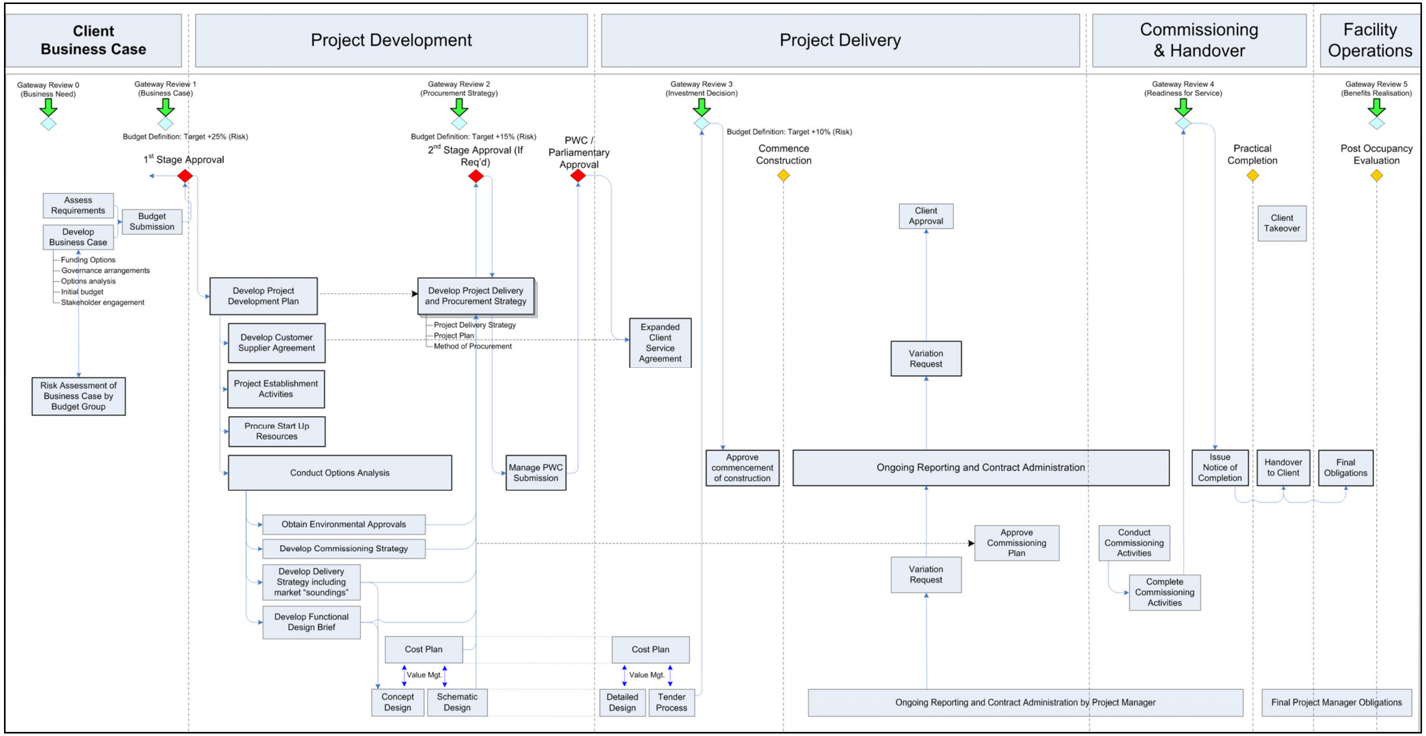
Ian McPhee — Canberra ACT

Auditor-General — 5 February 2009

# Appendix

# Appendix 1: Interaction of the PWC process with the Gateway Review Process and the two-stage approval process for non-Defence major capital work



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