

The Auditor-General  
Audit Report No.43 2008–09  
Performance Audit

# **Construction of the Christmas Island Immigration Detention Centre**

**Department of Finance and Deregulation**

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of Australia 2009

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Canberra ACT  
23 June 2009

Dear Mr President  
Dear Mr Speaker

The Australian National Audit Office has undertaken a performance audit in the *Department of Finance and Deregulation* 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 *Construction of the Christmas Island Immigration Detention Centre*.

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

A handwritten signature in black ink, appearing to read 'Ian McPhee'.

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

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# Summary and Recommendations





# Summary

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## Introduction

1. In the latter part of 2001 several measures were introduced to address an increase in unauthorised arrivals to Australia. These measures included legislation excising Christmas Island, Ashmore and Cartier Islands and Cocos (Keeling) Islands from the migration zone for the purposes of unauthorised arrival as well as arrangements for the reception and accommodation of unauthorised boat arrivals and the processing of their claims for protection at various offshore locations.

2. In addition, on 11 March 2002, the Government decided to proceed urgently to construct a new purpose built permanent Immigration Reception and Processing Centre<sup>1</sup> on Christmas Island, together with the construction of essential infrastructure associated with the construction and on-going operation of the Centre. In terms of project delivery:

- the then Department of Immigration and Multicultural and Indigenous Affairs (DIMIA)<sup>2</sup> was to be responsible for the construction of the facility; and
- the then Department of Transport and Regional Services (DOTARS)<sup>3</sup> was responsible for all associated infrastructure and headworks to support the facility, construction of staff housing in the Island's residential area and provision of the construction camp.

3. The project approved in March 2002 had been for a 1200 person facility to be built in 39 weeks for an indicative budget of \$242.9 million. By June 2002, architects and a Construction Contractor had been appointed. However, delays in the project timelines and increases in project costs had begun to emerge. By

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<sup>1</sup> The project is now referred to as the Christmas Island Immigration Detention Centre (CIIDC).

<sup>2</sup> The department is now known as the Department of Immigration and Citizenship (DIAC). It is referred to as DIMIA in relation to actions prior to its renaming and as DIAC in relation to actions since that time.

<sup>3</sup> The department is now known as the Department of Infrastructure, Transport, Regional Development and Local Government (DITRD LG). As a result of the November 2007 Federal election and subsequent changes to the Administrative Arrangements Order, all relevant Territories staff and records associated with the CIIDC project and related infrastructure services for which DOTARS had been responsible were transferred to the Attorney-General's Department (AGD). The formal transfer occurred on 25 January 2008, with the physical relocation of the Territories staff occurring in March 2008. Local government services are provided on Christmas Island by the Shire of Christmas Island.

September 2002, the project estimate had increased to \$427 million with a delivery period in the order of 120 weeks.

4. After considering the work of a departmental taskforce as well as commercial and legal advice, in November 2002 the Government reaffirmed the need for the CIIDC project. However, following discussions with the appointed Construction Contractor, it was concluded that construction of a 1200 place purpose-designed and built facility could not be achieved within the budget, and it was decided to terminate the contract with the Construction Contractor.<sup>4</sup> After considering options, on 18 February 2003, the Government decided to respecify the project to an 800 place facility at a forecast estimate of \$276.2 million.

### **Respecified project**

5. Prior to the termination of the original construction contract entered into by DIMIA, a fully operational construction camp had been built, and some land clearing bulk earthworks for the CIIDC facility had been undertaken.

6. At the time the project was respecified, responsibility for delivering the CIIDC facility was transferred from DIMIA to the Department of Finance and Deregulation<sup>5</sup> (Finance), with a more conventional delivery method<sup>6</sup> to be adopted in an endeavour to provide greater cost certainty. Responsibility for the provision of associated infrastructure remained with DOTARS. Finance was to manage the facility construction project from 19 February 2003 to completion, which was expected to take 34 months (that is, practical completion by December 2005). The budget of \$276.2 million was allocated as follows:

- a facility construction budget of \$197.7 million (referred to in this report as the Finance Budget Allocation);

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<sup>4</sup> Termination took effect on 31 May 2003.

<sup>5</sup> Prior to the change of Government following the 2007 Federal Election, the department was known as the Department of Finance and Administration.

<sup>6</sup> As opposed to the 'fast-track' process, involving parallel design and construction for the purpose-built CIIDC proposed for the original project.

- \$58 million in budgeted costs for DOTARS to deliver housing and infrastructure works<sup>7</sup> and resume the mining lease on which the CIIDC would be constructed (the DOTARS Budget Allocation); and
- \$20.5 million in budgeted costs associated with DIMIA's management of the project up to the February 2003 transfer of responsibility to Finance. DIAC was allocated a further \$3.1 million for project supervision and consultancies for the period from the February 2003 transfer of project management to Finance until project completion, but this allocation was not included in the \$276.2 million figure. Collectively, these amounts are referred to as the DIMIA Budget Allocation.

7. In June 2003, the proposal to construct a respecified, purpose-built CIIDC was referred to the Public Works Committee (PWC) for its consideration. The PWC's December 2003 report recommended that the respecified project proceed at its estimated facility construction cost of \$197.7 million.

8. A two-stage project delivery model was adopted by Finance for the remaining construction work for the CIIDC facility. The first stage was the 'Early Works', which were carried out under a lump sum contract arrangement and involved bulk earthworks. The second stage was the 'Main Works'.

9. The planned Main Works delivery strategy was to involve a modified lump sum form of contract that included a Guaranteed Maximum Price (GMP). GMP construction contracts are arrived at through a staged process that involves the construction tender being carried out prior to the completion of the design, and the Preferred Tenderer being involved in the final documentation of the design. Each party participating in the tender process is provided with construction drawings and specifications to a sufficient level of detail to allow them to submit a fixed price for the works based on the required dates for practical completion.

10. A three phase open tender process to appoint the Main Works Contractor was conducted between February and December 2004. Two tenders were received in August 2004, with prices of both tenders being above the

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<sup>7</sup> Specifically, DOTARS was provided with funding for an additional port facility at Nui Nui (the main port is at Flying Fish Cove) and an associated upgrade to the link road, upgrade of other roads (including the construction of crab crossings), provision of housing for facility staff, construction of sports facilities and the provision of water, communications and power to the facility site.

available budget. As a result, the Finance Budget Allocation was increased by \$59 million. The Main Works Contract was signed in January 2005, with a stated GMP of \$207.9 million and a date for Practical Completion of 31 August 2006. A second budget increase (of \$60 million) was obtained by Finance in August 2006, during the construction stage.

11. Practical Completion by the Main Works Contractor of the CIIDC occurred in October 2007. However, various deferred and additional works had to be completed by Finance (through its contracted Project Manager) in order to bring the facility to a 'fit for purpose' condition such that it could be handed over to DIMIA. This handover occurred in April 2008. The estimated out-turn cost of the facility works is within the amended Finance Budget Allocation of \$317.0 million.

12. The PWC Manual requires<sup>8</sup> 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. Finance advised the PWC of the budget increases in January 2008. In June 2008, the Committee announced that it would receive a briefing from Finance and DIAC on the development of the CIIDC, focusing on the increase in the total budget from \$276 million in 2003 to \$396 million. After a public briefing was held in June 2008, the PWC wrote to the ANAO advising that it had concerns about the costing provided to it in September 2003, and the subsequent management of the project. ANAO advised the PWC that the audit of the project, which at that time was underway, would assess the rigour of the project estimates and budgets as well as the management of the project in terms of its cost, timing and scope.

## Audit scope and objective

13. A performance audit of the CIIDC construction project was first included as a potential audit in ANAO's Planned Audit Work Program for 2006–07. As the project was not completed in 2006–07, the audit of the construction of the CIIDC was not commenced that year but was rescheduled as a potential topic in the 2007–08 Planned Audit Work Program.

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<sup>8</sup> Parliamentary Standing Committee on Public Works, *Manual of Procedures for Departments and Agencies*, March 2008, Edition 7.2, p. 38.

14. The objective of the audit, in examining the construction of the CIIDC, was to assess:

- the adequacy of the planning and delivery processes for the project;
- the value-for-money achieved in the delivery of the project, including with regard to the suitability of the centre for its intended purpose; and
- the extent to which the *Public Works Committee Act 1969* (PWC Act) and approved procedures have been complied with.

## Audit Conclusions

15. The CIIDC was a more difficult construction project than many others undertaken by the Australian Government. It involved numerous challenges and risks including the isolation of Christmas Island, shipping being adversely affected by the swell season (which typically runs for five months from November to March), the absence of a wharf suitable for ships to berth alongside and the facility being constructed on reclaimed mining land that was surrounded by a National Park. In addition, the construction works were of considerable scale (the CIIDC facility comprises more than 50 buildings and associated landscaping works) with an ambitious design and delivery timetable, and a tight budget.

16. The CIIDC facility has been completed, has been accepted by DIAC as fit for its purpose and is now operational. However, this result has come at a considerably greater cost than budgeted at the time the project was respecified and over a substantially longer timeframe than had been expected. In this context, the audit has underlined several important messages for agencies to bear in mind when managing future construction projects.

17. The first is that it is only after sufficient scoping and planning work has been undertaken that reliable estimates and delivery timeframes can be established. The scope, budget and timeframe for the respecified project was established after nine months of detailed design work, market place investigation and cost reviews incorporating expert costing advice. Nevertheless, the revised delivery timeframe of 34 months (as opposed to 39 weeks for the original project) was exceeded by 27 months and Finance's Budget Allocation was increased by 60 per cent. Factors contributing to this outcome included that, at the time the respecified budget was approved, the design brief had not been finalised, a concept design had not yet been

prepared and the revised budget included very little in the way of a contingency allowance for risk.

18. The second message relates to the importance of managing a project as a whole when individual agencies have separate budgets for sub-parts that are interdependent.<sup>9</sup> For the CIIDC project, Finance was responsible for the facility construction aspect with DOTARS responsible for most of the infrastructure works necessary to connect the facility to the services on the Island, as well as for an upgrade of the Island's port crane. Early in the project, Finance consulted with DOTARS to ensure there were sufficient spare parts on the Island for the port crane (given its importance to project logistics) but Finance (and prior to February 2003, DIMIA) was not involved in DOTARS' decision-making processes relating to the construction of the additional port facility at Nui Nui, and the subsequent procurement of a new crane or the upgrade to the existing pedestal at Flying Fish Cove (due to the decision to relocate the existing, older, crane to Nui Nui). For budgetary reasons DOTARS decided to have the crane pedestal upgraded rather than a new pedestal constructed. The relatively modest initial saving in capital expenditure was more than offset by the effects on the facility construction project of the crane being taken out of service due to the discovery of major foundation faults in the pedestal.<sup>10</sup> This example emphasises the importance of a whole-of-government perspective in such decisions by agencies.

19. Thirdly, it is important that agencies manage projects by developing and following delivery strategies that reduce identified risks to acceptable levels. There are a number of possible approaches to the development and delivery of Commonwealth capital works projects, each involving different risks and having advantages and disadvantages. To provide greater cost certainty given the original project had been respecified partly due to significant budget increases, Finance's chosen project delivery strategy was to involve the main works contract being tendered based on a detailed and developed design, and the contract being signed based on a completed

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<sup>9</sup> ANAO has outlined in other reports the importance of having a lead agency, allied with associated risk management and whole-of-government performance management arrangements (see ANAO Audit Report No.50 2004–05, *Drought Assistance*, Canberra, 2 June 2005, pp. 24–25). Similarly, in March 2005, all Departmental Secretaries endorsed a guide entitled 'Working Together' that emphasised the importance of a whole-of-government approach to inter-agency work.

<sup>10</sup> In this respect, ANAO has estimated a net delay effect on the project of one month and additional costs of \$6.4 million (a new pedestal was estimated to cost \$700 000 more than upgrading the existing pedestal).

design.<sup>11</sup> The strategy was sound but was not followed. Instead, the design and tendering processes were overlapped and the design was not completed until some time after the construction contract was signed.<sup>12</sup> The departures from the planned approach contributed to the project delays and increased costs to the Commonwealth.

20. To capture both industry and its own experience in managing construction projects, Finance has developed a better practice guide to the delivery of major capital works, which at the time of the audit was being updated. The first draft of this guide was introduced in July 2005, during the construction phase of the CIIDC project. Where the guide has adequately addressed matters identified by this audit as requiring attention, this has been recognised (in lieu of an ANAO recommendation being made). ANAO has made six recommendations relating to:

- greater emphasis being given in the management of construction projects to the requirement to provide the PWC with advice on the extent and nature of project uncertainties, and their potential effect on the project budget. This can assist agencies to meet statutory obligations as well as better manage Parliamentary expectations as to the likely project timing and out-turn cost. In addition, timely advice should be given to the Committee of significant project changes;<sup>13</sup>
- the importance of infrastructure works being effectively integrated with the facility construction work, particularly where different Australian Government agencies are responsible for the infrastructure and facility works;

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<sup>11</sup> The strategy recognised that:

- tendering the Main Works Contract before a well-developed design had been prepared and/or signing the construction contract before the design had been completed adversely affects the Commonwealth's ability to transfer the risk of design errors and omissions to the construction contractor; and
- delays during the design phases would ultimately cost less in time and money than delays in the construction phase.

<sup>12</sup> The second budget increase (of \$60 million) was necessary, in large part, due to increased costs that resulted directly or indirectly from the change in approach.

<sup>13</sup> As noted in ANAO Audit Report No.20 2008–09, *Approval of Funding for Public Works*, 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.

- agencies working to implement planned project delivery strategies and, where departures are proposed, providing decision-makers with a comprehensive assessment of risks and how they can best be managed; and
- agencies measuring construction projects' performance, including through formal post-project 'lessons learned' exercises, as this is central for ensuring that planned improvements in cost, time and quality are achieved, and for identifying potential for improved approaches.

## Key Findings

### Key Adviser Contracts (Chapter 2)

21. Finance engaged three key advisers to assist it deliver the CIIDC project: a Project Manager, a Principal Consultant (for design and construction services) and a Cost Manager.

22. The Project Manager engagement was particularly significant. An independent review of the original project commissioned in September 2002 had concluded that a Project Manager should be engaged to overview the project delivery, including the CIIDC facility, interface with the associated infrastructure provision and liaise with the Island community. Consistent with the outcome of this review, one of the first actions taken by Finance following the then Government's 18 February 2003 decision to respecify the CIIDC project and transfer delivery responsibility from DIMIA, was to commence the procurement process to appoint a Project Manager.

23. The Project Manager was appointed via a two-stage public tender process. The Project Manger was responsible for delivering the project in the time allocated and, in consultation with the contracted Cost Manager, at a cost no more than that allocated in the Project Cost Plan. The successful tenderer had been assessed as the best candidate against the qualitative evaluation criteria but was also the most expensive. Finance considered that, while the cost was more expensive than the next highest scoring tenderer, it was 'highly likely' that the better resources would result in a superior project outcome for the Commonwealth.



24. When it was responsible for the original project, DIMIA had appointed an architect (the same firm that later became Finance's Principal Consultant<sup>14</sup>) and the Cost Manager. Finance continued with these engagements under the existing terms following the transfer of delivery responsibility from DIMIA to Finance.

25. Between June and October 2003, Finance's Project Manager negotiated a scope of work for both the Principal Consultant and the Cost Manager, and draft contracts were prepared. However, some eight months after taking responsibility for the project and five months after appointing its Project Manager, Finance then decided to undertake a sole-source tender process<sup>15</sup> for the Principal Consultant and Cost Manager engagements based on its perspective that, while the existing arrangements could continue to be used on an hourly basis, better value for money could be achieved by a lump sum arrangement. The late decision to undertake a sole-source tender for the Principal Consultant engagement had an adverse impact on the design timetable for the facility.<sup>16</sup>

26. Delays were experienced with the finalisation and signature of the contracts with the Principal Consultant and the Cost Manager. For the Principal Consultant, contract negotiations extended from December 2003 to June 2004. The Principal Consultant proposed a substantial number of changes to the contract, many of which were agreed to by Finance and reflected in the contract that was signed in July 2004. The Cost Manager contract had been signed in June 2004. Each contract had a commencement date of July 2003.

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<sup>14</sup> In June 2009, the Principal Consultant (PSC) commented to ANAO that it had initially been appointed by DIMIA under a Deed of Standing Offer to provide architectural services only and that: 'Later in the process, PSC was engaged by Finance in the role of architect, however this was changed to the role of Principal Consultant when Finance requested PSC to also provide a range of consultant services including Civil Engineer; Structural Engineer; Mechanical; Electrical; Security; Hydraulics; Fire Services; Fire Engineering; Kitchen Design; Furniture, Fittings and Equipment; Acoustics; Access; Building Certifier; Landscape Architect. The terms design consultant, architect and Principal Consultant are not interchangeable.'

<sup>15</sup> The Request for Tender informed each firm engaged by DIMIA that it was Finance's intention, pending agreement on contract terms, to continue to engage the existing firm for the duration of the project. An alternative approach would have been to leave open the possibility that other firms were being asked to tender, thereby providing the potential for competitive pressure within the engagement process.

<sup>16</sup> Specifically, reporting to Finance by the Project Manager stated that whilst schematic design had commenced on 6 October 2003 it was suspended on 23 October 2003 for nearly six weeks as a result of Finance's decision to undertake a tender process for the Principal Consultant. See further at paragraph 2.36 in the body of the report.

27. Having regard to the timeframe requirements for approaches to the market under the current Commonwealth Procurement Guidelines and the greater emphasis now placed on open approaches to the market, for future projects it is unlikely Finance would have been able to adopt the procurement strategies used on the CIIDC project. In this respect, Finance advised ANAO that it is involved with an exercise being conducted by the Department of Defence (Defence) to establish panel arrangements for project management and other key resources needed by Defence to deliver construction projects. Other Commonwealth agencies will also be able to engage consultants from the Defence Infrastructure Panel.

28. The form of contract employed by Finance provided the advisers with no financial incentives for early completion of all necessary works, and included no financial penalty in situations where the project was delayed. The respective Contract Sums were varied in response to delays in the project given that resources were required to be deployed for a longer period and/or a change in scope that required an increased commitment of resources. As it eventuated, each adviser contract was amended a number of times to increase the total amount payable by Finance (by between 42 per cent and 230 per cent).<sup>17</sup> Most of the increases for the key advisers related to extensions of time as a result of delays in developing and finalising the facility designs, as well as further delays with construction of the facility.<sup>18</sup>

29. In light of this experience, it will be important that Finance improve the contractual framework for key adviser appointments to future construction projects. In May 2009, Finance advised ANAO that, to provide incentives for timely completion of major capital works, it has introduced incentivised contracts into recent major projects such as the National Portrait Gallery.

### **Project governance (Chapter 3)**

30. Key governance aspects of the respecified project included:

- an Interdepartmental Committee comprising Finance as Chair, DIMIA, the Department of the Prime Minister and Cabinet (PM&C), DOTARS,

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<sup>17</sup> This figure relates to the Project Manager and Superintendency Contract, and includes amounts associated with the Project Manager engaging subcontractors to undertake various deferred and additional works. Excluding the amounts payable to subcontractors, the value of the Project Management and Superintendency Contract was increased by 149 per cent.

<sup>18</sup> In respect to the Principal Consultant contract, see further at paragraph 2.44 in the body of the report.

the Department of Employment and Workplace Relations (DEWR) and Environment Australia;

- a Memorandum of Understanding between Finance and DIMIA;
- a Project Control Group involving Finance, DIMIA, the Project Manager and Main Works Contractor (to provide the formal interface between Finance and DIMIA);
- the Project Control Group reporting to a Steering Committee that comprised senior DIAC and Finance officials; and
- fortnightly project implementation meetings comprising Finance and its Project Manager, Principal Consultant and Cost Manager.

31. In addition, a number of plans were prepared to guide the facility construction project. However, some of these plans were not maintained and updated throughout the project, or did not reflect all relevant project activities. There were also some gaps in the framework, including in relation to risk management. For example, an internal audit conducted between November 2007 and January 2008 found that risk assessments for the project were not updated with the frequency required by Finance's guidance.

#### *Whole-of-Government budgeting and cost control*

32. Australian Government consideration of the respecified CIIDC project was undertaken on the basis of a whole-of-project budget that included the costs of facility construction (managed by DIMIA in respect to the original project, and Finance for the respecified project), the cost of undertaking infrastructure works necessary for the Centre to be made operational (the responsibility of DOTARS) and DIMIA's ongoing involvement as the facility user.

33. In circumstances where there is more than one agency involved in the delivery of a project, one agency is undertaking the delivery of works on behalf of another, or funding is obtained from a number of sources, it is important that a comprehensive approach be taken to preparing the overall project budget, comparing estimates to the overall budget and accounting for the final (out-turn) cost. However, there was no authority for Finance and its Project Manager and Cost Manager to exercise any oversight or authority over the DIMIA and DOTARS Budget Allocations. DIAC's actual costs were \$26.2 million. The final out-turn cost of the project is not known because DOTARS was not able to assemble information on its actual project-related costs. Had the cost management format covered all project expenditure as

originally envisaged, it would have also established a clear and regular interface between the various agencies involved in the project, as well as providing for improved accountability, including to the PWC.

### *Interface between infrastructure works and facility construction works*

34. It is important to the delivery of construction projects that there is an effective interface between the infrastructure and facilities works packages, as there can be areas of common risk as well as interrelationships between the two. In respect to the CIIDC project, the provision of the infrastructure works was an integral part of the overall project in connecting the CIIDC facility to the services on the Island—without the infrastructure works the facility would be unable to be constructed and operated.

35. However, a governance structure was not developed and implemented between Finance and DOTARS for the works being managed by DOTARS.<sup>19</sup> This was notwithstanding Finance’s documented risk assessments identifying the provision of utilities and support trades on the Island as a risk to be managed. For example, early in the project, Finance consulted with DOTARS to ensure there were sufficient spare parts on the Island for the port crane (given its importance to project logistics) but Finance (and prior to February 2003, DIMIA) was not involved in DOTARS’ decision-making processes relating to the construction of the additional port facility at Nui Nui, and the subsequent procurement of a new crane or the upgrade to the existing pedestal at Flying Fish Cove.

36. DOTARS conducted a tender between February and April 2003 for a new (or near new) crane at Flying Fish Cove after the decision was made to relocate the existing, older, crane to the additional port facility at Nui Nui. The crane could be either a fixed ships cargo crane or a fixed tower crane, with the scope of work for the latter option involving the tower crane to be installed onto a new pedestal. However, for budgetary reasons DOTARS decided to have the crane pedestal upgraded rather than a new pedestal constructed (a new pedestal was estimated to cost \$700 000 more than upgrading the existing pedestal). DOTARS also did not address, or discuss with Finance, the costs and benefits of constructing a new pedestal as a means of managing some of the

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<sup>19</sup> By way of comparison, there was one important piece of infrastructure works (the construction of a rising sewer main and pump station) that Finance was responsible for delivering and the progress with those works and any impact on the Main Works Contract was addressed each month by the Project Manager in its reports to Finance. Costs were included against Finance’s Budget Allocation.

logistical risks for shipping materials to the Island. Specifically, had a new pedestal been constructed, the existing pedestal could have been retained as a back-up platform in the event of problems with the new crane on a new pedestal.

37. The estimated savings of \$700 000 realised by DOTARS in its budget were small given the importance of an operating port crane on the CIIDC facility construction project and the budget at that time for these works of \$197.7 million. The initial saving in capital expenditure was more than offset by the effects on the facility construction project of the crane being taken out of service due to the discovery of major foundation faults in the pedestal. In this respect, ANAO has estimated a net delay effect on the project of one month and additional costs of \$6.4 million.<sup>20</sup>

### **Facility design and construction (Chapters 4, 5 and 6)**

38. In deciding to respecify the project and transfer delivery responsibility to Finance, the Government had been advised that re-tendering of the project on the basis of a detailed design and delivery of the project through a fixed price contract would provide greater costing certainty prior to construction commencing and address allocation of risk by integrating it into the price. Consistent with this advice, the Government decided that a more conventional delivery method should be adopted in an endeavour to provide greater cost certainty.<sup>21</sup>

39. Following its appointment in May 2003, Finance's Project Manager commenced the development of a project management framework. This included renegotiation of the architect's engagement to become a Principal Consultant engagement<sup>22</sup> and Cost Manager engagements and development of a Communications Plan, a documented Brief and Design Endorsement Process and a documented Project Delivery Strategy.

<sup>20</sup> This comprised: \$577 630 in repair costs met by DOTARS; \$4.63 million in increased payments to the Main Works Contractor under the Main Works Contract; \$736 263 paid to the Main Works Contractor (outside the scope of the Main Works Contract) for it to provide a temporary crane facility at the port, using the 100 tonne crane from the CIIDC site and a tugboat and barge from Indonesia; and \$501 994 in additional payments by Finance to its Project Manager, Cost Manager and Principal Consultant for six weeks of the 13 and a half month delay in the construction stage of the project.

<sup>21</sup> The Memorandum of Understanding signed by Finance and DIMIA stated that: 'The project will be undertaken via a traditional delivery method. Traditional delivery, including a fixed price contract, will provide greater costing certainty prior to construction commencing, and will address allocation of risk by integrating it into the price.'

<sup>22</sup> See footnote 14.

40. The Project Manager's June 2003 Project Delivery Strategy report to Finance analysed various project delivery models/strategies that could be applied to the CIIDC project. It proposed that a GMP delivery method be adopted for the Main Works. The Project Delivery Strategy stated that:

This is a variation on the traditional lump sum form of tender. The Guaranteed Maximum Price provides the client with the least risk to out-turn cost. The contractor is required to deliver the project within the fixed time, cost, quality and scope as defined by the client. This includes the acceptance of risk for design errors and omissions. Therefore the contract sum cannot be varied unless the client requires a significant scope change.

The engagement process involves a competitive tender with documentation at approximately 80 per cent completion. The preferred tenderer enters into a due diligence deed. During this phase the preferred tenderer works with the design consultants to finalise the design documentation, price and the program. This process allows the contractor to provide a proactive role during the finalisation of design. Buildability<sup>23</sup> input and coordination between disciplines is managed by the contractor. The contractor has responsibility to ensure the client's briefed requirements are achieved and all site and sub-surface conditions are addressed.

### *Facility design*

41. Shortly after its appointment, Finance's Project Manager undertook a detailed review of the project program. The Project Manager's initial assessment was that project completion could be delayed by six months from December 2005 to June 2006. At the completion of the program review, a provisional revised date for practical completion of March 2006 was established. Nevertheless, the revised project timetable was based on a short timetable for developing designs and having them endorsed by DIMIA. In addition, the facility construction budget was consistently under pressure from an early stage of the design development process.

42. The facility design was to be prepared in four stages, with each of the stages constituting a 'hold point' such that design work would stop until DIMIA endorsement of that stage of the design was secured. The planned approach explicitly recognised that:

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<sup>23</sup> Buildability is an issue that affects the method of construction, coordination of design elements, temporary works, safety or works sequencing or duration.

- this process may cause delays but that delays during the design phases would ultimately cost less in time and money than delays in the construction phase; and
- the level of risk and associated impact on cost and quality, for delay and changes during the construction is usually higher and is expected to be significantly increased for this project by the remote location of Christmas Island.

43. However, due to time pressures associated with an overly-ambitious project timetable and delays in the development of the design documentation, the management of the project departed from the identified risk management strategy of design hold points and the detailed design being completed before the Main Works tender was undertaken and construction commenced. Instead, the procurement strategy was revised to allow for concurrent conduct of the Main Works Contract tender and completion of design documentation and later design stages were commenced without waiting for DIMIA's endorsement of the prior stage. Specifically:

- it was originally intended that design briefs would be completed by the time the Project Manager was engaged (in May 2003) and that schematic design would commence concurrently with the appointment of the Project Manager.<sup>24</sup> However, after appointment in May 2003, the Project Manager advised Finance that it had become apparent that the CIIDC project requirements had not been endorsed by DIMIA resulting in a new stage being added to the project master program. This new stage was to involve the design brief and the concept design being completed by the end of July 2003 but this did not occur until 24 September 2003;
- preparation of the schematic design then commenced prior to endorsement of concept design, but its completion was delayed;<sup>25</sup> and

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<sup>24</sup> Tenderers for the Project Manager role were further advised that the first phase of the project would involve the development of a project delivery model and Schematic Design, a process that was expected to take two months.

<sup>25</sup> One factor in the delayed completion was that, according to the Project Manager's reporting to Finance, the architect stopped work on the schematic design in order to prepare a response to the Request for Tender for a Principal Consultant issued by Finance in November 2003 for the Principal Consultant contract. See further at paragraph 2.36 in the body of the report.

- the tender was conducted on a less mature design than originally envisaged, with delays in providing information to tenderers extending the tender closing date.

44. Further delays occurred after a preferred tenderer was selected. This was reflected in an unplanned further issue of design documentation (so as to allow a final GMP to be set), a delay in the completion of the Investigation Period (the third and final stage of a GMP procurement process) and in the Main Works Contract being amended prior to signature to include a new clause as follows:

The parties agree that as at the date of this Contract, the drawings<sup>26</sup> have not been provided to the Contractor. The drawings will be progressively provided to the Contractor in accordance with a program to be agreed between the parties.

45. The Main Works Contract was signed in late January 2005 with an amended date for Practical Completion of 31 August 2006, a delay of five months compared to that included in the Request for Tender (RFT). Construction work did not commence on site until April 2005 and Approved for Construction designs were not completed and accepted by the Contractor until September 2006 (they had been scheduled for completion in November 2004). The design documentation issues led to a number of time extensions being approved for the Main Works Contractor.<sup>27</sup>

### *Project budgets and estimates*

46. The original \$197.7 million facility construction budget had been based on 'order of magnitude' amounts developed by DIMIA and Finance in December 2002. Subsequently, the Cost Manager prepared Project Cost Reports for the Concept Design and Schematic Design, and Pre-Tender Estimates for the Early Works and Main Works.

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<sup>26</sup> The contract defined 'drawings' as 'the for Construction Drawings and the specifications for the work under the Contract to be provided by the Principal to the Contractor'.

<sup>27</sup> Extensions of time are granted where there is an allowable delay under the contract and the assessment of any claim is to compare what was supposed to happen with what actually occurred and then identify the reasons for any difference. In June 2009, the Principal Consultant advised ANAO that: 'The Main Works Contract was executed prior to the completion of the construction documents. The contract required the Contractor to accept these documents so that the risk of documentation discrepancies, errors and omissions transferred to the Contractor. During the procurement process, PSC had expressed concern to Finance and the Project Manager that, having executed the contract, there was no incentive for the Contractor to accept the documents and the risk. It was our concern that acceptance of these documents would be used as a lever by the Contractor in contractual negotiations.'



47. The Concept Design Cost Report dated September 2003 stated that the project was within the allocated budget. The Confidential Cost Breakdown provided to the Public Works Committee (also in September 2003) was based on the Concept Design Cost Report. However, the Committee was not informed that the estimate on which it had been based had been tailored to match the budget such that it did not reflect a genuine estimate of the cost to complete the works as designed at the Concept Design phase.<sup>28</sup> In particular, the Committee was not informed that:

- the estimate included a contingency figure 46 per cent lower than that recommended by the Cost Manager; or
- the Government decision to respecify the project and transfer delivery responsibility to Finance had provided a mechanism for the provision of additional funding following market testing, should it be agreed by Government.

48. In addition, advising the Committee that the construction estimate as \$177.8 million implied a level of precision that was at odds with the level of project uncertainty at this stage. An estimate to the nearest \$20 million, or more, would have been more commensurate with the state of development of the design and the procurement plan. Similarly, the Schematic Design Cost Report included an estimate of \$232 948 096 when, for this level of design, an order of accuracy of +/- 30 to 40 per cent may generally be expected.

#### *Main Works tender*

49. At the time Finance issued the RFT for the Main Works Contract, its Cost Manager had estimated (in the Schematic Design Cost Report) that the facility construction project was \$35 million over budget. Finance advised ANAO that market testing (a prerequisite to seeking additional funding from Government) was to occur prior to investigating budget reduction measures.

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<sup>28</sup> In June 2009, the Principal Consultant advised ANAO that it 'had recognised that there was a fundamental mismatch between the government budget and the government brief. The result of not addressing the budget issues was that, although design started in early 2002 with the design competition, basic design issues affecting scope and centre layout were still being resolved late in 2004.'

On the basis of the tenders received,<sup>29</sup> Finance obtained a \$59 million increase to the original Finance Budget Allocation of \$197.7 million.

50. Finance decided to enter into the Main Works Contract on the basis of its assessment that the GMP was \$207.949 million. However, this was not the maximum amount that could become payable under the contract. Specifically, through the contract, Finance had agreed to underwrite potential 'value engineering savings' of \$13.054 million and the Main Works Contractor was entitled to a bonus of \$200 000 if a sufficient amount of work was awarded to Christmas Island businesses. This meant that, at the time it was signed, the 'true' GMP was over \$221 million such that the budget increase of \$59 million (including a contingency of \$6 million) was likely to be insufficient to fund the cost of construction. As it eventuated, the local business development bonus was paid in full and \$4.9 million of the 'value engineering savings' could not be realised, with the shortfall met by Finance.

51. In addition, the decision to undertake the main facility works tender process and sign a construction contract prior to detailed design being completed inhibited the planned transfer of risk to the construction contractor under a GMP contract. This was reflected, for example, in the amount of Provisional Sums<sup>30</sup> included in the contract price.<sup>31</sup>

52. A second budget increase was obtained by Finance in August 2006. The second increase, \$60 million, included the amount of \$4.9 million arising from the shortfall of expected savings. However, the second budget increase was necessary, in large part, due to increased external costs that resulted directly or indirectly from design delays and the change in Main Works delivery

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<sup>29</sup> The construction cost of one of the tenders was below the Cost Manager's pre-tender estimate. The other tender was \$23 million above the pre-tender estimate. Nevertheless, the lower priced tender still involved a tendered GMP that was expected to result in a budget overrun of \$59 million (including \$6 million contingency allowance). The Cost Manager advised Finance that: 'The tenders received compare favourably to the pre-tender estimate and generally reflect fair and reasonable pricing given the prevailing market conditions where resources are stretched and competitive interest is perhaps less keen than in recent years.'

<sup>30</sup> Provisional sums for certain items of work or equipment in a construction contract are estimates only, and do not represent a maximum limit for that item of equipment or work. This is because it is not possible to accurately predict the cost of those items or work at the time of entering into the contract, or it is uncertain as to whether items of work will be required.

<sup>31</sup> The contract price included \$9.6 million in Provisional Sums relating to 20 work items. The two largest Provisional Sum items totaled \$8 million (\$5 million for 'Loose Furniture, Fixtures and Equipment' and \$3 million for the 'Complete landscaping and irrigation') with Finance's second budget increase nearly doubling the allowance for these items as it included an additional \$7.7 million provision for 'Escalation of provisional sum items currently being tendered for landscaping and furniture, fixtures and equipment'.

approach from a traditional sequential process to instead involve an overlap of the design and tendering processes, with the tendering process completed and a contract signed based on incomplete design documentation. ANAO estimated that the design-related costs required two-thirds of the \$60 million second budget increase.

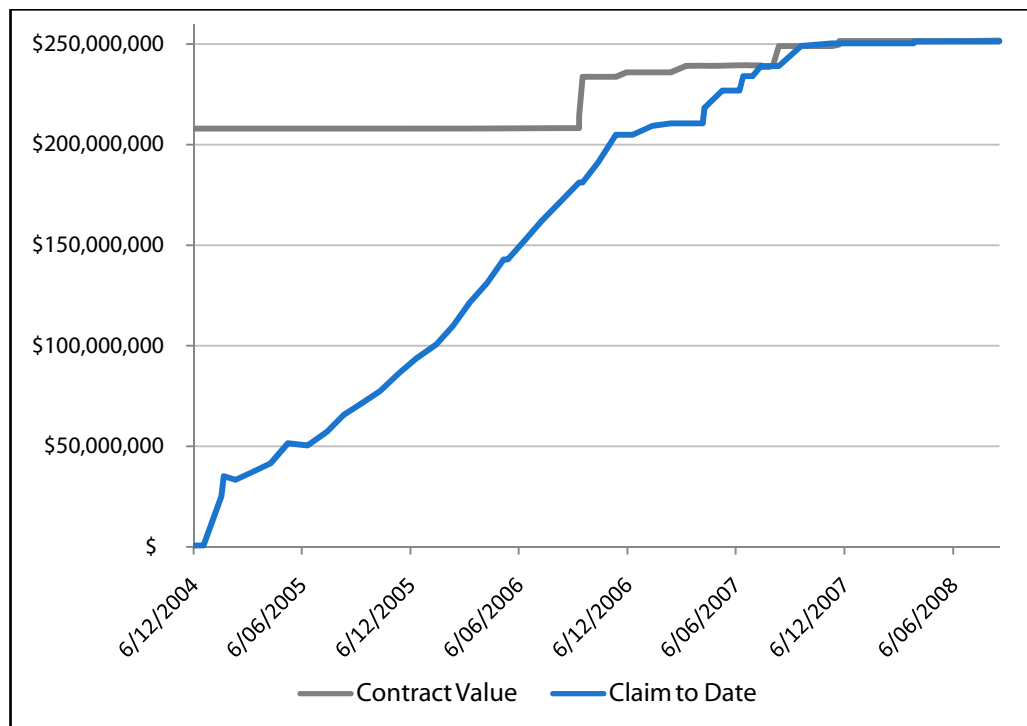
### *Construction cost increases and delays*

53. The majority of Finance's second budget increase was used to fund a \$43 million increase in the value of the Main Works Contract. In this respect, the value of the Main Works Contract was varied on 25 occasions between May 2006 and August 2008. As illustrated by Figure S 1, the final value of the Main Works Contract was \$251.6 million, a figure 21 per cent higher than the 'headline' GMP of \$207.9 million assessed by Finance at the time the Contract was signed. In addition to payments attributed to the Contract, a further \$1.34 million was paid to the Main Works Contractor in relation to repairs and maintenance of the construction camp (\$605 516) and three of the four crane journeys (\$736 263). There were also other works originally intended to be delivered under the Main Works Contract that were delivered through other means, specifically:

- a variation to the Early Works Contract was negotiated to include \$1.3 million of civil works at the northern boundary of the CIIDC site; and
- various deferred and additional works that were completed by Finance (through its contracted Project Manager acting as a Construction Manager) in order to bring the facility to a 'fit for purpose' condition such that it could be handed over to DIMIA—\$2.35 million including \$115 275 in contract administration fees paid to the Project Manager (in effect, the Project Manager performed a role similar to that of a Construction Manager although its contract was not amended to address this extended and different role).

**Figure S 1**

**Main Works Contract Value and Contract Payments**



Source: ANAO analysis of Finance data.

54. Delays in the delivery of the Main Works Contract, and additional costs, also resulted from:

- the new crane at Flying Fish Cove being taken out of service in January 2006 due to the discovery of major foundation faults during routine maintenance. The crane was out of service for some six months while the foundations and footings were repaired and/or replaced;
- on 31 August 2006, power to the CIIDC site failed due to a fault in the underground high voltage main cable connecting the facility to the Island’s power supply.<sup>32</sup> Power was interrupted fully for two days and

<sup>32</sup> In November 2002, DOTARS had installed on Christmas Island an 11kV power cable running between the Christmas Island Power Station and the CIIDC in two sections (the first of 4400 metres and the second of 5880 metres).

was not fully restored until 9 September 2006.<sup>33</sup> In addition to the cost increases borne by Finance for this failure, the DOTARS Budget Allocation was increased in October 2007 by \$5 million for DOTARS to replace the main power supply cable to the site that had been installed as part of the DOTARS infrastructure works but which had subsequently failed;<sup>34</sup> and

- inclement weather—in total, nine extensions of time were granted for wet weather between September 2006 and May 2007 (as part of the negotiation of the Second Deed of Settlement Finance agreed to release to the Main Works Contractor liquidated damages it withheld in respect of the failure to achieve Practical Completion by 19 April 2007, and waived its right to impose liquidated damages up to and including 13 October 2007 with the Second Deed also providing for a payment by Finance of \$10 million).<sup>35</sup>

## Project outcomes and evaluation (Chapter 7)

55. The objectives of the project were to:

- build the first purpose-built CIIDC in Australia that met the design brief and was in accordance with the time, cost and quality requirements;
- achieve the successful completion of the project whilst maintaining support from the Christmas Island community;
- deliver the project with environmental excellence;
- build the project with better than industry performance in respect of Occupational Health and Safety;

<sup>33</sup> Amongst other things, the power failure resulted in Finance increasing the value of the Principal Consultant contract by \$20 580 in October 2007 for the design and documentation of a temporary power solution for the CIIDC so as to mitigate the risk of further power failures to the facility.

<sup>34</sup> This was on the condition that, when the contractual matter was settled between the original contractor and DOTARS, funds from any settlement were to be returned by DOTARS. In May 2009, AGD advised ANAO that: 'The power cable was replaced in 2008 at a cost of \$2 720 677. Settlement has not been reached with the original supplier. The Australian Government Solicitor has been engaged to seek compensation from the original supplier and is pursuing the matter.'

<sup>35</sup> In May 2007, the Main Works Contractor had lodged seven notices of dispute with Finance. At that time, the Contractor claimed that the extension of time that was in dispute was 198.8 days and the amount of extension of time costs in dispute was \$40.1 million. As of August 2007, after allowing for prolongation of Principal-caused delays, the Contractor claimed that an extension of 234.9 days was in dispute with costs of \$46.89 million. After allowing for the concurrency of some claims, the days in dispute were identified by Finance as representing a delay of 89 days with an amount in dispute of \$19.45 million.

- deliver the project in a collaborative environment; and
- enhance the reputations of the Principal (Finance), the Project Manager, and subcontractors of the Project Manager and/or Principal and Works Contractor for excellence in construction.

56. The monitoring of achievement against the first objective was a key ongoing task for Finance and its advisers. Whilst the measurement of performance against the remaining project objectives was not carried out in a formal sense, Finance advised ANAO that it monitored aspects of these objectives during the course of the project. However, as measuring construction projects' performance is essential for ensuring that planned improvements in cost, time and quality are achieved and for identifying potential for improved approaches, there would have been benefits in Finance developing procedures that require:

- a formal post-project review of major construction projects to be undertaken soon after they are completed so as to identify aspects and processes that have been particularly successful as well as those where lessons can be learned; and
- significant project changes, including to the budget, to be promptly reported to the Public Works Committee.

### *Project time and cost*

57. As noted earlier, Australian Government consideration of the respecified CIIDC project was undertaken on the basis of a \$276.2 million whole-of-project budget that included the costs of facility construction (managed by DIMIA in respect to the original project, and Finance for the respecified project), the cost of undertaking infrastructure works necessary for the Centre to be made operational (the responsibility of DOTARS) and DIMIA's ongoing involvement as the facility user. The final budget was \$400.5 million but the out-turn cost of the overall project is not known because, whilst Finance's and DIMIA's costs have been established, DOTARS was not able to assemble information on its actual project-related costs.

58. In terms of the CIIDC facility, the key project delivery parameters of the then Government's February 2003 decision to respecify the CIIDC project and transfer delivery responsibility to Finance involved a Budget Allocation of \$197.7 million for Finance to manage the project from February 2003 to completion, which was expected to take 34 months (that is, practical completion by December 2005). In these respects:

- the final approved budget for the facility aspects of the project was \$317.0 million, an increase of 60 per cent. As at February 2009, the out-turn cost of the facility works was \$311.7 million, \$5.3 million or 1.7 per cent below the final budget; and
- the transfer of the CIIDC facility to DIMIA occurred on 7 April 2008. This represented a total project elapsed time of 61 months from the date the project was transferred to Finance, 27 months (79 per cent) longer than the anticipated timeframe when the respecified project was transferred to Finance for delivery.

### *Meeting client agency needs*

59. DIMIA commissioned a review of the CIIDC and its security arrangements so as to report on whether the facility meets the stated intent of the PWC submission on the proposed facility, and whether it conforms to the recommendations of the Palmer Report, the Comrie Report and the PWC findings in relation to the Maribyrnong Immigration Detention Centre. The review was completed in December 2007, at which time the facility works were close to being completed. It concluded that the purpose of the design brief had been met. Subsequently, DIAC has experienced some shortcomings in the quality of some of the work and issues with the maintenance of the facility and rectification of defects during the Defects Liability Period.

## Summary of agency responses

60. A copy of the proposed report was provided to Finance, DIAC, AGD and DITRD LG. Comments were provided by each agency and have been incorporated in the body of the report. Summary comments were also provided, as follows.

### Finance

Finance was responsible for managing the delivery of the CIIDC on behalf of DIAC. This project was unique in that it was the first purpose-designed and built Immigration Detention Centre in Australia, and as such there were no established benchmarks with which it could be compared. The difficulties associated with constructing such a unique project were compounded by the remoteness of Christmas Island, with it being some 1500 kilometres from the nearest point on the Australian mainland, yet only 360 kilometres from Indonesia. There were also significant local challenges to overcome including the sensitivity of the natural environment (most of the Island is designated

national park), limited Island infrastructure and seasonal conditions to name a few.

Whilst Finance acknowledges the programming delays and cost increases that were associated with delivering this project, we consider 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. For the CIIDC these processes may not have foreseen all the issues resulting from the complexity of this particular project, however it is reasonable to expect that they would have narrowed the gap between the initial budget and the final out-turn cost. Finance has also put considerable effort into improving its business processes and has, since receiving responsibility for this project, developed a Better Practice Guide for delivery of capital works projects we deliver. Finance continues to review and improve this guide, and to this end we welcome the ANAO's audit and findings into our project management processes in the context of this project.

## **Department of Immigration and Citizenship**

As you know DIAC does not deliver major works itself, and I note all six recommendations are addressed to the Department of Finance and Deregulation who have a key responsibility to deliver major projects on behalf of other Commonwealth Agencies. Nevertheless, I support all recommendations and recognise the sound principles behind them apply to all works projects irrespective of size.

I am pleased to advise that the key findings and audit recommendations will be carried forward and considered in relation to future works to be undertaken by the Department. This includes the proposed Villawood redevelopment which is in concept stage at present.

Specifically, I note the recommendation for a post-project review of completed works. Now that the facility has been in operation for several months it would be appropriate to do this. I strongly support this happening.

## **Attorney-General's Department**

The Attorney-General's Department supports the recommendations. Implementation will provide robust governance for major capital projects undertaken by the Commonwealth.

**61.** Extracts of the proposed reports were provided to Finance's Project Manager, Principal Consultant and Cost Manager. Detailed comments were



provided by the Project Manager and Principal Consultant and have been reflected, as appropriate, in the body of the report.

# Recommendations

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**Recommendation No.1**  
**Paragraph 3.41**

ANAO *recommends* that, in future circumstances where the Department of Finance and Deregulation is delivering capital works projects that depend upon Commonwealth owned and/or operated infrastructure, project governance arrangements be developed to manage the risk and cost of project construction and infrastructure decisions being made in isolation by:

- (a) developing a stronger leadership model that sets out the mutual obligations of each agency to coordinate decisions of critical importance associated with interdependent activities; and
- (b) adopting a sound approach to preparation and management of the overall project budget by comparing design milestone estimates of the cost of works to the overall budget and subsequently accounting for the final (out-turn) cost.

**Agreed response:** Finance, DIAC, AGD and DITRDLG.

**Recommendation No.2**  
**Paragraph 4.47**

ANAO *recommends* that the Department of Finance and Deregulation informs the Public Works Committee of the project budget, the estimate of cost and order of accuracy on which the estimate is based when providing information to the Committee for projects it is delivering.

**Agreed response:** Finance, DIAC, AGD and DITRDLG.

**Recommendation  
No.3****Paragraph 5.66**

ANAO *recommends* that the Department of Finance and Deregulation, prior to committing funds to a major construction contract:

- (a) provide decision-makers with an assessment of any factors that may be reasonably expected to increase the overall cost to the Commonwealth, or reduce the scope or quality of the works; and
- (b) support spending authorisation and approval processes by advising decision-makers on the maximum amount that may become payable under the contract, as well as an assessment of the most likely cost.

**Agreed response:** Finance, DIAC, AGD and DITRDLG.

**Recommendation  
No.4****Paragraph 6.53**

ANAO *recommends* that the Department of Finance and Deregulation promote improved project delivery outcomes by:

- (a) providing decision-makers with a comprehensive assessment of risks and how they can be managed prior to making any significant departures from the planned project delivery strategy; and
- (b) implementing strategies aimed at promoting greater collaboration and teamwork between key consultants (including project managers, cost managers and designers) in working toward the established project objectives.

**Agreed response:** Finance, DIAC, AGD and DITRDLG.

**Recommendation  
No.5**

**Paragraph 7.29**

ANAO *recommends* that the Department of Finance and Deregulation require its key project management and other advisers to participate in a post-project review of major construction projects soon after they are completed so as to identify aspects and processes that have been particularly successful as well as those where lessons can be learned.

**Agreed response:** Finance, DIAC, AGD and DITRDLG.

**Recommendation  
No.6**

**Paragraph 7.43**

ANAO *recommends* that the Department of Finance and Deregulation:

- (a) when seeking additional funds for its capital works projects, develop budget breakdowns that clearly identify the elements that are proposed to be revised; and
- (b) explicitly recognise within its internal guidance material the requirement to report significant project changes, including to the budget, to the Public Works Committee.

**Agreed response:** Finance, DIAC, AGD and DITRDLG.

# **Audit Findings and Conclusions**



# 1. Introduction

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*This chapter provides an overview of the then Government's decision to construct a purpose built Immigration Detention Centre on Christmas Island, as well as the various public works projects that have been proposed in connection with the construction of this Centre. It also sets out the audit objectives and approach.*

## Background

**1.1** In the latter part of 2001, the then Government introduced several measures to address an increase in unauthorised arrivals to Australia. These included:

- legislation excising Christmas Island, Ashmore and Cartier Islands and Cocos (Keeling) Islands from the migration zone for the purposes of unauthorised arrival;
- arrangements for the reception and accommodation of unauthorised boat arrivals and the processing of their claims for protection at offshore locations, including Nauru, Papua New Guinea and on the Australian Indian Ocean Territory of Cocos/Keeling Islands; and
- enhanced facilities for the reception and accommodation of unauthorised arrivals on Christmas Island.

**1.2** In addition, on 11 March 2002, the then Government decided to proceed urgently to construct a new purpose built permanent Immigration Reception and Processing Centre on Christmas Island, together with the construction of essential infrastructure associated with the construction and on-going operation of the Centre. The project is now referred to as the Christmas Island Immigration Detention Centre (CIIDC).

## Christmas Island Public Works Projects

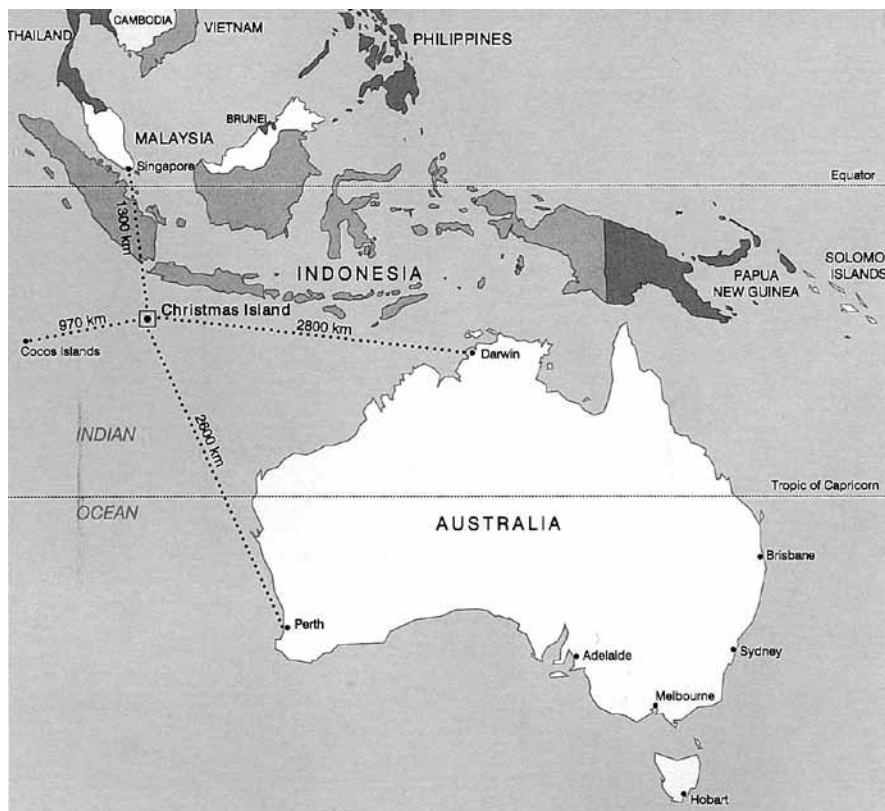
**1.3** Christmas Island is located in the Indian Ocean, approximately 320 kilometres south of Java Head and 2 630 kilometres from Perth (see Figure 1.1).<sup>36</sup> The island has an area of 135 square kilometres and consists mainly of limestone interstratified with volcanic rock.

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<sup>36</sup> Joint Standing Committee on the National Capital and External Territories, *Current and future governance arrangements for the Indian Ocean Territories*, May 2006, p. 8.

**Figure 1.1**

**Location of Christmas Island**



Source: Extract from AUSLIG MAP 94/068, *Christmas Island, Edition 2 1995*.

**1.4** At Australia’s request, the United Kingdom transferred sovereignty of Christmas Island to Australia in 1958.<sup>37</sup> Together, the non-self governing external territories of Christmas Island and the Cocos (Keeling) Islands make up Australia’s Indian Ocean Territories (IOTs). The IOTs are administered by the Australian Government (up to November 2007, by the then Department of Transport and Regional Services—DOTARS—and, since that date, by the Attorney-General’s Department—AGD). Local government services are provided on Christmas Island by the Shire of Christmas Island.

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<sup>37</sup> *ibid.*



## Common Use Infrastructure

1.5 In June 2001, the then Government announced funding of \$68.6 million for the construction of three common use infrastructure projects on Christmas Island as part of a \$100 million package to facilitate the development of a space centre on the island.<sup>38</sup> The common use infrastructure proposal was referred to the Public Works Committee (PWC or the Committee) on 9 August 2001 and a submission provided. The scope of works included three projects:

- an airport upgrade;
- an additional port on the east coast; and
- a new link road from the east coast to Lily Beach Road.

1.6 The reference lapsed when the previous Committee ceased to exist with the prorogation of Parliament on 8 October 2001. Prior to prorogation, DOTARS applied, and was granted approval in September 2001, for concurrent documentation on the grounds of the urgent nature of the proposed CIIDC project. This approval allowed DOTARS to undertake preliminary planning associated with the proposed works.

1.7 On 21 March 2002, the then Government:

- re-referred a common use infrastructure project to the PWC, but with a changed scope of work. The scope of works now related solely to improvements to the airport. The referral motion stated that works to upgrade the existing port and construct an alternative port and associated access road on the east coast of the island would also be required for the space centre but that these works would be undertaken as part of the project for the new CIIDC; and
- moved a motion in the House of Representatives to the effect that, given the urgent nature of the work, it was expedient to carry out the construction of a purpose-built CIIDC without the project being referred to the Committee. The expediency motion advised the House of Representatives that:

The likely cost of the project has yet to be determined. Since the new detention facility will be the first such facility, there is no precedent upon which cost

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<sup>38</sup> On 22 June 2001, the then Government announced that it would provide up to \$100 million, under the Strategic Investment Coordination process, to assist the Asia Pacific Space Centre (APSC) project to proceed on Christmas Island.

estimates can be accurately established. The design of the facility will impact on the staffing level required to operate it and the consequent requirement for associated support infrastructure, particularly housing, which will impact on costings.

### *Airport upgrade project*

1.8 The PWC travelled to Christmas Island and inspected the scope and environs of the proposed airport upgrade works, which the Committee was advised had an estimated cost of \$51.3 million. A public hearing was held on the Island on 12 June 2002. The Committee tabled its report on 27 August 2002, making five recommendations:

- in order to encourage international aircraft to use Christmas Island, as a matter of urgency, DOTARS approach the Civil Aviation Safety Authority to remove its exemption on the provision of emergency services at the airport;
- DOTARS seek further consultations with the Shire of Christmas Island in order to address any concerns raised by the Shire to the mutual satisfaction of the Shire and the Commonwealth;
- DOTARS enter into discussions with Christmas Island Phosphates in order to reach a compromise with regard to the removal of phosphate deposits from areas affected by the airport upgrades without the company's activities impacting on the cost or time frame of the project;
- the conduct of a social impact study and, if necessary, action to upgrade Christmas Island infrastructure and services to ensure that the local community would not be disadvantaged by the anticipated increase of workers assigned to the proposed public works projects; and
- the proposed common use infrastructure project on Christmas Island proceed pending approval of the draft Environmental Impact Statement and the fulfilment of the four other recommendations made in its report.

1.9 The expediency motion for the airport upgrade works to proceed was passed by the House of Representatives on 29 August 2002.

### **Immigration Detention Centre: Original Project**

1.10 In late 2001, in preparation for the wet season, temporary reception facilities for unauthorised boat arrivals were established on Christmas Island

at a site on Phosphate Hill. Previously, unauthorised arrivals had been accommodated in the Island sports hall and in tents erected nearby.

**1.11** As indicated earlier, on 11 February 2002, the then Government requested that agencies prepare a plan to construct a purpose-built permanent detention and processing facility on Christmas Island within six months. The plan was prepared within one month, principally by the then Department of Immigration and Multicultural and Indigenous Affairs (DIMIA)<sup>39</sup> and DOTARS (with input from other agencies including the Department of the Prime Minister and Cabinet (PM&C), the Department of Finance and Deregulation<sup>40</sup> (Finance) and the Department of the Treasury (Treasury)). The proposed approach involved total indicative costs of \$242.9 million for a purpose built facility with a first stage delivering core services and accommodation for up to 400 people within six months, and completion within the following four months.

**1.12** As noted by the PWC, the proposed purpose built permanent facility was recognised as being the first of its kind and, as such, there was no precedent upon which cost estimates could be accurately established. In respect to the \$242.9 million estimate, DIMIA records state that:

This budget allocation was developed in secrecy without a site being identified, any design work being commenced, any contact with Christmas Island contractors or officials nor any precedent for a purpose designed and built IRPC. The project was also to be delivered in a 39 week period. DIMIA and DOTARS had three weeks to develop this budget estimate, agree the costings with Finance and lodge the submission.

**1.13** On 11 March 2002, the then Government decided that a purpose-designed CIIDC should be built with capacity for around 1200 people, together with associated infrastructure. The key terms of the then Government's decision included that:

- a 'fast-track' process be used, involving parallel design and construction for the purpose-built CIIDC, noting that this required a

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<sup>39</sup> Between January 2006 to January 2007 the department was known as the Department of Immigration and Multicultural Affairs (DIMA). The department is now known as the Department of Immigration and Citizenship (DIAC).

<sup>40</sup> Prior to the change of Government following the 2007 Federal Election, the department was known as the Department of Finance and Administration.

'highly truncated'<sup>41</sup> design and construction timetable reducing the estimated development timetable for a first stage capacity of up to 400 detainees from around two years to 26 weeks, and completion within the following 14 weeks, if industry was able to meet this challenge;

- a resolution be made in the House of Representatives as soon as possible that, by reason of the urgent nature of the work, the development of the CIIDC and associated works should not be referred to the PWC; and
- a Steering Committee be established, comprising DIMIA, DOTARS, PM&C and Finance, to oversight the development of the CIIDC and associated infrastructure. In terms of project delivery, the key responsibilities fell to DIMIA and DOTARS, as follows:
  - DIMIA would be responsible for the construction of the facility at North West Point; and
  - DOTARS was responsible for all works outside the detention facility, specifically: all associated infrastructure and headworks to support the facility at North West Point; construction of staff housing in the Island's residential area; and provision of the construction camp at Phosphate Hill.

**1.14** An Interdepartmental Committee report dated 21 March 2002 recommended that the overall project cost estimate be reduced from \$242.9 million to \$210.4 million.<sup>42</sup> The reductions were associated with a reduced length of access road to be sealed and reduction in staff housing. Housing would be progressed in stages depending on operational concept requirements developed over the course of the project, with further requirements to be developed in the context of the 2003–04 Budget.

**1.15** As noted at paragraph 1.7, also on 21 March 2002, a motion was moved in the House of Representatives to the effect that, given the urgent nature of the work, it was expedient to carry out the construction of a purpose-built

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<sup>41</sup> It was noted that the 'fast-track' process would involve a select pre-tender arrangement for construction based on a cost plus arrangement and judging capacity to deliver rather than tendering against specification.

<sup>42</sup> DIMIA commissioned an independent Quantity Surveyor to review the revised estimate. The Quantity Surveyor's estimate was \$224 million. Since this variance was less than 6.5 per cent above the budget of \$210.4 million, agencies decided not to adjust the budget pending more detailed design and development of costings.

CIIDC without the project being referred to the PWC. In its sixty-sixth Annual Report, the Committee noted (page 18) that:

- its Members had expressed concern that the frequent exemption of works on the grounds of urgency may set a precedent by which projects are allowed to bypass appropriate Committee scrutiny;
- it always deals with referrals in an expeditious fashion and has never delayed a project; and
- at the time of the writing of the report in February 2003, there had been very little progress on the construction of the CIIDC.

### **Review of original CIIDC project**

**1.16** The project approved in March 2002 had been for a 1200 person facility to be built in 39 weeks. By June 2002, architects and a Construction Contractor had been appointed. However, delays in the project timelines and increases to project costs had begun to emerge.

**1.17** By September 2002, the project estimate had increased to \$427 million with a delivery period in the order of 120 weeks. On 23 September 2002, the then Government decided that PM&C should convene a taskforce to provide it with further advice including independent expert commentary on the current design brief. Legal advice on available options was also obtained.

**1.18** After considering the work of the taskforce and commercial and legal advice, in November 2002 the then Government reaffirmed the need for the CIIDC project. The Government further decided that the Finance Minister (in consultation as necessary with the Minister for Immigration and Multicultural and Indigenous Affairs and the Minister for Regional Services, Territories and Local Government) should enter into discussions with the appointed Construction Contractor to examine the feasibility of achieving construction of the facility within the \$210.4 million budget. This was to include the possibility of:

- renegotiating the contract in the light of the revised, less urgent timeline for construction of the CIIDC, with a view to amending the contract to a more conventional approach for a project of the CIIDC's nature; or
- terminating the contract and entering into a new contract, possibly on an alliance basis or possibly with another contractor, that would allow construction of the CIIDC with a revised design brief.

**1.19** It was concluded that construction of a 1200 place purpose-designed and built facility could not be achieved within the budget, and it was decided to terminate the contract with the Construction Contractor.<sup>43</sup> After considering options, on 18 February 2003 the Government decided to respecify the project to an 800 place facility at a forecast estimate of \$276.2 million.<sup>44</sup> At that time, responsibility for delivering the CIIDC facility was transferred from DIMIA to Finance, with a more conventional delivery method to be adopted in an endeavour to provide greater cost certainty.<sup>45</sup> Responsibility for the provision of associated infrastructure remained with DOTARS.

## Referral and PWC consideration of the respecified project

**1.20** The slow progress on the original project was raised with DIMIA by the Senate Legal and Constitution Affairs Committee in February 2003 during the consideration of Additional Estimates for 2002–03. The PWC initially requested a briefing on the work from DIMIA but was subsequently informed by the Minister for Immigration and Multicultural and Indigenous Affairs that project delivery responsibility had been transferred to Finance. In response to a request from the PWC that the respecified project be referred to the Committee, in March 2003 the Parliamentary Secretary to the then Finance Minister advised the Committee that:

Despite some adjustment to the details of the project, it is, still, the same project, which the Parliament determined should proceed to construction, and construction has commenced. Given that [*the Act*] refers to proposed works, the Act does not contemplate referral to the [*Committee*] of a project that has already commenced. On this basis, the project cannot be referred to the Committee.

**1.21** In June 2003, the PWC again wrote to the Parliamentary Secretary to the Finance Minister requesting that the respecified project be made subject to a full PWC inquiry, and requested a briefing by Finance officials on the works carried out to date and proposed to be undertaken in future at the Committee's

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<sup>43</sup> Termination took effect on 31 May 2003.

<sup>44</sup> The \$276.2 million budget and 34 month timeframe for the respecified project to be delivered by Finance was established after nine months of detailed design work, market place investigation and cost reviews incorporating expert costing advice. In addition, advice was provided by DOTARS on the cost of the infrastructure works completed at that time.

<sup>45</sup> The Government had been advised that, re-tendering of the project on the basis of a detailed design and delivery of the project through a fixed price contract would provide greater costing certainty prior to construction commencing and address allocation of risk by integrating it into the price.

private meeting to be held on 26 June 2003. Further legal advice was obtained by Finance, which concluded that the Government could either:

- proceed with the construction of the CIIDC without the need to refer the project to the PWC since the March 2002 expediency motion still stood; or
- refer the project to the PWC, if the then Government's view was that the project was now effectively a new project and, therefore, no longer covered by the March 2002 expediency motion.

**1.22** The legal advice also recognised that it was open to any Senator or Member of the House of Representatives to move a referral motion. In this respect, in June 2003, Senator Robert Ray indicated that he was going to move a motion to refer the project to the PWC. In light of this development, on 19 June 2003, the Finance Minister agreed to a recommendation from Finance that his Parliamentary Secretary move a motion in the House of Representatives as soon as practicable referring the respecified project to the PWC for its consideration. The Minister further agreed that Finance officials could brief the PWC at its 26 June 2003 meeting.

**1.23** On 19 June 2003, the proposal to construct a respecified, purpose-built CIIDC was referred to the PWC. The proponent agency for the work was Finance.

**1.24** A public hearing into the proposed work was held at Parliament House, Canberra,<sup>46</sup> on Friday, 31 October 2003. The Committee's 2 December 2003 report made two recommendations, as follows:

- Finance continue to liaise with the Christmas Island Chamber of Commerce and other relevant organisations in relation to the issues raised in the Christmas Island Chamber of Commerce submission; and
- the proposed respecified CIIDC proceed at an estimated cost of \$197.7 million.

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<sup>46</sup> In its report, the Committee noted that, in June 2002, while conducting an inquiry into proposed common use infrastructure on Christmas Island, the Committee had had the opportunity to inspect both the temporary immigration and reception processing centre and the site of the proposed new immigration and reception processing centre as well as receiving a briefing on the proposed permanent immigration and reception processing centre project. The Committee's report further stated that on this basis, and in order to occasion no further delay to a project 'so important to local commerce', the Committee had elected to hold its hearing into the respecified immigration and reception processing centre project in Canberra.

## Audit approach

**1.25** A performance audit of the CIIDC project was first included as a potential audit in ANAO's Planned Audit Work Program for 2006–07. It was envisaged that the audit would commence once the project was completed, and would focus on the respecified project to be delivered by Finance as well as DOTARS' construction of services infrastructure and staff housing. The audit was also to have regard to the original project managed by DIMIA, particularly so as to assess the steps taken to address the issues that arose prior to the transfer of responsibility.

**1.26** As the project was not completed in 2006–07, the audit of the construction of the CIIDC was not commenced that year but was rescheduled as a potential topic in the 2007–08 Audit Work Program.<sup>47</sup> Practical Completion by the Main Works Contractor of the CIIDC occurred on 13 October 2007.<sup>48</sup>

### Audit scope and objectives

**1.27** The audit focused on the CIIDC project as respecified in 2003, and examined all aspects of the project from planning through to completion, including processes associated with the referral to the PWC. The audit also had regard to the original project managed by DIMIA, and included an examination of the construction of infrastructure services and staff housing.

**1.28** The objective of the audit, in examining the construction of the CIIDC, was to assess:

- the adequacy of the planning and delivery processes for the project;
- the value-for-money achieved in the delivery of the project, including with regard to the suitability of the centre for its intended purpose; and
- the extent to which the *Public Works Committee Act 1969* (PWC Act) and approved procedures have been complied with.

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<sup>47</sup> Day-to-day management and conduct of this audit, and the audit work underpinning ANAO Audit Report No.20 2008–09, *Approval of Funding for Public Works*, 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.

<sup>48</sup> In April 2009, Finance advised ANAO that it does not expect the Final Certificate to be issued before 30 June 2009.



**1.29** Audit fieldwork was conducted between February and October 2008. Various Issues Papers were provided to agencies between February 2009 and April 2009.

### **Finance's project delivery better practice guide**

**1.30** An internal audit of the CIIDC project undertaken by Finance noted that the department's Asset Management Group (AMG) had implemented a better practice guide to the delivery of major capital works in 2006,<sup>49</sup> but that this guide was not typically referenced following its implementation. In November 2008, Finance advised ANAO that, following the internal release of the second version of the guide in September 2007, a progressive review of internal work processes and standard operating procedures had been undertaken by Finance's Property and Construction Division (within AMG) as part of moves to improve the overall governance framework. Finance provided ANAO with a copy of the third version of the guide (dated November 2008) and advised that the final release of the revised guide would occur after internal consultation within the department had been completed. In May 2009, Finance advised ANAO that the fourth version of its better practice guide had been issued for the internal use by Finance officers in the Property and Construction Division and that it continues to update and improve its guide as it learns from the experience of the CIIDC and other projects.

**1.31** ANAO has had regard to Finance's better practice guide in developing the proposed audit recommendations. In particular, where the guide has adequately addressed matters identified by the ANAO audit as requiring attention, this has been explicitly recognised (in lieu of an ANAO recommendation being made).

**1.32** The audit was conducted in accordance with ANAO Auditing Standards at a cost to the ANAO of \$640 000.

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<sup>49</sup> In May 2009, Finance advised ANAO that the first draft of the guide was introduced in July 2005, during the construction stage of the CIIDC project.

## 2. Key adviser engagements

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*This chapter examines the appointment of Finance's Project Manager, the Principal Consultant (responsible for design and construction inspection services) and Cost Manager. It also examines the contractual arrangements with each adviser, and their management (including significant increases in contract payments compared to those expected at the time the appointments were made and contracts signed).*

### Introduction

**2.1** As outlined in ANAO Audit Report No.20 2008–09, *Approval of Funding for Public Works*, on a case by case basis as decided by Government, Finance may undertake (on behalf of proponent agencies) the delivery of those non-Defence capital works 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.<sup>50</sup> The CIIDC is an example of a construction project being managed by Finance, at the request of Government, on behalf of another agency.

**2.2** The Property and Construction Division within Finance's Asset Management Group (AMG) delivers services and provides advice relating to the Australian Government's non-Defence property portfolio. Due to the significance of the CIIDC project, on 24 March 2003, the Major Projects Branch was established within the AMG to manage major construction projects, including the CIIDC.<sup>51</sup> During 2003–04, the Major Projects Branch was split due to the additional responsibility gained for delivering two new capital works projects that were announced in the 2004–05 Budget. The first branch, Major Projects Branch—Immigration, was responsible for delivering the CIIDC and the Villawood Detention Centre projects.<sup>52</sup> The second branch, Major Projects Branch—Domestic Portfolio, was responsible for delivering projects relating to the non-Defence domestic property portfolio.

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<sup>50</sup> As an alternative to Finance delivering a project, Finance may 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. See ANAO Audit Report No.20 2008–09, *Approval of Funding for Public Works*, Canberra, 5 February 2009, p. 44.

<sup>51</sup> Department of Finance and Administration, *Annual Report 2002–03*, pp. 14 and 45.

<sup>52</sup> Department of Finance and Administration, *Annual Report 2003–04*, pp. 15 and 16.

**2.3** Finance and other agencies subject to the FMA Act are responsible for procuring consultants in accordance with the Commonwealth Procurement Guidelines (CPGs). The CPGs in place at the time the appointments were made for the CIIDC project were dated March 1998. In terms of the three key adviser appointments:

- the Project Manager was appointed through a two-stage public tender process; and
- the Cost Manager and Principal Consultant<sup>53</sup> had each been appointed by DIMIA when it was responsible for the original project. Finance continued with these engagements under the existing terms until late 2003 when it conducted a tender process for each contract. Only the incumbent contractors were invited to tender as it was Finance's stated intention, pending agreement on contract terms, to continue to engage them for the duration of the Project. In May 2009, Finance advised ANAO that:

This was completely subject to satisfactory proposals being received that offered appropriate value for money. Had such value for money not been evident a wider tender process would have been undertaken.

**2.4** Revised CPGs took effect in January 2005, which, amongst other matters, gave effect to the government procurement provisions of the Australia-United States Free Trade Agreement (USFTA).<sup>54</sup> It was expected that the dominant impact of the revised CPGs would be an increase in the number and scope of procurement opportunities offered to the full market. This was because the revised CPGs required (with certain exemptions) that open tender processes be undertaken for procurements expected to cost more than \$80 000, other than those for construction services, where the threshold was \$6 million.<sup>55</sup> Construction services are defined in the CPGs as procurements related to the construction of buildings and all procurements covered by the

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<sup>53</sup> See footnote 14.

<sup>54</sup> Finance advised entities of proposed changes to government procurement in June 2004, and issued a series of Procurement Updates providing additional information. A draft copy of the revised CPGs was issued in October 2004 for comment and Finance suggested that entities affected by the changes should prepare for the implementation of the revised government procurement framework, including reviewing and preparing to amend agency Chief Executive Instructions and internal procurement procedures.

<sup>55</sup> New CPGs released in December 2008 (to take effect from 1 January 2009) increased this threshold from \$6 million to \$9 million.

PWC Act. The CPGs encourage the use of competitive procurement processes for procurements below the threshold amounts.

**2.5** A further revision to the CPGs was released in December 2008, to take effect from 1 January 2009. A key initiative reflected in the revised CPGs was the promotion of greater coordinated procurement contracting across the whole-of-government. The stated aim is to enable the Australian Government to achieve better terms commensurate with the aggregated value of its participation in a particular market sector. In addition, it is expected that coordinated procurement arrangements will also create efficiencies for agencies and for potential suppliers including through a reduced number of approaches to the market.

**2.6** With some limited exceptions, both the 2005 and the 2008 CPGs require each open approach to the market (that is for a two-stage process, for both the Registrations of Interest—ROI—stage and the Request for Tender—RFT—stage) provide potential suppliers with at least 25 days to lodge a submission (30 days where the notice of approach to the market was not issued electronically). In respect to Finance’s appointment of a Project Manager for the CIIDC project, the timeframes allowed were 11 days for the ROI stage and 14 days for the RFT stage.

**2.7** Having regard to the timeframe requirements for approaches to the market under the current CPGs and the greater emphasis now placed on open approaches to the market, for future projects it is unlikely Finance would have been able to adopt the procurement strategies used on the CIIDC project (both with respect to not undertaking an open approach to the market and in providing very little time for the tender responses to be submitted).<sup>56</sup> In this respect, Finance advised ANAO that it is involved with an exercise being conducted by the Department of Defence (Defence) to establish panel arrangements for project management and other key resources needed by Defence to deliver construction projects. Other Commonwealth agencies will also be able to engage consultants from the Defence Infrastructure Panel.

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<sup>56</sup> The CPGs permit direct sourcing where, for reasons of extreme urgency brought about by events unforeseen by the agency, property or services cannot be obtained in time under open tendering procedures. In respect to the CIIDC project, Finance’s need to engage advisers was foreseen when the project was being respecified with Finance’s budget including allowance for such engagement and a substantially longer timeframe for the project was made available (34 months rather than 39 weeks).

## Project Manager

**2.8** An independent review of the original project commissioned in September 2002 had concluded that a Project Manager should be engaged to overview the project delivery, including the CIIDC facility, interface with the associated infrastructure provision and liaise with the Island community. Consistent with the outcome of this review, one of the first actions taken by Finance following the then Government's 18 February 2003 decision to respecify the CIIDC project and transfer delivery responsibility from DIMIA was to commence the procurement process to appoint a Project Manager.

## Registrations of Interest

**2.9** On 22 February 2003, an advertisement seeking ROI for 'the role of Project Manager for a high profile, high value, building project' was published in 'The Australian' newspaper. The advertisement stated that letters requesting Finance to provide the ROI package were to be received by 5pm on 28 February 2003, with ROIs to be received by Finance by 5pm on 14 March 2003.

**2.10** On 3 March 2003, Finance provided the ROI documentation to 31 companies that had submitted a letter requesting it. The ROI documentation noted that the full scope of works for the contract had not yet been developed, and provided an indicative list of the minimum scope of works that would be required. The ROI documentation also noted that the evaluation of ROIs received represented the first stage of a two-stage process to select a Project Manager, with the first stage expected to result in the selection of approximately four suitably qualified registrants that may be invited to tender.

**2.11** ROIs were received from 10 parties and assessed against the approved ROI evaluation plan. Eight of the 10 submissions were assessed as meeting the mandatory criteria (which related to the provision of certain required undertakings and information, and a requirement that they have managed a minimum of three construction projects in the last three years with an out-turn cost in excess of \$50 million) and proceeded to be assessed against the suitability criteria. The suitability criteria were rated as follows:

- Project Management and Superintendency Experience: 20 per cent;
- Registrants' philosophy and methodology in project management for major building projects, including specific skills and resources for optimising time, cost and quality performance, ability to resolve

disputes and examples where their abilities have provided superior outcomes for the client: 20 per cent;

- information to substantiate that registrants' possess a human resource base capable of managing the project: 15 per cent;
- details of current workload, stating the approximate value of each contract, the estimated completion date and the value of fees outstanding at the time of Registration: 10 per cent;
- information on Organisation Quality Certification: 10 per cent;
- details of experience in the management of at least one project within a collaborative framework: 10 per cent;
- details of experience in the management of at least one project within a complex stakeholder environment, particularly on government infrastructure projects: 10 per cent; and
- details of experience in the management of projects in remote locations including the logistic difficulties presented by a project and the strategies used to overcome the logistic difficulties: 5 per cent.

**2.12** The evaluation panel<sup>57</sup> unanimously agreed the suitability scores (against the approved evaluation plan) for those eight submissions, and agreed to recommend that the top four scoring organisations be invited to tender for the role of Project Manager.

## **Request for Tender**

**2.13** On 3 April 2003, the four shortlisted organisations were invited to submit a tender for the role of Project Manager. The closing date for the submission of tenders was 2pm on 17 April 2003. The RFT set out the following in respect of the scope of services to be provided under the contract:

The proposed facility will provide permanent accommodation for approximately 400 people and temporary accommodation for a further 400 persons (approximate) on Christmas Island. Some earthworks have recently been completed, however, there will be a need for further earthworks to complete the platforms for the building. A construction camp for 326 workers has been constructed.

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<sup>57</sup> The panel consisted of two members of Major Projects Branch with construction management experience, with the third member (from Shareholder and Asset Sales Division) having experience in major Government procurement activities.

The intent of the Contract is for the Project Manager, as its basic obligation, to review all construction works, design and cost documentation undertaken up until the time of its appointment and to advise, administer, superintend, inspect, coordinate and control the Architect, Cost Manager, the Principal's Consultants and the Works Contractor so as to ensure the completion of the Works to the required quality, and in accordance with the Works Contract.<sup>58</sup> The Project Manager will also ensure that all Principal's Consultants and the Works Contractor comply with the National Code of Practice for the Construction Industry.

**2.14** For the purpose of preparing their tender, the shortlisted firms were advised that a project budget of \$150 million should be assumed, exclusive of consultants costs, Finance's costs, and work completed to date. They were further advised that:

- the program for the works would be 30 months to practical completion from the date of appointment of the Project Manager, with a 12 month Defects Liability Period;
- fixed dates for the project were Project Delivery Analysis with Recommended Model by 1 June 2003 and Practical Completion on or before 31 December 2005; and
- the detailed program was to be determined by the Project Manager but, for the purposes of the tender the following phase times should be assumed:
  - Phase 1—Project Delivery Model and Schematic Design: 2 months;
  - Phase 2—Detailed Design and Documentation: 10 months;
  - Phase 3—Main Works Tender: 4 months;
  - Phase 4—Construction: 17 months; and

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<sup>58</sup> In June 2009, the Principal Consultant advised ANAO that: 'The relevance of this extract may not be understood without explanation. The Project Manager contract included the management of Finance's consultants including the Architect and Cost Manager. The engagement and management of a consultant team is a significant role and responsibility for the duration of the project. Following engagement of the Project Manager one of its first tasks was to advise Finance on the procurement of a design consultant team. That advice was to procure the design consultant team through changing the Architect's role to Principal Consultant. This may have been driven by the potential program impact of Finance going to expressions of interest and tender for more than 15 consultants, however it also transferred the responsibility and resource cost for procurement and ongoing management of the consultant team from the Project Manager to the Principal Consultant.'

- Phase 5—Defects Liability Period: 12 months.

### *Evaluation of tenders*

**2.15** Tenders were received from three of the four invited organisations. Each tender was assessed<sup>59</sup> against the approved tender evaluation plan. The tenders were evaluated in five stages, as follows:

- Stage 1—Mandatory Assessment Criteria (which were the Go/No Go Criteria specified in the ROI document; submission of a complete and correct Tender Declaration; and a Statement of Compliance with the National Code of Practice for the Construction Industry and the Industry Guidelines for the industrial relations and the occupational health and safety components of the National Code of Practice for the Construction Industry);
- Stage 2—Weighted Criteria Assessment which were:
  - the proposed implementation plan: 25 per cent;
  - the proposed organisation chart: 25 per cent;
  - key personnel skills and experience: 20 per cent;
  - financial capacity: 20 per cent; and
  - the proposed works information management system: 10 per cent;
- Stage 3—Preliminary Value for Money Assessment;
- Stage 4—Presentation by Tenderers; and
- Stage 5—Final Value for Money Assessment involving Finance considering which Tenders have the greatest intrinsic merit or benefit, with regard both to the weighted evaluation criteria and the assessment of tendered prices.

**2.16** Each of the shortlisted tenderers was assessed as meeting the mandatory criteria and, based on the information in their tenders, proceeded to the remaining phases of the evaluation. In relation to the weighted criteria:

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<sup>59</sup> The panel comprised three senior Finance officials but, for this stage, was chaired by the senior official from Shareholder and Asset Sales Division. The chairman of the ROI panel elected not to participate in the tender evaluation due to a potential conflict of interest and was replaced by another official from within Major Projects Branch.



- each of the three tenderers was assessed as having the financial capacity to carry out the contract;
- two tenderers:
  - were rated at a similar high level in terms of their proposed implementation plan, but the third tenderer was assessed as lacking specific detail on how the services would be delivered and had not adequately addressing specific issues that related to the requirements of the project;
  - were assessed as each offering a strong team with significant experience. The third tenderer was assessed as proposing a team with insufficient experience for the project; and
  - proposed a works information management system that met the needs of the project; and
- one of these two tenderers was assessed as displaying sufficient resources for all phases of the project with 'serious deficiencies' assessed in relation to the resourcing proposed by the two other tenderers.

**2.17** The tenderer ranked most highly against the weighted criteria (initially at Stage 2 some 9 per cent higher than the next ranked tenderer but increasing to 20 per cent higher after ratings were adjusted following the Stage 4 presentations) had also tendered the highest price (\$2 782 700 plus GST, which was \$460 713 or 20 per cent higher than the next ranked tenderer). The tender evaluation panel considered its scoring against the weighted criteria and cost and concluded that two tenderers were similar on a value for money basis but that:

The Project Manager will be paid between 1.5 and 2 per cent of the cost of the project. The performance of the Project Manager in the delivery of its services can easily have an impact of over 10 per cent of the project cost. Even without a major risk event occurring, the performance of a Project Manager can easily have a 5 per cent cost and time impact on the project. The cost implications of a project with an under-resourced Project Manager could be many times the total payment received by the Project Manager. While on a value for money basis [*the two highest scoring tenderers*] are almost identical, the cost and time risks identified above of having an under-resourced Project Manager ensures that the best solution is the lowest risk solution. In this case [*the highest scoring tenderer*] have offered a solution that has been thoroughly researched, covers all of the scope items identified in the Request for Tender documents, and has

the highest probability of the three tenderers of delivering a successful project for the Commonwealth. While the cost is more expensive than *[the next highest scoring tenderer]* it is highly likely that the better resources will result in a superior project outcome for the Commonwealth.

**2.18** On this basis, CMR Consultants (Australia) Pty Ltd (Thinc)<sup>60</sup> was assessed as providing ‘the best value for money and lowest risk and resulted in the highest probability that the CIIDC will be managed to achieve Finance’s objectives on the project’.

## **Project Manager Contract**

**2.19** On 5 May 2003, the Finance Secretary approved the appointment of Thinc as the Project Manager. A Letter of Award was sent to Thinc by Finance on 14 May 2003 advising that it had been selected as the successful tenderer for the CIIDC Project Management and Superintendency Contract. The contract was signed on 16 July 2003. It provided for a broad scope of contract services:

The general nature of the Works include the complete management of the Project from the design phase through completion of construction and the Defects Liability Period. The Project Manager will be the Project leader and coordinator for the time, cost and quality performance of the Project and will provide skilled Project leadership on all issues relating to the Project’s delivery. The Project Manager should note that during the Term, the scope of Services may change from that detailed in this Schedule 2. In addition to the list included in the Schedule 2, the Project Manager must carry out whatever tasks are required to provide the delivery of the Services. The Project Manager must perform all management, superintendency and quality assurance services necessary for the timely and economic completion of the Works, including all services set out in this Schedule 2. The Project Manager must also perform cost control in consultation with the Cost Manager, and design management including adding practical suggestions and innovations in the design as well as advising on constructability. The Project Manager’s fee will reflect the eventual Project Delivery Model.

**2.20** The Term of the Contract was nominated as 43 months from the Date of Commencement (9 May 2003), but was able to be extended at Finance’s discretion by a period of up to 12 months. The completion date coincided with the end of the 12 month Defects Liability Period associated with the Main Works Contract (December 2006).

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<sup>60</sup> CMR Consultants became Thinc Projects Pty Ltd in June 2005.

**2.21** As a result of the Project Manager appointment, the former relationship entered into by DIMIA for project advisory services was terminated by Finance in May 2003.

## **Contract Variations**

**2.22** Finance's better practice guide does not address any preference the department may have for the nature of fee arrangements with advisers such as a contracted Project Manager. The Australian Standard Project Management Contract (AS 4915–2002 *Project Management – general conditions*) outlines that the management fee payable to a contracted project manager may be based on one or more of three calculations:

- a lump sum fee, which may be attributed to each stage of the project;
- a percentage fee of the price of the work, which may be attributed to each stage of the price; and/or
- a time based fee calculated by applying rates to the time spent in carrying out the services.

**2.23** In addition to the management fee, the Australian Standard provides for disbursements to be reimbursed where prior written approval is obtained from the principal before they are incurred, and receipts<sup>61</sup> are provided to the principal's reasonable satisfaction.

**2.24** The CIIDC Project Management and Superintendency Contract was time-based providing for the provision of resources at set levels for specific periods of time. Accordingly, the Contract Sum was varied in response to:

- delays in the project given that project management and/or superintendent resources were required to be deployed for a longer period; and/or
- a change in scope that required an increased commitment of resources by the Project Manager.

**2.25** The form of contract employed by Finance provided the Project Manager with no financial incentives for early completion of all necessary works, and included no financial penalty in situations where the project was delayed. Accordingly, the longer the project took to be delivered and the

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<sup>61</sup> The standard provides that an administrative charge at a set percentage may be charged on the amount of any disbursements.

greater the incidence of out-of-scope work, the greater the amount that would be paid to the Project Manager.<sup>62</sup> As it eventuated, the Project Management and Superintendency Contract was varied on 37 occasions between 2 July 2003 and 11 December 2008 by a total of \$6.39 million. As a result, the final Contract Sum of \$9.17 million was 230 per cent<sup>63</sup> greater than the value at the time the contract was signed. The largest increases related to:

- delays during design (nine variations totalling \$1.46 million) and construction (10 variations totalling \$1.99 million);
- increased resourcing during the Defects Liability Period (three variations totalling \$392 866);
- superintendency services for the 'Early Works' package undertaken in advance of the letting of the Main Works Contract (two variations totalling \$105 600); and
- the Project Manager engaging and paying various subcontractors to under a range of deferred and additional works (after Practical Completion had been awarded to the Main Works Contractor) in order to bring the facility to a 'fit for purpose' condition such that it could be handed over to DIMIA (seven variations totalling \$2.36 million—the majority of this amount related to sub-contractor costs, with the Project Manager paid a fee set at 5 per cent of the value of the work).

**2.26** This last variation was particularly significant from a project governance perspective. Specifically, Finance records state that:

The Deferred Works were not completed as a variation to the Main Works Contract during the course of the project in order to minimize the risk that such variations could result in an Extension of Time (EOT) claim to the completion date of the Main Works Contract. Any approved EOT claims could have had a substantial cost impact, of up to \$160 000 per day in delay costs.

A proposal has been negotiated with [*the Project Manager*] where it will assist with organizing and managing the Deferred Works following the

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<sup>62</sup> In May 2009, Finance advised ANAO that, to provide incentives for timely completion of major capital works, it has introduced incentivised contracts into recent major projects such as the National Portrait Gallery.

<sup>63</sup> This figure relates to the Project Manager and Superintendency Contract, and includes amounts associated with the Project Manager engaging subcontractors to undertake various deferred and additional works. Excluding the amounts payable to subcontractors, the value of the Project Management and Superintendency Contract was increased by 149 per cent.

commencement of the Defects Liability Period. *[The Project Manager]* will, under the management of Finance, be tasked with engaging sub-contractors to perform the Deferred Works. This variation will be treated as a provisional sum against *[the Project Manager's]* contract for payment of the works completed. All sub-contractor procurements by *[the Project Manager]* will be undertaken in accordance with the FMA Act and Commonwealth Procurement Guidelines (CPGs). As the contracts being entered into are for construction works valued well under \$6 million, Division Two of the CPGs will not apply.'

**2.27** The Project Management and Superintendency Contract stated that any agreed variation to the contracted services (including any additional services) must be effected by written agreement of the parties (through a process outlined in the contract). However, the contract was not varied through this process. Instead, the only action taken was to process a variation to the Contract Sum. In this respect, Finance advised ANAO in May 2009 that:

In response to a verbal briefing, *[the Project Manager]* wrote to Finance on 1 August 2007 summarising its proposal for the performance of the deferred works. Finance responded to this proposal via Aconex on 3 August 2007.

While Clause 46 *[of the Project Management and Superintendency Contract]* was only partially followed if taking a strict interpretation of that clause, contracts can be varied by agreement between the parties, evidenced by verbal communications and/or the conduct of the parties. We agree, however, it would have been better practice to follow Clause 46 through formal written agreement.

**2.28** The role and responsibilities of a Construction Manager are substantially different to those of a Project Manager. The Project Manager was engaged on the basis of a tender process that assessed its credentials against other firms in terms of providing project management and superintendency services; its ability to perform a Construction Manager role was not assessed and other potential providers of this role were not given the opportunity to undertake this work.<sup>64</sup> In addition, extending the role of the Project Manager to perform a Construction Manager role without appropriate amendment to the contract does not adequately protect the Commonwealth (for example, the

<sup>64</sup> In May 2009, Finance advised ANAO that: 'There are limited resources available on Christmas Island. To undertake the management of the deferred works in the timeframe necessary, *[the Project Manager]* was the only appropriately placed organization to complete the work, having a detailed understanding of the site and local conditions. Finance exercised its judgment and accountability for best value for money in making this decision. Finance notes that the management of the works was a relatively minor cost, with the actual construction work itself being awarded to mainly local subcontractors.'

contract did not include clauses associated with construction works, such as fitness for purpose assessments, warranties, specifications, and insurances).

## Principal Consultant

**2.29** Through a select tender process, DIMIA had engaged a design consultant for the original CIIDC project. The engagement as tendered was to involve a lump sum capped fee for a specific scope of work with the consultant appointed by DIMIA to enter into a design agreement with a builder that DIMIA was also to select. Phillips Smith Conwell Architects (PSC) was engaged by DIMIA to commence developing the design concept with payment on an hourly basis, pending the consultant entering into an agreement with a builder.

**2.30** Concurrent with the selection of its design consultant, DIMIA also identified a preferred construction company to deliver the project (Walter Construction Group). The design agreement to be entered into by the Design Consultant was to be provided by the Commonwealth and be on reasonable terms satisfactory to both the builder and the design consultant. DIMIA had prepared a draft of the design agreement in conjunction with the builder and it was forwarded to the design consultant for its agreement in June 2002.

**2.31** Project records explain that the design agreement between the builder and the design consultant was to be executed by 11 July 2002. However, agreement still had not been reached on the design agreement in February 2003 when the Commonwealth had decided to respecify the project and handover management of the project to Finance.

## Finance decision to re-tender the Principal Consultant contract

**2.32** Following the transfer of delivery responsibility from DIMIA to Finance, Finance continued to access the services of the design consultant engaged by DIMIA, with fees calculated and paid at the existing hourly rates. In its first (June 2003) monthly report to Finance, the Project Manager advised that:

The prior engagement of Phillips Smith Conwell (Architect) and WT Partnership (Cost Manager) to DIMIA has been transferred to Finance pending agreement of new work scope and fees. At this point the engagements will be transferred to Finance. *[The Project Manager]* is currently negotiating new work scopes for the consultants, and finalising a recommendation on the composition of the consultant team.

**2.33** The June 2003 monthly report identified a milestone for July 2003 of 'finalise commercial terms and contracts with PSC and its subconsultants, as well as with WT'. In turn, the July 2003 monthly report stated that:

The draft contract and scoping documentation for the design consultants and cost manager engagements has been completed and is ready for submission to Finance for approval. A recommendation for single select engagement of secondary consultants is with Finance for approval. In the meantime all required consultant resources have been mobilised on an hourly basis for the advancement of the concept design. The hourly rate fees will be offset against the overall fee proposals negotiated for the scope of work now defined in the contract documentation.

**2.34** In June 2009, the Principal Consultant commented to ANAO that it had initially been appointed by DIMIA under a Deed of Standing Offer to provide architectural services only and that:

Later in the process, PSC was engaged by Finance in the role of architect, however this was changed to the role of Principal Consultant when Finance requested PSC to also provide a range of consultant services including Civil Engineer; Structural Engineer; Mechanical; Electrical; Security; Hydraulics; Fire Services; Fire Engineering; Kitchen Design; Furniture, Fittings and Equipment; Acoustics; Access; Building Certifier; Landscape Architect. The terms design consultant, architect and Principal Consultant are not interchangeable.

**2.35** The Project Manager's August 2003 and September 2003 monthly reports both stated that the draft contract and scope of work for the Principal Consultant and, separately, the Cost Manager engagements had been tabled with the consultants and 'final details are being agreed'. The intention was that the hourly fees being paid to the Principal Consultant and Cost Manager would, under the contracts negotiated by the Project Manager, be offset against overall fee proposals negotiated for the scope of work that had been defined in the contract documentation.

**2.36** However, some eight months after taking responsibility for the project and five months after appointing its Project Manager, Finance then decided to undertake a tender process for the architect and Cost Manager engagements. As outlined in Chapter 4, the late decision to undertake a sole-source tender for the Principal Consultant engagement had an adverse impact on the design timetable for the facility. Specifically, whilst schematic design had commenced on 6 October 2003, reporting to Finance by the Project Manager stated that schematic design was suspended on 23 October 2003 for nearly six weeks as a

result of Finance's decision to undertake a tender process for the Principal Consultant. In June 2009, the Principal Consultant advised ANAO that it had a different perspective in that:

meaningful schematic design was essentially suspended, not because of the tender process, but because the full design consultant team required to carry out the design had not yet been engaged by Finance. PSC in fact continued to provide design services over this period however services were limited to what could be achieved without input from an appropriate design consultant team.

...The Principal Consultant tender was not simply to tender the continuation of PSC's architectural services but to bring the services of a full range of design consultants to the project under PSC's new role of Principal Consultant. The new role of Principal Consultant required PSC to source, engage and manage the design consultant team. This is not a role that PSC sought but, after discussing the benefits to the project with Finance, it was a role that PSC reluctantly accepted. In PSC's opinion, this would normally be the role of the client, Finance, and the client's Project Manager. What was expressed to PSC by Finance was that this would have been a major task for the Project Manager and Finance and our understanding is that the process required for Finance to tender and separately engage each of these services would have required a considerably longer timeframe and consequently a greater impact on the project program.

## **Finance's tender process**

**2.37** On 12 November 2003, Finance invited PSC to tender for the role as Principal Consultant for the respecified CIIDC. PSC was invited to tender on a 'sole select' basis, as an approach to achieve new contractual terms. The RFT stated that:

The Principal has existing agreements with an Architect, Phillips Smith Conwell Pty Ltd and a Cost Manager, WT Partnership Australia Pty Ltd, both based in Brisbane. The Principal's intention, pending agreement on contract terms with these two consultants, is to continue to engage them for the duration of the Project.

**2.38** An alternative approach would have been to leave open the possibility that other firms were being asked to tender, thereby providing the potential for competitive pressure within the engagement process. Finance indicated to ANAO that providing this impression had been intended but, as outlined



above, the RFT disclosed to the incumbent supplier that Finance's intention was to reappoint the same supplier.<sup>65</sup>

**2.39** The PSC tender was received by Finance on 19 November 2003. The total tender price submitted by PSC was \$9.76 million. The tender evaluation report stated that the PSC tender was accepted on the basis that the overall tendered fee represented value for money, as confirmed by Finance's Cost Manager. The tender evaluation report outlined a number of areas where clarification would be sought from PSC as part of the tender negotiations, as follows:

- With respect to the contract sum details:
  - Inclusion of the Operations consultant is to be confirmed, and provisional allowance made; and
  - Provisional sum details are confirmed.
- Finalisation of minor details with respect to disbursements, including numbers of and costs for trips to Christmas Island.
- Agreement to a Master Programme for inclusion in the Principal Consultant contract.
- Settlement of detailed contract conditions, including 'fit for purpose' definition, design certificates, contract scope fine tuning (including for security and contingency, and work by others), variation approach, procurement, insurance (public liability and location of risk).

**2.40** On 4 December 2003, PSC was advised in writing by Finance that it had been selected as the preferred tenderer for the Principal Consultant's role. The Project Manager conducted contract negotiations with PSC on behalf of Finance.

**2.41** Whilst it was expected that the contract would be executed during February 2004, contract negotiations extended from December 2003 to June 2004. The Principal Consultant proposed a substantial number of changes to the contract, many of which were agreed to by Finance. Contract finalisation did not occur until 26 July 2004, after endorsement on 16 July 2004 by Finance's Executive Board. The Executive Board had been advised that:

These negotiations are now complete with the main outcomes being:

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<sup>65</sup> See also paragraph 2.3.

- achievement of a lump sum contract;
- better definition of the services to be provided;
- an agreed revised project program;<sup>66</sup> and
- resolution of contract matters.

**2.42** The contract for the Principal Consultant involved a total cost of \$10.96 million consisting of \$9.83 million for professional fees and a disbursement budget of \$1.13 million.

**2.43** In deciding to retender Finance considered that, while the existing contract could continue to be used on an hourly basis, better value for money could be achieved by a lump sum arrangement. However, as noted at paragraph 2.35, Finance's Project Manager had already negotiated contracts with the Principal Consultant and Cost Manager with the hourly fees to be offset against overall fee proposals negotiated for the scope of work that had been defined in the contract documentation.

**2.44** The contract sum was varied 37 times between 8 March 2004 and 5 August 2008. These variations increased the contract sum by \$4.58 million,<sup>67</sup> or 42 per cent. In particular, according to Finance's records of the variations:

- five variations totalling \$2.95 million were made as a result of the construction period of the Main Works Contract being extended. The Contract Sum had been based on construction being completed by 31 March 2006 but Practical Completion was not achieved until 13 October 2007; and
- 18 variations were made in relation to the Principal Consultant and/or its sub-consultants investigating design options with a total increase of \$1.16 million. The contract had required the Principal Consultant to participate in and contribute to value management reviews at a point in time just after the completion of each design phase and required that

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<sup>66</sup> In June 2009, the Principal Consultant advised ANAO that the project program included in the contract was not 'agreed'. The Principal Consultant advised ANAO that it had qualified its tender responses in respect to the project program due to late advice of changes to the proposed program and concerns it had that the revised programs provided to it for tender purposes reduced the time available for completion of design and document to less than that required. The Principal Consultant further advised ANAO that the program included in the contract was not the one on which its qualified tender and tendered lump sum fee was based.

<sup>67</sup> Of this amount of \$4.58 million payable to the Principal Consultant, \$3.61 million was for services provided directly by the Principal Consultant in-house and \$969 969 was payable by the Principal Consultant to its sub-consultants.

any suggestions made by the Preferred Tenderer to improve value were to be treated as a value management item, and the cost of any redesign included in the cost of the suggestion for evaluation by Finance. However, due to the Main Works Contract being let based on incomplete design documentation, the investigation of options was undertaken after the Investigation Period and so were not covered by the contractual clauses requiring this work as part of the contracted scope of services. In respect to these variations, in June 2009, the Principal Consultant advised ANAO of its view as follows:

Principal Consultant fee increases prior to construction were almost all for documenting client instigated changes to the brief and changes to the brief and changes to the agreed design. By far the largest of these increases was for documenting a large number of 'cost saving options' adopted by Finance after substantial completion of the consultant's documentation. This cost cutting was a direct result of the mismatch between scope expectations and budget. Changes to documentation to incorporate these client instigated changes occurred after the initial execution of the Main Works Contract between Finance and the Preferred Tenderer. The only significant changes that occurred to the Principal Consultant construction services fees were directly related to the increase in duration of the construction period.

It is hard to imagine a fair and reasonable contractual framework that would not recompense the design consultant team for significant changes to substantially complete documentation and significant increase to the construction period. It is our understanding of good risk management practice that financial risk should not lie with a party not able to control that risk.

## Cost Manager

**2.45** As part of its management of the original project, DIMIA had also appointed a Cost Manager/Planner.<sup>68</sup> The appointed firm (WT Partnership—WT) was a member of DIMIA's Cost Service Panel, and had been selected after quotes had been obtained from three panel members. When the project was transferred to Finance, the Cost Manager continued to provide services to Finance under its previous terms of engagement with DIMIA.

**2.46** In November 2003, Finance decided to invite the Cost Manager to tender for continuation of its role. Finance records state that this approach was based on the following key considerations:

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<sup>68</sup> For consistency, this position is referred to as Cost Manager throughout this Report.

- the Cost Manager had been specifically chosen for the project after a two-stage process;
- better value for money would be delivered due to the existing Cost Manager's knowledge of the project;
- the project could achieve the current agreed program for completion by the end of the first quarter of 2006; and
- while the existing contract could continue to be used on an hourly rate basis, better value for money could be achieved from a lump sum tender.

**2.47** The closing date for the tender was 4pm on 20 November 2003. Similar to the approach used for the Principal Consultant (see paragraph 2.37), the RFT stated that it was Finance's intention, pending agreement on contract terms, to continue to engage the existing Cost Manager for the duration of the Project.<sup>69</sup>

**2.48** The tender was received on 20 November 2003. Finance's tender evaluation report stated that WT was nominated as the preferred tenderer for the Cost Manager role and its tender was accepted on the basis that the overall tendered fee represented value for money. The tender evaluation report also outlined a number of areas where clarification from WT would be sought as part of the tender negotiations.

**2.49** The selection of WT as preferred tenderer was approved by Finance on 24 December 2003. On 19 January 2004, WT was advised by Finance that it had been selected as the preferred tenderer for the Cost Manager position, and that the next stage required the terms of the contract to be agreed.

**2.50** The total tender price submitted by WT for the Cost Manager role was \$1.427 million plus GST. The tender evaluation report had concluded that, while the tendered fee was within benchmark levels,<sup>70</sup> negotiations to reduce the tender price should be undertaken. Finance's contracted Project Manager undertook these negotiations, but was unable to negotiate a reduction in the tendered price. Nevertheless, Finance concluded that the lump sum contract arrangement combined with better definition of the services to be provided

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<sup>69</sup> See also paragraph 2.3.

<sup>70</sup> As part of the evaluation process the lump sum price was reviewed against industry rates for similar services.

and an agreed revised project program meant that value for money had been obtained.

**2.51** The contract for the Cost Manager role was not signed until 24 June 2004. The commencement date of the contract was stated to be 1 July 2003, with an estimated date for Practical Completion of 31 March 2006. The value of the contract was stated to be \$1 541 000 excluding GST comprising:

- \$1 427 000 in lump sum professional fees; and
- a disbursements budget of \$114 000.

**2.52** The commencement date of 1 July 2003 meant that the professional fees invoiced to Finance on an hourly basis since that date (amounting to \$341 470) were converted into lump sum payments against the phases relating to Concept Design (\$188 000), Schematic Design (\$90 000) and Design Development (\$63 470 against a total lump sum fee of \$320 000). The amounts of \$102 567 for fees and \$15 578 for disbursements paid by Finance to the Cost Manager on an hourly basis for work between February 2003 and 30 June 2003 were not included under the contract.

**2.53** The scope of work included in the contract stated that:

The Consultant's primary role is to ensure that Finance's and Client's interests in respect to this project are protected financially and that value for money outcomes are achieved.

Develop and update the project estimate and budget. Monitor and agree the total project costs, and advise on methods to maintain agreed budgets. Advise on savings and economies that can be achieved.

**2.54** A total of 11 financial variations were made to the contract. The final total approved contract cost was \$2 261 958, a figure 47 per cent higher than the original contract value. The major causes of cost increases related to the conversion of design documentation from that used to price the tender/contract to Approved for Construction Drawings (five variations totalling \$462 346) and the extension of the construction phase (four variations totalling \$215 032). The total amount paid by Finance to the Cost Manager for services since February 2003 was \$2.32 million comprising \$2.22 million in fees and \$106 397 in disbursements.

**2.55** As noted above, the procurement approaches adopted by Finance were influenced by a desire to have greater cost certainty surrounding its key advisers compared to the previous arrangements entered into by DIMIA,

although there was not a clear appreciation as to why DIMIA had been similarly unable to implement this approach. Further, whilst an open tender was conducted for the Project Manager, the late decision to undertake sole-source tenders for the Principal Consultant and Cost Manager engagements had an adverse impact on the design timetable for the facility and, given each of the incumbents was told Finance intended to reappoint them,<sup>71</sup> did not provide any competitive tension to the process.

**2.56** In light of the experience on the CIIDC project, it will be important that Finance improve the contractual framework for key adviser appointments to future construction projects by developing contractual arrangements that provide an incentive for timely completion of the full scope of works within budget and to the desired standard whilst at the same time discouraging project delays, cost increases and/or reductions in quality. In May 2009, Finance advised ANAO that, to provide incentives for timely completion of major capital works, it has introduced incentivised contracts into recent major projects such as the National Portrait Gallery.

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<sup>71</sup> In May 2009, Finance advised ANAO that: 'Both tenders received from the Cost Manager and Principal Consultant were judged to offer value for money, and were in-line with expected market costs for the respective services offered. The Cost Manager's tendered fees for example were benchmarked against industry fee scales provided by the Australian Institute of Quantity Surveyors and competitive market work tendered on projects of a similar scale and complexity.'

## 3. Project governance

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*This chapter examines the governance framework for the project including the development of key plans and strategies. It also analyses the inter-relationships between the facility project and associated infrastructure works and identifies how the project would have benefited had there being greater coordination between Finance and DOTARS of the management of the upgrade to the Flying Fish Cove port crane given the importance of the port crane to the logistics for the facility construction project.*

### Background

**3.1** In September 2003, Finance completed an internal review of the CIIDC project. The internal review concluded that the project was well resourced and being actively managed. In terms of project governance, the review noted that:

- the project was overseen by an Interdepartmental Committee (IDC) comprising Finance as Chair, DIMIA, the Department of the Prime Minister and Cabinet (PM&C), the then Department of Transport and Regional Services (DOTARS), the Department of Employment and Workplace Relations (DEWR) and Environment Australia. The review concluded that the membership was broadly based and represented the full breadth of interests that the Australian Government had in the project;
- a Project Control Group had been convened to provide the formal interface between Finance and DIMIA. Finance's contracted Project Manager was a member of the Project Control Group as was the Main Works Contractor (after it had been appointed);<sup>72</sup>
- fortnightly project implementation meetings were held in Brisbane comprising Finance and the firms contracted as Project Manager, Principal Consultant and Cost Manager; and
- client design meetings were held with DIMIA as required. The aim of these meetings was to develop a design that met DIMIA's needs in the most efficient way whilst preserving overall quality and performance.

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<sup>72</sup> The Project Control Group reported to a Steering Committee that comprised senior DIAC and Finance officials.

**3.2** In addition to the governance structures explicitly noted by Finance in its internal review of the project, a Memorandum of Understanding (MoU) between Finance and DIMIA was signed in June 2006, with a draft MoU prepared and in use from 2003.<sup>73</sup>

## **Project monitoring reports, plans and strategies**

**3.3** The Project Management and Superintendency Contract required Finance's contracted Project Manager to:

Provide a comprehensive service including leadership in, and coordination of, all aspects of the Project so as to manage the Project for the Principal in order to ensure the construction of a facility which meets the design brief with superior time, cost and quality outcomes.

**3.4** The contract also stated that the Project Manager was responsible for delivering the project in the time allocated and, in consultation with the contracted Cost Manager, at a cost no more than that allocated in the Project Cost Plan. Reporting by Finance's Project Manager was tailored to each phase of the project. Consistent with its contractual responsibilities, commencing in June 2003, each month the Project Manager provided Finance with a report to record progress and recommend actions to resolve issues affecting the project. Attached to this report were reports from the Project Manager's Design Manager as well as reports from the Cost Manager and the Principal Consultant (and various sub-consultants to the Principal Consultant). During the construction stage, the reports also attached a superintendent's site report. This approach provided a sound basis for Finance to be informed, in a timely manner, of the progress with, and status of, the project.

## **Risk Management Plan**

**3.5** A number of plans were prepared to guide the facility construction project. However, some of these plans were not maintained and updated throughout the project, or did not reflect all relevant project activities. There were also gaps apparent in the documentation of risk management planning.

**3.6** In respect to risk management planning, it is common in the construction industry for the project manager to be responsible for managing risks on a project, including maintaining the risk register and reporting against

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<sup>73</sup> The Memorandum of Understanding also covered the Villawood Immigration Detention Facility Redevelopment.



it regularly. Consistent with this approach, the tender submitted by the successful candidate for the Project Manager role stated that a strategic approach to the identification and management of risk was one of the key aspects of its approach to the successful delivery of the CIIDC. The tender proposed that the project management process include 'ongoing risk identification, assessment and management' with the role of the nominated Project and Risk Manager:

Deliberately separated ... from the tasks of stakeholder management, brief production, brief endorsement, design management, procurement planning and communications management. This will allow him to focus on the project objectives, client interface, budget, programme and project risks.

**3.7** To demonstrate its understanding of how it might go about the identification and management of risk, the Project Manager included in its tender a 'snapshot' of the issues, strategies and an associated risk management plan. A more detailed analysis of one risk area (the remoteness of the facility location) was included in the tender to exemplify the proposed approach. However, the Project Management and Superintendency contract did not subsequently identify risk management or the preparation of a Risk Management Plan as being the Project Manager's responsibility.

**3.8** Finance documents indicate that risk planning for the respecified project began in early 2003 with internal risk planning workshops. In addition, as part of the handover from DIMIA, Finance obtained a copy of the risk management plan that had been developed by DIMIA when it had responsibility for the construction of the CIIDC facility. However, DIMIA cautioned that its view was that the risk profile for the project had changed significantly with some risks now addressed but with new risks arising.

**3.9** A Risk Management and Procurement Workshop was held in early December 2003. The purpose of the workshop was to revisit the major project risks that had been identified by the various groups involved in the delivery of the project, and to introduce the then-current thinking in respect of the procurement strategy for the construction works. The workshop was attended by Finance, the Project Manager, the Principal Consultant and the Cost Manager. Other Australian Government agencies were not involved.

**3.10** Finance also prepared a risk map that outlined 15 risk areas. Various versions of a 'Risk Identification and Analysis' table and 'Treatment/Mitigation Options' table were also prepared. However, there was no clear linkage between these documents and the outcomes of the December 2003 Risk

Management and Procurement Workshop. In addition, an internal audit conducted between November 2007 and January 2008 found that risk assessments for the project were not updated with the frequency required by Finance's guidance.

**3.11** Finance's better practice guide (first released in July 2005) outlines that the outputs of risk assessments should be recorded in a Project Risk Management Plan, and that the Risk Management Plan should be managed by the Project Control Group and updated at key project milestones.<sup>74</sup> However, in September 2003, Finance advised DIMIA that a risk management plan had yet to be prepared.

**3.12** The September 2003 Project Management Plan stated that the Risk Management Plan was 'under development'. In May 2009, Finance advised ANAO<sup>75</sup> of some of the Project Manager's risk management activities and further advised that communications between it and the Project Manager indicate that a Risk Management Plan and a costed risk matrix was in existence and being used from October 2003 onwards.

## **Project delivery strategy**

**3.13** The choice of delivery method can take into account a range of factors including the state of the market, the type of project and the extent to which private sector partnering may be an important component of delivery.<sup>76</sup> The parameters of time, cost, quality and scope also impact on the choice of delivery system. Finance's better practice guide notes that, before selecting a project delivery strategy, it is important to understand the objectives and priorities of the project given that each delivery strategy involves different risks and has advantages and disadvantages. The better practice guide notes that the most common approaches to the development and delivery of Commonwealth capital works projects are:

- Head Contract (Traditional Lump Sum) where the works are fully designed and documented prior to the calling of construction tenders,

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<sup>74</sup> Examples of such milestones include the appointment of the main service providers (such as the Project Manager) and the Main Works Contractor as well as at key project delivery milestones such as commencement of construction, prior to practical completion and commissioning and handover.

<sup>75</sup> Similar advice was provided to ANAO by the Project Manager (in June 2009) together with relevant supporting documentation.

<sup>76</sup> ANAO Audit Report No.29 2008–09, *Delivery of Projects on the AusLink National Network*, Canberra, 23 April 2009, p. 126.

with no further design documentation necessary except 'shop drawings' by the contractor, the documentation of variations (if any) and design documentation for provisional sum work;

- Design and Construct where the construction contractor takes responsibility for the design, documentation and construction of the works as defined by the client's design brief at the initiation of the project;
- Document and Construct which involves the client's design team developing the design to a point beyond concept design, and sometimes substantially completed, at which point the design consultants are novated to the contractor who is responsible for completing the design, documentation and construction works; and
- Managing Contractor which involves the client engaging the design team and, once the initial design concepts are completed, a Construction Manager is appointed to assist the design team and provide practical building advice. Construction works are tendered to trade contractors who enter into a contract direct with the client, the Construction Manager being responsible for the organisation, management and coordination of the works.

**3.14** As outlined in Chapter 1, on 18 February 2003, the then Government decided to respecify the project to an 800 place facility at a forecast estimate of \$276.2 million with responsibility for delivering the CIIDC facility transferred from DIMIA to Finance. The Government had been advised that re-tendering of the project on the basis of a detailed design and delivery of the project through a fixed price contract would provide greater costing certainty prior to construction commencing and address allocation of risk by integrating it into the price. Consistent with this advice, the then Government decided that a more conventional delivery method should be adopted in an endeavour to provide greater cost certainty.<sup>77</sup> This was reflected in the 19 February 2003 announcement by the then Finance Minister and the then Minister for Immigration and Multicultural and Indigenous Affairs that:

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<sup>77</sup> The Memorandum of Understanding signed by Finance and DIMIA stated that: 'The project will be undertaken via a traditional delivery method. Traditional delivery, including a fixed price contract, will provide greater costing certainty prior to construction commencing, and will address allocation of risk by integrating it into the price.'

The project will be re-tendered by the Department of Finance and Administration under a more traditional delivery methodology involving fixed price tenders based on a detailed and developed design to meet specifications from the Department of Immigration and Multicultural and Indigenous Affairs.

**3.15** Following its appointment in May 2003, Finance's contracted Project Manager commenced the development of a project management framework. This included renegotiation of the Principal Consultant and Cost Manager engagements and development of a Communications Plan, a documented Brief and Design Endorsement Process, and a documented Project Delivery Strategy.

**3.16** The Project Manager's June 2003 Project Delivery Strategy report to Finance analysed various project delivery models/strategies that could be applied to the CIIDC project. It proposed that a Guaranteed Maximum Price (GMP) delivery method be adopted for the Main Works. The Project Delivery Strategy stated that:

This is a variation on the traditional lump sum form of tender. The Guaranteed Maximum Price provides the client with the least risk to out-turn cost. The contractor is required to deliver the project within the fixed time, cost, quality and scope as defined by the client. This includes the acceptance of risk for design errors and omissions. Therefore the contract sum cannot be varied unless the client requires a significant scope change.

The engagement process involves a competitive tender with documentation at approximately 80 per cent completion. The preferred tenderer enters into a due diligence deed. During this phase the preferred tenderer works with the design consultants to finalise the design documentation, price and the program. This process allows the contractor to provide a proactive role during the finalisation of design. Buildability<sup>78</sup> input and coordination between disciplines is managed by the contractor. The contractor has responsibility to ensure the client's briefed requirements are achieved and all site and sub-surface conditions are addressed.

**3.17** On 11 June 2003, the then Minister for Finance and Administration announced the project delivery strategy, as follows:<sup>79</sup>

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<sup>78</sup> Buildability is an issue that affects the method of construction, coordination of design elements, temporary works, safety or works sequencing or duration.

<sup>79</sup> Senator Nick Minchin, Minister for Finance and Administration, *Project Delivery Method for Construction of Christmas Island Immigration Reception and Processing Centre*, Media Release, 11 June 2003.

The key points of the project delivery strategy include

- design and documentation would be completed by the current design team led by Phillips Smith Cornwell Architects Pty Ltd;
- the main construction contract to be based on a modified lump sum form of contract that includes a Guaranteed Maximum Price.
  - This involves the construction tender being carried out prior to the completion of the design, and the Preferred Tenderer being involved in the final documentation of the design.
  - This method reduces risk to the Commonwealth and provides valuable access to the specialist building expertise the successful contractor will bring to the project; and
- a possible early works package that may include design specific earthworks and storage facilities.

## Whole-of-Government budgeting and cost control

**3.18** In circumstances where there is more than one agency involved in the delivery of a project, one agency is undertaking the delivery of works on behalf of another, or funding is obtained from a number of sources, it is important that a comprehensive approach be taken to preparing the overall project budget, preparation of estimates and comparing these to the overall budget and accounting for the final (out-turn) cost. For example, in terms of economic appraisal of projects, *Estimates Memorandum 2003/05 Capital Budgeting—Business Case Requirements* states that:

All expected costs (both for the agency, other agencies and at a whole-of-government level) should be identified.

**3.19** Amongst other things, effective monitoring and control of the overall project budget can aid effective project governance in that it encourages decisions on individual cost items to be made in the context of the overall project, rather than in isolation. In this regard, Australian Government consideration of the respecified CIIDC project was undertaken on the basis of a whole-of-project budget that included the costs of facility construction (managed by DIMIA in respect to the original project, and Finance for the respecified project), the cost of undertaking infrastructure works necessary for the Centre to be made operational (the responsibility of DOTARS) and DIMIA's ongoing involvement as the facility user. Similarly, the project referred to the Public Works Committee on 19 June 2003, involved:

- construction of a purpose-designed and built CIIDC; and

- essential infrastructure associated with the construction and on-going operation of the CIIDC.

**3.20** Against this background, the initial total project budget of \$276.2 million was divided between three agencies:

- Finance was responsible for a construction budget of \$197.7 million (referred to in this report as the Finance Budget Allocation). There were two increases to the construction budget totalling \$119 million;
- there was \$20.5 million in budgeted costs associated with DIMIA's management of the project up to the February 2003 transfer of responsibility to Finance. DIAC was allocated a further \$3.1 million for project supervision and consultancies for the period from the February 2003 transfer of project management to Finance until project completion, but this allocation was not included in the \$276.2 million figure advised to the PWC. Collectively, these amounts are referred to as the DIMIA Budget Allocation; and
- DOTARS had a budget of \$58.0 million to deliver housing and infrastructure works and resume the mining lease on which the CIIDC would be constructed (the DOTARS Budget Allocation). The DOTARS Budget Allocation was increased in October 2007 by \$5 million.

## **Finance's Budget Allocation**

**3.21** Finance's facility construction budget of \$197.7 million was based on 'order of magnitude' amounts developed by DIMIA and Finance in December 2002. In respect to this budget, in March 2009 Finance advised ANAO that:

Finance at the time (April 2003) was of the opinion that significant work did indeed go into building up cost models in the months prior to Government re-specifying the project and setting a Budget of \$276.2m in February 2003. ...We note however, it was always recognised that there were significant unknowns associated with constructing the first purpose-designed facility of its type, in a remote location such as Christmas Island. Government recognised this in its decision of February 2003, in providing a mechanism for seeking additional funding if required following market testing.

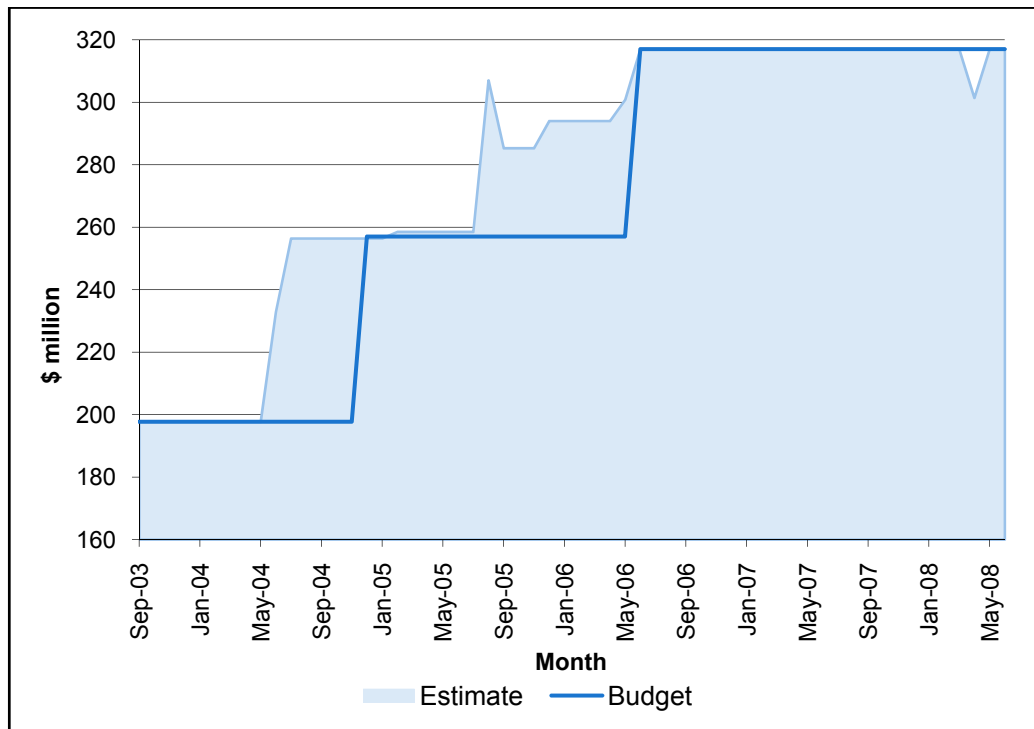
**3.22** As illustrated by Figure 3.1, two requests for additional funds were made by Finance during the delivery of the respecified CIIDC Project. The first was prior to the award of the Main Works Contract, and the second during the construction phase. In each instance, Finance's Budget Allocation was increased some time after the estimate (as provided by the Cost Manager) for

the construction works had increased. In June 2009, the Principal Consultant advised ANAO that:

The practice of aligning budget and estimate illustrated by this figure had a significant impact on the design process and program.

**Figure 3.1**

**Project budgets and estimates of the project cost (exc GST)**



Source: ANAO analysis of Finance data.

### Whole-of-project budget

**3.23** The overarching governance arrangements adopted for the CIIDC project did not effectively coordinate the work of the three agencies involved with delivery of the project. Finance provided the Public Works Committee with a summary of the funding for the total project, including the \$20.5 million of the budgeted funds being managed by DIMIA<sup>80</sup> and DOTARS' Budget

<sup>80</sup> In addition to the \$20.5 million in budgeted costs associated with DIMIA's management of the project up to the February 2003 transfer of responsibility to Finance, DIAC was allocated a further \$3.1 million for project supervision and consultancies for the period from the February 2003 until project completion. The \$3.1 million in funding was not included in the \$276.2 million figure advised to the PWC.

Allocation (\$58 million). However, Finance did not have overarching authority in respect to all elements of the overall project, which encompassed the entire CIIDC proposal, and not just the CIIDC facility project alone.<sup>81</sup> This was reflected in Finance not being appropriated all the funding for the project and other agencies did not provide Finance with Drawing Rights under Section 27 of the *Financial Management and Accountability Act 1997*.

**3.24** The potential value of Finance having such a role was evident from the June 2003 Project Manager's monthly report to Finance which indicated that reporting to Finance would address all capital expenditure, including that incurred by DOTARS and DIMIA:

In conjunction with the above exercise [*to resolve the design brief and its congruence with the approved budget*], the Project Manager is reviewing the scope of the budget in terms of the cost centres to be funded. This will ensure that agreement can be reached on the 'fine grain' of scope to be funded and reported upon. It will also ensure that the Cost Manager is able to allocate a budget to each cost centre. [*The Cost Manager*] has issued for discussion a draft Project Cost Management Report which sets the high-level cost management reporting format. This report shows that the Project Manager and Cost Manager is responsible for the management and reporting on \$202.6 million of capital expenditure, which includes project contingency, DOTARS works associated with the project, as well as Finance and DIMIA costs.

...At the completion of the next reporting period it is anticipated that we will be able to report on the overall budget status including funds expended, funds committed and the cost to completion. Also [*the Cost Manager*] will prepare a reconciliation of the expenditure to date and agreed budget against the Government approved total of \$276.2 million.

**3.25** The cost management reporting format was not finalised until September 2003. In its report to Finance for that month, the Project Manager commented that:

During this reporting period we have finalised the cost management reporting format for entry of the cost information into Prima Vera Expedition. This will provide a high-level cost management reporting format against the \$197.7 million budget Finance is accountable for. Within this framework, [*the Cost Manager*] will manage the \$164.1 million construction budget, [*the Project*

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<sup>81</sup> Finance included the funding for DIMIA and DOTARS in the total project budget in its initial submission of the respecified project in September 2003; and in the update report to the PWC in January 2008. On both occasions the figures for DIMIA and DOTARS remained at \$20.5 million and \$58 million respectively.



*Manager]* will manage the consultant fees (\$12.7 million), and the balance will be managed by Finance (and the information provided for inclusion in this high level report).

**3.26** As a result, Finance and its Project Manager and Cost Manager did not exercise any oversight or authority over the DIMIA and DOTARS Budget Allocations. The final budget was \$400.5 million but the out-turn cost of the overall project is not known because, whilst Finance's and DIMIA's costs have been established, DOTARS was not able to assemble information on its actual project-related costs. Had the cost management format covered all project expenditure as originally envisaged, it would have also established a clear and regular interface between the various agencies involved in the project, as well as providing for improved accountability, including to the PWC. In June 2009, Finance commented to ANAO that:

While Finance could have sought information on expenditure of DIMIA/DOTARS funds, we note that this role would have simply captured costs incurred by the respective agencies in an overall cost plan, and would not have revealed the specific decision making behind that expenditure.

**3.27** The ANAO has emphasised in other reports the importance of having a lead agency, allied with associated risk management and whole-of-government performance management arrangements.<sup>82</sup> In this context, PM&C has previously advised ANAO that it strongly advocates agencies working collaboratively in the areas of policy development, program management and service delivery, and in the minority of cases where a lead agency is not established, that needs to be the result of a conscious and agreed decision.<sup>83</sup> In March 2005, all Departmental Secretaries endorsed a guide entitled 'Working Together' that emphasised the importance of a whole-of-government approach to inter-agency work. The principles in that document would be equally relevant to future construction projects that involved more than one agency.

## Interface between infrastructure works and facility construction works

**3.28** It is important to the delivery of construction projects that there is an effective interface between the infrastructure and facilities works packages, as there can be areas of common risk as well as interrelationships between the

<sup>82</sup> See ANAO Audit Report No.50 2004–05, *Drought Assistance*, Canberra, 2 June 2005, pp. 24–25.

<sup>83</sup> *ibid.*, p. 26.

two. In respect to the CIIDC project, the provision of the infrastructure works was an integral part of the overall project in connecting the CIIDC facility to the services on the Island—without the infrastructure works the facility would be unable to be constructed and operated.

**3.29** DOTARS was responsible for acquiring the land on which the facility has been constructed. In addition, most of the infrastructure works were the responsibility of DOTARS. In particular, DOTARS was provided with funding for an additional port facility at Nui Nui (the main port is at Flying Fish Cove) and an associated upgrade to the link road (which, as of April 2009, had not been constructed), upgrade of other roads (including the construction of crab crossings), provision of housing for facility staff, construction of sports facilities and the provision of water, communications and power to the facility site.

**3.30** One notable exception where DOTARS was not responsible for infrastructure work related to the construction of a sewer rising main and pump station. Those works were contracted by Finance (and paid from Finance’s Budget Allocation) with Finance’s Project Manager overseeing this work, and coordinating it with the Early Works Package and the Main Works contract. As a result, the progress with the Early Works Package and the Main Works contract, and any impact on the project, were addressed each month by the Project Manager in reports to Finance.

**3.31** By way of comparison, a governance structure was not developed and implemented between Finance and DOTARS for the works being managed by DOTARS (for example, there was no MoU such as that developed between DIMIA and Finance). This was notwithstanding Finance’s documented risk assessments identifying the provision of utilities and support trades on the Island as a risk to be managed (the risk management approach adopted was discussed at paragraphs 3.5 to 3.12). In respect to Island utilities, Finance’s documented concern was that DOTARS would reduce its spending on utility services with the management strategy to involve Finance having ‘close involvement in the provision of the utilities’. However:

- other than briefings through the Interdepartmental Committee, there was no evidence of any formal linkages of the DOTARS infrastructure works to the CIIDC facility project governance arrangements;
- early in the project, Finance consulted with DOTARS to ensure there were sufficient spare parts on the Island for the port crane (given its importance to project logistics) but Finance (and prior to February 2003,

DIMIA) was not involved in DOTARS' decision-making processes relating to the construction of the additional port facility at Nui Nui, and the subsequent procurement of a new crane or the upgrade to the existing pedestal at Flying Fish Cove; and

- DIMIA was also not involved in the decision-making processes relating to the provision by DOTARS in November 2002 of power to the site (which was essential to the efficient conduct of construction works, as well as for the ongoing operation of the facility).

**3.32** Finance's interest in the DOTARS projects increased towards the end of construction due to the failure of the pedestal for the port crane at Flying Fish Cove and integration concerns, and the Main Works Contractor including the unavailability of the port crane and loss of power to the construction site as part of the various notices of dispute for extensions of time and additional funding lodged with Finance in May 2007. For example, after both the port crane failed and the power cable to the site failed, additional risk treatment strategies were identified involving Finance requiring, respectively, a 'technical report on continuing failure of port crane and follow up action' and a 'technical report on failure of power cable to the site and follow up action'.

#### *Loss of power to construction site*

**3.33** On 31 August 2006, power to the CIIDC site failed due to a fault in the underground high voltage main cable connecting the facility to the Island's power supply. Power was out for two days and was not fully restored until 9 September 2006.

**3.34** In addition to the cost increases borne by Finance for this failure, the DOTARS Budget Allocation was increased in October 2007 by \$5 million for DOTARS to replace the main power supply cable to the site that had been installed as part of the DOTARS infrastructure works but which had subsequently failed. This was on the condition that, when the contractual matter was settled between the original contractor and DOTARS, funds from any settlement were to be returned by DOTARS. In May 2009, AGD advised ANAO that:

The power cable was replaced in 2008 at a cost of \$2 720 677. Settlement has not been reached with the original supplier. The Australian Government Solicitor has been engaged to seek compensation from the original supplier and is pursuing the matter.

### *Port Crane at Flying Fish Cove*

**3.35** DOTARS conducted a tender between February and April 2003 for a new (or near new) crane at Flying Fish Cove after the decision was made to relocate the existing, older, crane to the additional port facility at Nui Nui. The crane could be either a fixed ships cargo crane or a fixed tower crane, with the scope of work for the latter option involving the tower crane to be installed onto a new pedestal. The tendered prices for the two preferred cranes (one ships crane and one tower crane) fell within the lower expected pre-tender estimate but DOTARS considered there were insufficient funds available to construct a new pedestal. Neither AGD nor DOTARS were able to advise ANAO why sufficient funds were not available for the provision of a new pedestal when these works were considered necessary prior to going to tender and the purchase price of either of the two preferred cranes was within the lower range of the pre-tender estimate.

**3.36** DOTARS recognised that, by not constructing a new pedestal, there was a reduced capacity for the new crane and increased difficulties during changeover.<sup>84</sup> However, for budgetary reasons DOTARS decided to have the crane pedestal upgraded rather than a new pedestal constructed (a new pedestal was estimated to cost \$700 000 more than upgrading the existing pedestal). DOTARS also did not address, or discuss with Finance, the costs and benefits of construct a new pedestal as a means of managing some of the logistical risks for shipping materials to the Island. Specifically, had a new pedestal been constructed, the existing pedestal could have been retained as a back-up platform in the event of problems with the new crane on a new pedestal.

**3.37** In March 2004 some surface cracking in the concrete foundations that the new Favco M760D crane was connected to was identified together with the concern that ‘puddles of water in the cracks would disappear then reappear during the crane’s operation (that is, the water disappearing within the cracks).’ Rectification works were undertaken.

**3.38** On 11 January 2006, the new Favco M760D crane at Flying Fish Cove was formally taken out of service due to the discovery of major foundation

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<sup>84</sup> For example, use of the existing pedestal prevented the existing crane (a Favco M440D) for erection of the new crane (a Favco M760D) such that it was necessary to ‘break’ both the existing crane and the new crane down into smaller components with the existing 40 tonne mobile crane used to perform the dismantling and erection tasks.

faults during routine maintenance. The crane was out of service for some six months while the foundations and footings were repaired and/or replaced. As a result, the Main Works Contractor was required to reschedule deliveries of equipment and materials to the Island, and to use inefficient unloading processes (that is, tug and barge) at the port, noting that the second port at Nui Nui is not able to be used for unloading cargo other than a standard 20 foot container.<sup>85</sup>

**3.39** In its September 2008 update report on the CIIDC project, the PWC noted that:

Finance, told the Committee that the impact of the crane failure proved to be dramatic:

... during that period of crane outage, we commissioned barges to travel from Indonesia to Christmas Island to transfer the out-of-gauge material and package it in such a way that it could be lifted by a 100-tonne crawler crane that we had on the site. We had to move that 100-tonne crawler crane from the site to the wharf on ...three occasions ... Each time, that required a major dismantling of the crane, trucking it to the portside and reassembling it under the direction of a specialist engineer who was flown in from Singapore.<sup>86</sup>

**3.40** The estimated savings of \$700 000 realised by DOTARS in its budget were small given the importance of an operating port crane on the CIIDC facility construction project and the budget at that time for these works of \$197.7 million. The initial saving in capital expenditure was more than offset by the effects on the facility construction project of the crane being taken out of service due to the discovery of major foundation faults in the pedestal. In this respect, ANAO has estimated a net delay effect on the project of nearly one month and additional costs of \$6.4 million, comprising:

- \$577 630 in repair costs met by DOTARS, but not attributed to the cost of the project;<sup>87</sup>

<sup>85</sup> Such 'out of gauge' cargo included structural steel, roofing sheets, prefabricated ensuites and 40 foot containers.

<sup>86</sup> Parliamentary Standing Committee on Public Works, *Update Report: The Christmas Island Immigration Detention Centre Project*, Report 7/2008, September 2008, p. 6.

<sup>87</sup> In May 2009, AGD advised ANAO that: 'These costs have been confirmed and action taken to bring the capital expenditure to account.'

- \$4.63 million in increased payments to the Main Works Contractor under the Main Works Contract;
- \$736 263 paid to the Main Works Contractor (outside the scope of the Main Works Contract) for it to provide a temporary crane facility at the port, using the 100 tonne crane from the CIIDC site and a tugboat and barge from Indonesia; and
- \$501 994 in additional payments by Finance to its Project Manager, Cost Manager and Principal Consultant for six weeks of the 13 and a half month delay in the construction stage of the project.

## Recommendation No.1

**3.41** ANAO *recommends* that, in future circumstances where the Department of Finance and Deregulation is delivering capital works projects that depend upon Commonwealth owned and/or operated infrastructure, project governance arrangements be developed to manage the risk and cost of project construction and infrastructure decisions being made in isolation by:

- (a) developing a stronger leadership model that sets out the mutual obligations of each agency to coordinate decisions of critical importance associated with interdependent activities; and
- (b) adopting a sound approach to the preparation and management of the overall project budget by comparing design milestone estimates of the cost of works to the overall budget and subsequently accounting for the final (out-turn) cost.

### *Agency responses*

**3.42** Finance, DIAC, AGD and DITRDLG agreed to the recommendation. DITRDLG noted that the recommendation related to project governance arrangements including the mutual obligations of each agency. Finance noted that it would:

seek to achieve these outcomes through formal agreement with the relevant agencies at the outset of such projects. This will require the cooperation of those agencies and would not relieve them of their obligations.

## 4. Pre-tender design and project cost estimates

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*The chosen project delivery strategy was to involve the main works contract being tendered based on a detailed and developed design with the objective of providing greater cost certainty given the original project had been respecified partly due to significant budget increases. This chapter examines the development of the concept and schematic designs for the CIIDC facility, as well as the estimates of the cost of construction based on these designs. It highlights that the project budget and timetable was under considerable pressure from an early stage.*

### Introduction

**4.1** In respect to design management and the development of associated project estimates, the November 2008 version of Finance's better practice guide:

- requires the preparation of a functional design brief (which is to be updated as the project progresses);
- requires the development of schematic design documents, detailed design documents and tender issue or approved for construction documents together with associated cost plans and estimates;
- advises that the project delivery team needs to closely monitor the progress of the design, ensuring scope 'creep' does not occur, and that the budget is maintained within approved levels.

**4.2** Estimates for a project are often generated at decision points associated with the project delivery lifecycle. These usually include concept design, schematic design, design development, pre-tender estimate, contract award, and at regular intervals during the construction phase, in the form of an estimated out-turn cost.

**4.3** 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.<sup>88</sup>

## Agency responsibilities

**4.4** The MoU between Finance and DIMIA in relation to the CIIDC project recognised that Finance and DIMIA shared responsibility for the efficient and cost-effective delivery of a project that was fit for purpose, met the Government's expectations and could operate in the future consistent with service delivery objectives and within budget constraints. Among other things, the MoU outlined the two agency's respective responsibilities in relation to the development and endorsement of designs for the CIIDC facility.

### Finance

**4.5** Under the MoU, Finance was responsible for:

- developing a Functional Design Brief, based on the approved Client Design Brief, for DIMIA's endorsement;
- management of the design of the CIIDC; and
- seeking DIMIA's endorsement of the designs at the completion of the Concept Design, Schematic Design, Design Development and Approved for Construction stages.

**4.6** Against this background, Finance's Project Manager's contract required it to manage the design process, and manage the Principal Consultant. Specifically, the Project Manager's scope of services for Phase 2—Design and Documentation—included:

In Phase 2 of the Project, the Project Manager will manage the design and documentation, ensuring at all times that the design meets the design brief and time, cost and quality requirements of the Project. The Project Manager is responsible to the Principal for ensuring the design and documentation is carried out in a timely and cost effective manner.<sup>89</sup>

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<sup>88</sup> Evans & Peck, *A Review of the reliability of Cost Estimation of QDMR Projects funded under AusLink*, 27 June 2007, p. 12.

<sup>89</sup> Request for Tender for Project Management and Superintendency Contract, Finance, Ver 5 undated (likely March 2003), Contract, Schedule 2, CI 7.2.



4.7 In respect to this responsibility, the Project Manager included a full time Design Manager as part of its project management team.<sup>90</sup> The Project Manager's tender submission had included the following description of the role of its Design Manager:

Managing the consultants and their progress will be the responsibility of the design manager.... Located in Brisbane with the design team, the design manager will drive the designers, manage their production programme, oversee their coordination and challenge their assumptions and conclusions in order to achieve a high quality outcome.<sup>91</sup>

4.8 In turn, under its 25 July 2004 contract, the Principal Consultant was required to:

provide a comprehensive service including leadership in, and coordination of, all aspects of the design of the Project for the Principal in order to enable the construction of a facility which meets the intent of the design brief and operational requirements. The Consultant has appointed a team of subconsultants by which it will carry out the following broad scope of work.

## DIMIA

4.9 The MoU stated that DIMIA was responsible for reviewing and commenting on the fitness for purpose of the design and construction work, including by providing progressive and timely endorsement of the design of the project. Accordingly, DIMIA provided advice to Finance on design and construction features of the CIIDC facility so as to maximise the operational efficiency of the facility and minimise its ongoing operational costs. The Principal Consultant contract recognised the design brief process as follows:

**Design Progress:** The initial brief for the work was determined by the terms of agreement between Finance and DIMIA for the reduced facility which was described by DIMIA in the following document:

- "Brief for the Design of the Immigration Reception and Processing Centre (IRPC) Christmas Island", as amended to 14 March 2003.

A copy of the agreement between Finance and DIMIA in the form of the "Basic Statement of Government Requirements" is contained in the Conceptual

<sup>90</sup> A Finance internal review of the project in September 2003 noted: 'The Design Manager interprets, moderates and, as necessary restrains, the DIMIA client brief and manages client expectations.'

<sup>91</sup> Project Manager's Tender submission, 16 April 2003, Sect 1.3.

Design Report Volume A dated 24 September 2003 prepared by *[the Principal Consultant]*.

The design brief for the reduced facility has been further developed and matched to the project budget by *[DIMIA]* with advice from *[Finance]*, the Project Manager, the Principal Consultant and the Cost Manager. The current brief in terms of scope, quality and budget is detailed in the Conceptual Design Report Volumes A and B dated 24 September 2003 prepared by *[the Principal Consultant]*.

**4.10** DIMIA agreed to limit its requests for client initiated variations during the Main Works contract as a means of containing costs and simplifying Finance's contract administration and superintendency role.<sup>92</sup> DIMIA records and those of Finance state that this approach was taken on the basis of Finance's assurance that all works necessary to bring the facility up to the 'fit for purpose' standard would be completed prior to the handing of the facility over to DIMIA.

## Design and endorsement 'hold points'

**4.11** In its Project Delivery Strategy report, Finance's Project Manager had advised that the most suitable application of GMP contracts is where:

- The design brief is to be well defined with no exceptions.
- Time is flexible during delivery but costs are fixed.
- Design consultants are engaged by the client and a deed is executed to transfer management control of design during due diligence to the contractor.
- Interface of design objectives versus contractor objectives (final cost vs design intent) must be managed in a collaborative environment.
- The time available for the work is such that the detailed design can be completed before construction must commence.

**4.12** As noted at paragraph 3.14, Ministers expected that the respecified project would involve a fixed price Main Works Contract being tendered based on a detailed and developed design. The design was to be prepared in four stages, with each of the stage constituting a 'hold point' such that the Principal Consultant would stop work until DIMIA endorsement of that stage of the

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<sup>92</sup> DIMIA records state that it requested seven variations during the construction stage, which was seen as an unprecedented low number given the value, complexity and location of the facility.

design was secured (see Table 4.1). In this respect, the Project Manager's September 2003 *Brief and Design Endorsement Process* document prepared for Finance advised that:

At the completion of each design stage it will be necessary to ensure that DIMIA's endorsement is obtained prior to commencement of the next stage. Other relevant stakeholders will also be consulted during this process.

It is anticipated that this process may cause delays. However, with the application of this structured approach, including predetermined hold points and expectations, the delay periods will be minimised. The strategy recognises that delays during the design phases will ultimately cost less in time and money than they will if they occur in the construction phase. The level of risk and associated impact on cost and quality, for delay and changes during the construction is usually higher and is expected to be significantly increased for this project by the remote location of Christmas Island.

This process therefore is a specific response to risks identified and documented in the Project Management Plan.<sup>93</sup>

**Table 4.1**

**Planned design development and endorsement stages**

Design Stage	Extent to which design has been completed	Time period for DIMIA endorsement prior to next stage commencing
Concept	5%	35 working days
Schematic	15%	25 working days
Design development	50% to 70%	20 working days
Contract documentation for incorporation in the tender documents	100%	20 working days

Source: *Brief and Design Endorsement Process* prepared for Finance by its Project Manager, Version 3. Issued 24 September 2003.

**4.13** In June 2009, the Principal Consultant commented to ANAO that:

The impact of overlapping the endorsement period with the commencement of the following stage of the design and documentation process was more significant than the potential risk of abortive work due to non acceptance by DIMIA. As noted in this ANAO report, the program initially allowed for a halt to the design process during this period. In reality, design consultants often

<sup>93</sup> A similar approach had been advocated by the Project Manager in its tender for this role.

make a commercial decision to continue work in this period at their own risk to consolidate the work of the previous stage and to get a head start on the next stage of the project. This is often factored into the consultant's resourcing and ability to meet the program; consultants also often aim to exceed the contract deliverables for each stage thereby increasing the quality and definition of information available for review for endorsement and estimating purpose. The program was amended to remove these endorsement periods, run the design and documentation stages end to end and to allow DIMIA endorsement to run parallel to the subsequent design stage.

## **Preparation of estimates at each design stage**

### **4.14** The Cost Manager's scope of services required it to:

Monitor evolving designs in relation to elemental cost targets and provide a Detailed Elemental Cost Plan<sup>94</sup> at each design stage, including Functional Design Brief, Concept Design, Schematic Design, Developed Design, and Tender Documents in accordance with NPWC / AIQS [*National Public Works Council / Australian Institute of Quantity Surveyors*] Format on a computer software program that will enable updating of the cost plan to take place at each design stage, and at the end of each month to give a committed end cost forecast.

Include in the Cost Plans at each stage for design fees, FF&E [*Fixed Furniture and Equipment*] and all other project costs not included in the construction contracts, such as but not limited to, Client and Finance costs, consultant fees, external costs, etc.

Confirm the suitability of the level of contingencies established in the cost plan and report on the usage of these contingencies. Reference these contingencies to the Risk Management Plan when developed.

### **4.15** The Cost Manager prepared Project Cost Reports for the Concept Design and Schematic Design, and Pre-Tender Estimates for the Early Works and Main Works. In respect to cost plans for the remaining design milestones, Finance advised ANAO that:

#### Functional Design Brief Cost Plan

The completion of the Functional Design Brief and Concept Design Report constitutes a single milestone. The Concept Design Report incorporated the Concept Design, Functional Design Brief and Return Brief including

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<sup>94</sup> The Elemental Cost Plan for each design stage was also required to include contingency and escalation allowances.

Accommodation Schedule. The Concept Design Report is based on this documentation (including the Functional Design Brief). While there was no separate Functional Design Brief cost plan developed as a stand-alone document, it was taken into account concurrently with the Concept Design Report that incorporated the Functional Design Brief and Return Brief.

#### Design Development Cost Plan

The Project Delivery Strategy and the risk assessment that underpinned it determined that the tenders for the Main Works Contractor should be sought based on Design Development Documentation.<sup>95</sup> The Pre-Tender Estimate, dated 28 July 2004, was essentially the Design Development Cost Report and was based on Design Development documentation. This cost estimate was completed a few days prior to tenders closing on 3 August 2004.

## Concept design

**4.16** Finance's better practice guide requires that a functional design brief be prepared during the project inception phase as well as a concept design/plan and a concept design estimate (referred to as a cost plan in the guide). The preparation of this documentation is to precede the referral of the project to the Public Works Committee. In respect to the estimate, the guide requires that:

- development of an outline business case prior to seeking Government approval for funding for a scoping study to identify a preferred option. At this point, the overall project estimate is to be prepared to within 50 per cent certainty—this stage was not undertaken for the CIIDC project as the two-stage approval process for capital works had not, at the time, been introduced; and
- in preparing a detailed business case to seek Stage 2 Government approval (which occurs prior to the project being referred to the Committee), the development of a function design brief and sufficient conceptual design to enable estimates to be prepared within 80 per cent certainty.

**4.17** For the CIIDC project, the Principal Consultant's contract described the concept design stage as follows:

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<sup>95</sup> ANAO notes, at paragraph 3.16, that the Project Delivery Strategy outlined that the engagement process would involve a competitive tender with documentation at approximately 80 per cent completion. As outlined in Table 4.1, the Design Development stage involves the design being at only 50 to 70 per cent complete.

During Concept Design, a number of options are developed and examined to the point where the physical, operational and financial parameters are identified and a preferred option can be confirmed as the most appropriate scope of works.

An agreed package of documentation (Client Endorsement Package) will be prepared and submitted to DIMIA for its endorsement.

**4.18** Tenderers for the Project Manager contract had been sought in April 2003 on the basis that design briefs would be completed by the time the Project Manager was engaged (in May 2003) and that schematic design would commence concurrently with the appointment of the Project Manager. Tenderers were further advised that the first phase of the project would involve the development of a project delivery model and Schematic Design, a process that was expected to take two months.<sup>96</sup>

**4.19** The first delay with design and documentation was reported to Finance by its Project Manager in the June 2003 monthly report (the first report provided by the Project Manager after it was appointed in May 2003). Specifically, the Project Manager advised Finance that it had become apparent that the CIIDC project requirements had not been endorsed by DIMIA and that, as a result, a Phase 1a had been added to the project master program. Phase 1a involving finalisation of the design brief and the concept design was to have been completed by the end of July 2003. It was not completed until 24 September 2003.

**4.20** On 2 October 2003, Finance varied the Project Manager's contract value by \$248 050. The documented reason for the increase related to the concept design phase delays, as follows:

The Project Management contract is time based and Phase One is for the production of a Concept Design and Project Delivery Plan. The Minister released the Project Delivery Strategy on the Island in mid June. The Concept Design was however significantly delayed as the Client brief did not match the Government decisions on scope or budget allocation. It has required at least seven design meetings to obtain an acceptable response to the client brief within the budget allocation. DIMIA have also required an additional month for design endorsement of the Concept Design. Both these reasons for delay are due to circumstances outside the control of the Project Manager.

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<sup>96</sup> This was to be followed by Phase 2 (Detailed Design and Documentation) lasting for 10 months, Phase 3 (the Main Works Tender) lasting for four months and a 17 month construction period (Phase 4).

**4.21** DIMIA's endorsement of the Concept Design was provided on 11 November 2003. This was within the 35 working day endorsement period outlined in Table 4.1.

### Concept design estimate

**4.22** The Concept Design Project Cost Report was included as a section of the Concept Design Report issued by the Principal Consultant on 24 September 2003. The Cost Report reported against the Finance Budget Allocation (of \$197.7 million).

**4.23** The Cost Report advised that the 'Estimated Construction Cost', in the amount of \$164 099 817, was identical to the 'original Construction Budget' (which Finance advised ANAO related to the estimate provided to Government and subsequent Government decision taken in February 2003). In March 2009, Finance confirmed to ANAO that its approach was to tailor the estimate to the budget, rather than having the estimate reflect a genuine estimate of the cost to complete the works as designed at Concept Design phase (which could then be compared against the budget to assess if sufficient funds were available to deliver the works).<sup>97</sup> Finance advised ANAO that:

The Budget Audit Trail appendix to the Cost Report indicates that the elemental line items had indeed varied following a review and re-measure of the latest documentation available at that point in time. However, the total 'Estimated Construction Cost' remained the same as the 'Original Construction Budget', through the adoption of a lower level of contingency than recommended.

Considering that there was still contingency available within the project budget following the concept design estimate, and the Government decision of February 2003 that provided a mechanism for seeking further funding; the maintenance of costs within the then budget allocation by choosing not to adopt a higher contingency at that point in time was on balance, the most logical approach.<sup>98</sup>

<sup>97</sup> In June 2009, the Principal Consultant advised ANAO that 'the apparent difference between the consultant team's opinion of cost to construct the briefed scope and Finance's presentation of estimates matching the project budget was the cause of significant conflict', and that the Concept Design estimate also played a significant role in the price tendered by the Principal Consultant and the assessment of this fee by the Project Manager.

<sup>98</sup> The Cost Manager had raised concerns that the level of contingency was too low. The Cost Manager recommended a contingency in the order of 7.5 per cent (\$11.5 million based on the then current estimated construction costs), with an additional \$2.55 million contingency for other project aspects, making a total of \$14.05 million.

**4.24** The Concept Design Project Cost Report stated that the estimate for Finance’s Budget Allocation was \$197 699 817. This figure implied a level of precision that was not warranted given that the Brief and Design Endorsement Process document issued by the Project Manager had the Concept Design being prepared at 5 per cent design completion.<sup>99</sup>

*Confidential Cost Breakdown provided to the Public Works Committee*

**4.25** The Concept Design Project Cost Report was issued by the Cost Manager on 13 November 2003, dated 24 September 2003, after a number of drafts. The Confidential Cost Breakdown provided to the PWC was based on the Concept Design Project Cost Report.

**4.26** The Committee was informed by Finance that the ‘total building cost estimated for the respecified project’ was \$177.8 million. This comprised project consultant estimates totalling \$12.09 million and construction items totalling \$165.665 million. This latter figure was \$1 565 183 higher than the Concept Design Project Cost Report—due to the figure included for contingency being higher in the Confidential Cost Breakdown. There were also differences in the amounts included for the Cost Manager contract (\$100 000 less in the PWC Breakdown) and Principal Consultant contract (\$530 000 less).<sup>100</sup>

**4.27** The information provided to the Committee in September 2003 did not inform the Committee that the estimate on which it was based had been tailored to match the budget such that it did not reflect a genuine estimate of the cost to complete the works as designed at Concept Design phase. In particular, the Committee was not informed that:

- the estimate included a contingency figure 46 per cent lower than that recommended by the Cost Manager; or
- the Government decision to respecify the project and transfer delivery responsibility to Finance had provided a mechanism for the provision of additional funding following market testing, should it be agreed by Government.

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<sup>99</sup> Finance’s better practice guide requires concept estimates to be prepared with between 50 per cent and 80 per cent certainty.

<sup>100</sup> Finance advised ANAO in March 2009 that it does not consider the differences to be significant in nature.



**4.28** In addition, stating the construction estimate as \$177.8 million implied a level of precision that is at odds with the level of project uncertainty at this stage. An estimate to the nearest \$20 million, or more, would have been more commensurate with the state of development of the design and the procurement plan.

**4.29** Similar issues have arisen in other areas of public administration, both in Australia and overseas. For example, a best practice cost estimating standard has been developed as one response to significant increases in the actual delivery cost of many land transport construction projects on the AusLink National Network compared to the estimate of costs at the time funding was approved (after a review found a common factor was funding being approved based on estimates with too low a confidence level). Also, a recent report to the Secretary of State for Transport in the United Kingdom on the Targeted Program of Improvements (a program established to provide greater focus on the delivery of major highway schemes) concluded that large increase in estimates for projects yet to begin construction had resulted in part from inadequate initial estimates.<sup>101</sup>

### *Cost Escalation*

**4.30** In mid 2003, the Project Manager requested the Cost Manager to separately account for the cost escalation, as the previous reports had escalation embedded in the numbers. An allowance of \$4.5 million for escalation was included in the Concept Design Project Cost Report. The Cost Manager advised:

This allowance is for construction cost escalation over the period of construction (i.e. from November 2004 to March 2006).

The cost of escalation on costs up to the date of commencement of construction is included in the rates applied throughout the estimate of construction costs.

**4.31** An escalation allowance of \$4.5 million was included in the Confidential Limit of Cost Estimate provided at the Committee Hearing in October 2003. No background was provided to the Committee as to the basis for the allowance. The allowance was low given that the design was in an early stage, the works were to be undertaken on a remote island, and that construction completion was scheduled for over three years hence.

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<sup>101</sup> 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.

## Schematic design

**4.32** Finance's better practice guide requires that a schematic design report and schematic design cost plan be prepared when the design has been 15 per cent completed. Similarly, for the CIIDC project, endorsement of schematic design was to occur when the design was 15 per cent complete (see Table 4.1).

**4.33** The Principal Consultant's contract described the schematic design stage as follows:

Develop the design from the concept design.

Upon acceptance by [*Finance*], the preferred development option is further enhanced with a detailed analysis of physical, operational and financial aspects.

This phase involves the finalisation of the design brief and design drawings sufficient for more detailed cost planning.

An agreed package of documentation (Client Endorsement Package) will be prepared and submitted to DIMIA for its endorsement.

A Schematic Design Report will be prepared that demonstrates that a thorough analysis of building and engineering services systems has occurred, ensuring that the intent of the Functional Design Brief and Operations Outline will be met.

The Schematic Design Report and associated Cost Plan are put forward for acceptance by [*Finance*].

**4.34** On 6 October 2003, Finance approved commencement of schematic design except for three areas associated with the Medical Centre, the Administration Building and the Security/Perimeter fence issues, which required further consideration.<sup>102</sup> Schematic design commenced on that date, but was suspended on 23 October 2003 as a result of Finance's decision to undertake a tender process for the Principal Consultant. In this respect, the Project Manager's November 2003 report to Finance advised that:

November has seen the formal endorsement of the concept design by DIMIA.<sup>103</sup> However, the design process has been severely reduced due to the unexpected complexities of calling and assessing consultant tenders.

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<sup>102</sup> Approval to commence schematic design on these aspects was provided on 23 October 2003.

<sup>103</sup> On 12 November 2003, which was the target date for achieving this milestone.

Finance instructed the start of schematic design on 6 October 2003. However, the Principal Consultant was not prepared to mobilise secondary consultants based upon a cost recovery undertaking. Without the availability of secondary consultants it has not been possible to make significant progress on the schematic design. The Principal Consultant took this action on 23 October 2003.<sup>104</sup>

With expected recommencement of design on 1 December 2003, it is estimated that the design program has slipped by at least six weeks and a reprogramming exercise will be required once the appointment of consultants is confirmed.

**4.35** The Principal Consultant recommenced schematic design on 1 December 2003, and was notified of its preferred tenderer status on 4 December 2003. As explained earlier in Chapter 2, whilst it was expected that the contract would be executed during February 2004, this did not occur until 26 July 2004 after endorsement on 16 July 2004 by Finance's Executive Board. The Executive Board had been advised that:

The sole select tender of the Principal Consultant contract for the Project is now complete with the Decision Maker (the Secretary) agreeing, on 2 December 2003, to the nomination of PSC as the preferred tenderer for the role and for Major Projects Branch to enter into contract negotiations with the preferred tenderer.

The performance of PSC, during the period that they have been the preferred tenderer, has been excellent and the design has remained on program. The Department of Immigration and Multicultural and Indigenous Affairs (DIMIA) has endorsed both the schematic and design development packages without major revisions.

**4.36** Notwithstanding Finance's advice to its Executive Board that the design had remained on program, the options review and decision-making

<sup>104</sup> In June 2009, the Principal Consultant advised ANAO that: 'Extension to the program would have been avoided if Finance and the Project Manager had either procured the services of a design consultant team within a timeframe to meet the project program, or had made sufficient allowance in the project program for the process that was required to engage the team. Also reference to the Principal Consultant at 6 October 2003 is in error. At this date PSC were providing architectural services under an hourly rate agreement. The first tender submission for Principal Consultant was on 19 October 2003, this tender was later abandoned by Finance. The second tender submission was on 19 November 2003. This is the tender process that resulted in PSC being appointed Preferred Tenderer on 4 December 2003, and ultimately Principal Consultant on 26 July 2004.'

The expectation of Finance that a design consultant engaged on an hourly rate basis to provide architectural services would be in a position either contractually or commercially to provide the extended range of services of over 15 design disciplines required by the Principal Consultant role on a cost recovery basis prior to even submission of a tender for the services was unreasonable.'

process for the schematic design phase took two weeks longer than expected resulting in a late start by the Principal Consultant and its design sub-consultants on documentation and reports in some areas. The Draft Schematic Design Endorsement Package and full report was issued on 26 March 2004, one week later than the then-current target of 19 March 2004 (and nearly four months later than the original schedule of 26 November 2003). In its April 2004 monthly report to Finance, the Project Manager noted (on page 8) that:

- the Cost Manager's assessment of the cost of the schematic design and price escalation had a significant impact on the budget (the Cost Manager's report appended to the Project Manager's report stated that the estimated construction cost was in the order of \$23 million in excess of the initial construction budget with no allowance for contingency; the Cost Manager considered a contingency in the order of \$12 million was required);
- a decision had been made to proceed with the Main Works tender in order to determine a market view of the cost as intended in the Government decision; and
- the design program could not absorb any substantial changes from the next value management workshop.

**4.37** Endorsement of the Schematic Design was obtained from DIMIA in April 2004. However, the endorsement did not include specific directions to the design team on some of the alternatives. It also involved an alternative containment approach using a single perimeter fence, which the Principal Consultant advised would require a significant redesign of civil works and testing of various approaches, thereby affecting the ability to fully coordinate and integrate the final site and building layouts.

### **Schematic Design estimate**

**4.38** The Schematic Design Project Cost Report for the CIIDC project was issued by the Cost Manager on 23 April 2004 separately to, and after the endorsement of, the Schematic Design Report. The Schematic Design Project Cost Report was approved by Finance on 30 June 2004. The final version of the Schematic Design Project Cost Report was dated 26 May 2004 and issued by the Project Manager on 9 July 2004. This represented a relatively extended period of time to finalise the estimate, particularly given that the master program detailed in the Cost Report indicated that Developed Design was scheduled for completion by the end of May 2004.

**4.39** The Schematic Design Project Cost Report presented a summary of the estimate and elemental breakdowns. This approach is consistent with Finance's better practice guide (which requires an elemental cost plan including contingency and escalation allowances).

**4.40** The Schematic Design Project Cost Report reconciled the estimate of \$232 948 096 against the Finance Budget Allocation of \$197.7 million. The estimate was approximately \$35 million over the Finance Budget Allocation.<sup>105</sup> The increases in the estimate were attributed to:

- buildings and external works related increases of \$16.8 million;
- cost escalation increases of \$9.8 million;
- contingency allowance increases of \$6 million; and
- consulting fees increases of \$2.6 million.

**4.41** The estimate did not include any details, or a line item, for the Early Works package, which had been awarded in May 2004 for a contract amount of \$1 964 678.

**4.42** Similar comments as included above for the Concept Design Project Cost Report are applicable with regards to the order of accuracy of the Schematic Design stage estimate. Generally for this level of design, an order of accuracy of +/- 30 to 40 per cent may be expected.

**4.43** The estimate included an allowance of \$11.31 million for additional design items, which were not part of the original design brief, but subsequently requested by DIMIA. These included case management facilities, fire rating structures, fire testing, air conditioning in accommodation and computer class rooms, additional fencing, entry road, early works penalty, etcetera.

### *Cost Escalation*

**4.44** Cost escalation was considered in some detail in the Schematic Design Project Cost Report:

The Schematic Design Estimate includes an amount of \$20 million for escalation (\$14.3 million included for preconstruction escalation and \$5.7 million included for escalation during construction). This amount has

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<sup>105</sup> The contingency and escalation figures included in the Schematic Design Project Cost Report amounted to \$12 million and \$14.3 million respectively.

been calculated by applying an Australian national average escalation percentage to the estimated Construction Cost. This escalation applies from January 2003 through to completion of construction in March 2006.... Escalation up to construction is estimated to be in the amount of \$14,836,926 and escalation during construction is estimated to be in the amount of \$5,237,329.

Published indices at September 2003 (Concept Design) showed average forecast escalation in the order of 2.5 to 3% per annum. With significant increases in construction costs experienced in all of Australia's capital cities, published indices at March 2004 (Schematic Design) show average forecast escalation in the order of 5.15% per annum. Across the period of design and construction, the results of changes in published construction indices produce an increase in escalation allowance (between Concept Design and Schematic Design Estimate Reports) in the order of \$10.177 million.

In analysing Cost Escalation recorded by various published indices for Australian capital cities, an average in the order of 5.15% p.a. has been established. It should be noted that this average excludes Brisbane where significant escalation has been experienced in the last 18 months.

**4.45** Information on construction indices for capital cities across Australia was included in the Report. A detailed breakdown of how the escalation for pre-construction and during construction was calculated was also included.

**4.46** The approach of applying an Australian national average escalation percentage to the construction estimate has merit. However, excluding the index for Brisbane from the calculation of the national average is questionable. There was no commentary as to why Brisbane's forecast indices were not included, but it could be inferred that it was to avoid skewing the average, because Brisbane had a higher index of 12 per cent as compared to 3.7 per cent to 6.7 per cent for the other capitals. However, this issue is particularly relevant as one of the shortlisted tenderers was based in Brisbane, and the shortlist was approved in early May 2004 prior to the release of the Schematic Design Project Cost Report. Therefore there was a possibility that a Brisbane based contractor could be awarded the project, although it is acknowledged that the tender price is assessed on a competitive basis.

## Recommendation No.2

4.47 ANAO *recommends* that the Department of Finance and Deregulation informs the Public Works Committee of the project budget, the estimate of cost and order of accuracy on which the estimate is based when providing information to the Committee for projects it is delivering.

### *Agency responses*

4.48 Finance, DIAC, AGD and DITRDLG agreed to the recommendation. Finance noted that it:

has since implemented a range of procedures to improve the understanding of cost estimating accuracy at various milestones throughout the project delivery cycle. These include the two-pass approval process for major capital works and an internal Better Practice Guide for Finance officers in the Property and Construction Division.

## 5. The facility construction tender

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*This chapter outlines how the management of the project departed from the identified risk management strategy of design hold points and the detailed design being completed before the Main Works tender was undertaken.*

### Introduction

**5.1** As outlined in Chapter 3, the project delivery strategy approved by the then Government was to involve a main construction contract based on a modified lump sum form of contract that included a Guaranteed Maximum Price (GMP). GMP construction contracts are arrived at through a staged process. As illustrated by Figure 5.1, the first stage is the selection of a preferred tenderer. Each party participating in the tender process is provided with construction drawings and specifications to a sufficient level of detail to allow them to submit a fixed price for the works based on the required dates for practical completion. The tender price includes two main components:

- a construction budget, including prices for the works under construction and risks to be carried by the contractor (referred to as Group 3 risks<sup>106</sup>); and
- the prices for inclusion of Group 2 risks (such as documentation errors and omissions, latent conditions and/or the interface with early works packages).

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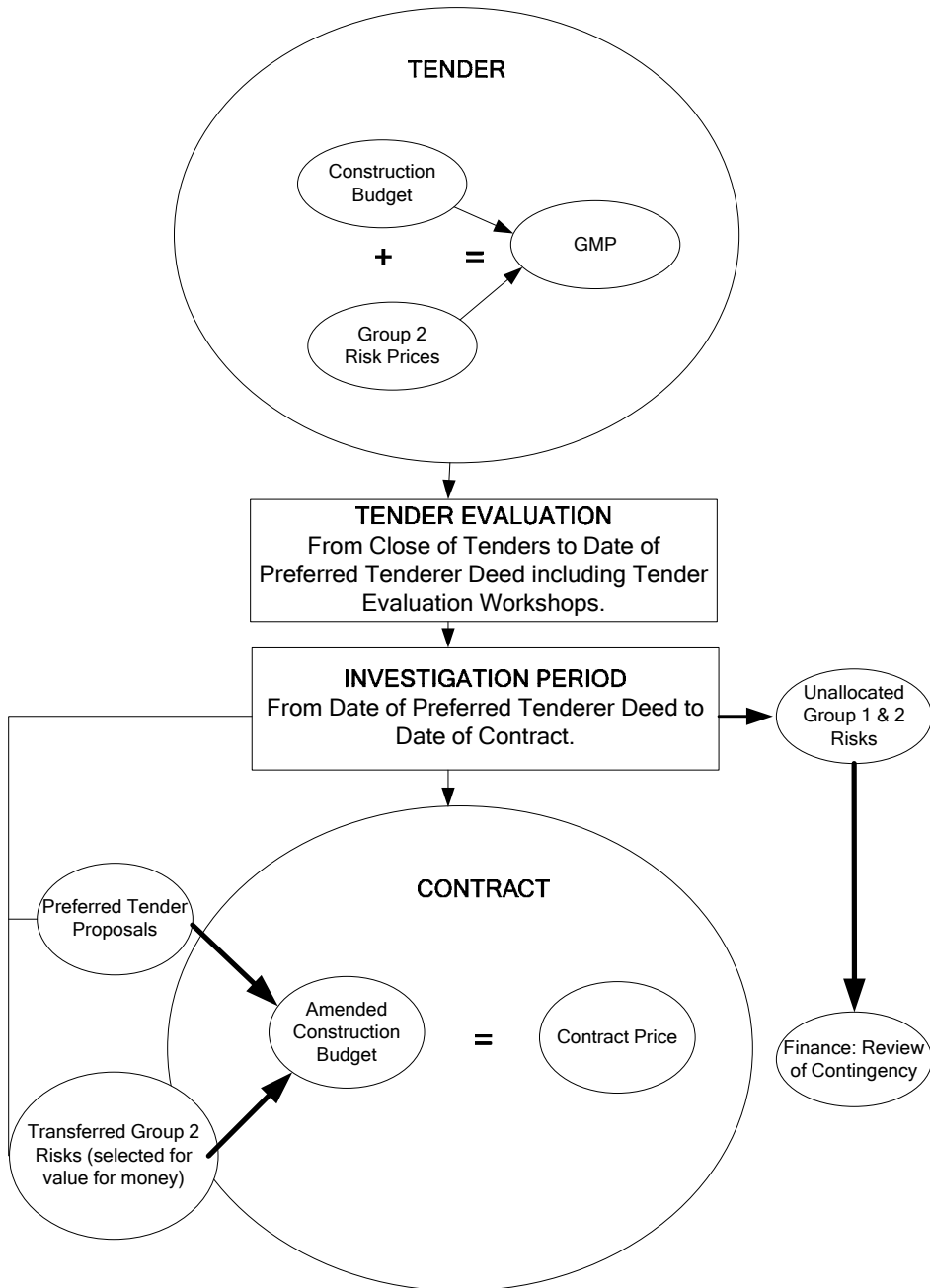
<sup>106</sup> For contract pricing purposes, risks are grouped into:

- Group 1 risks, which will be carried by the Principal (the Commonwealth) being material scope changes and uninsurable risks;
- Group 2 risks, which, when priced by the successful tenderer, define the Guaranteed Maximum Price (that is, the Guaranteed Maximum Price equals the construction budget plus Group 2 risks that are transferred to the contractor for the agreed price); and
- Group 3 risks, which are risks that are expected to be carried by the contractor such that they are unlikely to be negotiated during the Investigation Period (such as inclement weather) and must therefore be priced as part of the construction budget included in the tender.



**Figure 5.1**

**Staged Process to Develop a GMP Contract**



Source: *Christmas Island – Main Works Procurement: Risk Allocation Discussion Paper* prepared by Finance’s Project Manager, 31 March 2004, p. 3.

**5.2** The process outlined in Figure 5.1 was consistent with the preferred method of procurement proposed by the Project Manager and Cost Manager.<sup>107</sup> In this respect, the Cost Manager's Report for December 2003 and January 2004 commented that:

In conjunction with the Project Manager and Principal Consultant, [*the Cost Manager*] has developed a draft procurement methodology paper outlining the preferred method of tendering the works. Briefly, the preferred method is a two stage tender involving selected contractors (having been selected from a rigorous pre-qualification process) in a first stage tender for the works based on extensive developed design documentation accompanied by tender control documentation and a schedule of quantities incorporating provisional sums for elements not clearly defined and subject to design development. The second stage of the tender would be an open book negotiation process involving the preferred tenderer working closely with the project team in firming up the fixed lump sum based on final design documentation.

The preferred procurement methodology will provide the Principal with the benefits of traditional design and fixed lump sum whilst also providing the benefits of early contractor participation (in particular buildability, logistics relating to the remoteness of the Island and value management issues).

**5.3** In addition, a Risk Management and Procurement Workshop had been held in early December 2003. The stated purpose of the workshop was to revisit the major project risks that had been identified by the various groups involved in the delivery of the project, and to introduce the then-current thinking in respect of the procurement strategy for the construction works. The workshop was attended by Finance, the Project Manager, the Principal Consultant and the Cost Manager. In respect to tender selection, the recorded outcome of the Workshop was that:

It was noted that a two stage process was required to appoint a preferred bidder. This will take time. The Principal Consultant noted that pressure to document for an early tender may derail the completion of contract documentation. The Cost Manager noted that a Bill of Quantities could not be produced until the documentation was completed.

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<sup>107</sup> In June 2009, the Principal Consultant advised ANAO that it attended and participated in meetings to discuss the implications of implementing the proposed method of procurement and was critical of the approach being taken for procurement and the program to achieve that approach. The Principal Consultant advised ANAO that it did not propose the method of procurement.

It was resolved that the point of introduction for the preferred bidder should be at about 80 per cent of documentation that is approximately at the end of design development. However, it was noted that 80 per cent is not necessarily the definition of the end of design development.<sup>108</sup> In any case, the coordination between the design programme and the tendering process may be the overarching determinant of when this outcome can be achieved.

With the above in mind, [*the Principal Consultant*] and [*the Cost Manager*] were asked to define the documentation package they considered appropriate for the tender and when it could be available. It was thought that the tender package would be a combination of fully detailed documents, performance briefs, provisional sums and schedule of key notes. On the matter of a Bill of Quantities, it was considered that a schedule of key rates may be more appropriate to the tendering strategy.

**5.4** However, due to time pressures associated with an overly-ambitious project timetable and delays in the development of the design documentation, the management of the project departed from the identified risk management strategy of design hold points and the detailed design being completed before the Main Works tender was undertaken and construction commenced. Instead, as illustrated by Figure 5.2, the procurement strategy was revised to:

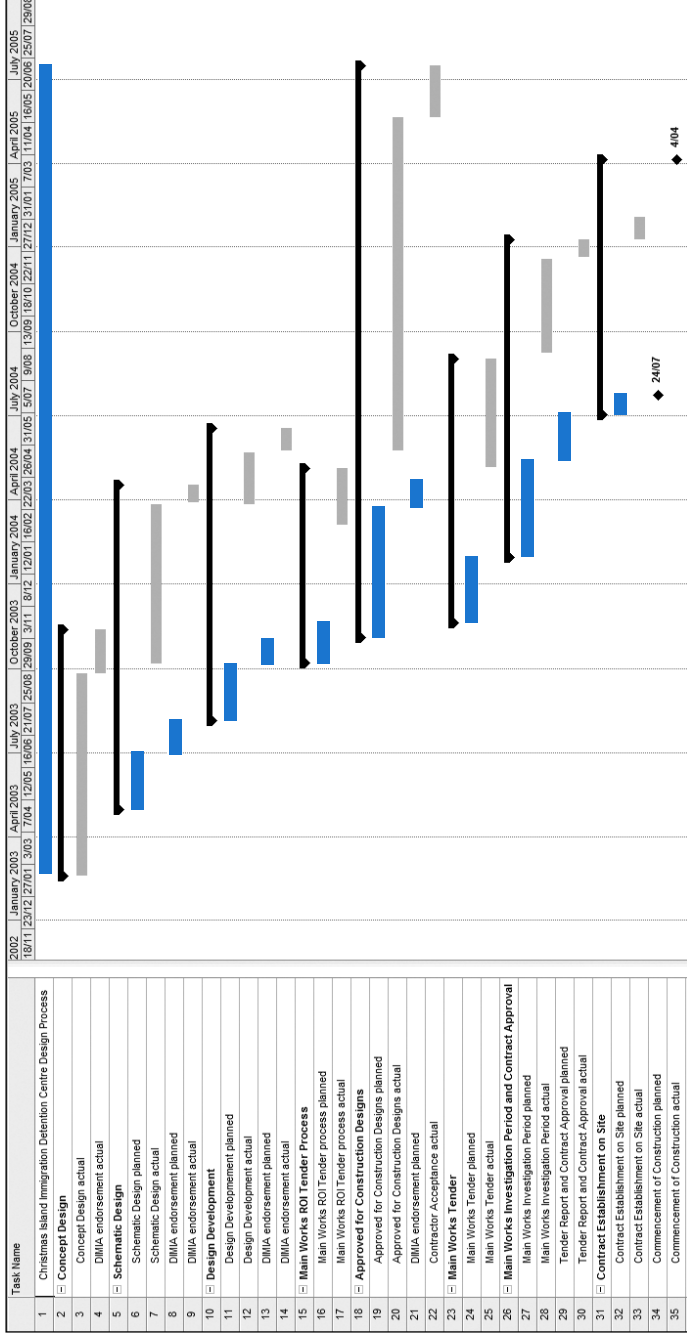
- allow for concurrent conduct of the Main Works Contract tender and completion of design documentation;<sup>109</sup> and
- later design stages were commenced without waiting for DIMIA's endorsement of the prior stage.

<sup>108</sup> In June 2009, the Principal Consultant commented to ANAO that this statement in the recorded outcome of the Workshop includes an inconsistency. Specifically: 'The statement refers to "80 per cent of documentation" and "at the end of design development" and implies that these two measures are concurrent. The end of design development could be referred to as approximately 80 per cent completed DESIGN but certainly not 80 per cent complete DOCUMENTATION. The two terms are not interchangeable. This illustrates a confusion that existed over the relationship between the design period, documentation period and investigation period. The consultant team had an expectation that documentation would be substantially complete prior to the Preferred Tenderer Investigation Period rather than running in parallel for a substantial portion of the documentation period. This would have placed the Main Works Contractor tender period well within the documentation period.'

<sup>109</sup> Specifically, in January 2004 Revision F of the Master Program was issued, with the forecast date for completing the design and documentation for the facility works delayed from 1 September 2004 to 9 November 2004. This meant that design and documentation work was now scheduled to be completed (to the final Approved for Construction stage) one day prior to the Main Works Contractor commencing construction on site.

**Figure 5.2**

**Project timeline for the facility design and construction commencement**



Source: ANAO analysis of project records.

## Registrations of Interest and issuing of the Request for Tender

5.5 The Main Works Contract was let through a three phase process. The first phase involved advertisements on 6 March 2004 seeking ROI by 26 March 2004 from suitably experienced head contractors to construct an 800 place CIIDC (including contingency capacity) with ancillary administrative and support facilities on a 20 hectare site on Christmas Island. Registrations were received from six organisations of which three were shortlisted<sup>110</sup> on 4 May 2004 to proceed to the next phase.

5.6 The second phase in the letting of the Main Works Contract involved a RFT being issued to the three shortlisted respondents. One of the shortlisted parties withdrew early in the process due to other tender commitments. After considering the situation of having only two tenderers, the level of activity in the Australian construction market and alternative procurement options and the associated risks, Finance decided to continue with the tender process. In the event one of the remaining tenderers withdrew, the most likely contingency plan was to terminate the process, complete the design and documentation and to go back to the market with a lump sum tender.

### Tender and contract design documentation

5.7 The September 2003 Brief and Design Endorsement Process document described the Contract Documentation phase as:

During this stage the documentation will be completed, coordinated and ready for tender to the construction market. This stage of the process is about completing the construction details to a standard that permits a robust tender and allows the contractor to construct the facility. If the preceding endorsement stages have been carried out properly the final endorsement should be routine. There should be little variation in the functionality of the design as it advances from design development to contract documentation.

5.8 The original project timetable involved tenders for the Main Works Contract being called in November 2003. The original timetable envisaged that,

<sup>110</sup> The Evaluation Team was chaired by a senior Finance official within Property and Construction Division and included two other Finance representatives from within Major Projects Branch, a representative from DIMIA and a representative from the contracted Project Manager. Registrations were evaluated in two stages: Stage 1 involved a Go/No Go assessment against the mandatory criteria; and Stage 2 involved an assessment against the weighted assessment criteria. Four respondents were assessed as having met the mandatory criteria and proceeded to the Stage 2 assessment.

at this time, the Developed Designs would have been completed and endorsed by DIMIA (by the end of October 2003) and that the preparation of Approved for Construction designs and documentation would have commenced. The Principal Consultant's contract described the design development stage as follows:

Develop the design from the Schematic Design to standards defined in this scope of work.

This phase involves the ongoing development of the approved design by all Consultants and the incorporation of all Authority requirements into the design.

A further cost plan estimate will be prepared by the Cost Manager with the assistance of the Principal Consultant to demonstrate that the project is still within budget. Cost estimates for building services will be provided by the relevant Subconsultant for coordination and checking by the Cost Manager.

A Design Development Report will be prepared that demonstrates that issues of planning, design, materials selection, construction and constructability, services integration and coordination, structural, civil, mechanical, electrical, hydraulic, energy, communications, security and other subconsultant disciplines have been addressed and integrated into the proposal to obtain an effective project outcome.

An agreed package of documentation (Client Endorsement Package) will be prepared and submitted to DIMIA for its endorsement.

The Design Development Report and associated cost plan will be accepted by *[Finance]* as representative of the conclusion of this phase.

**5.9** As noted, tenders for the Main Works Contract were actually called in May 2004. This represented a delay of six months against the original program. However, by this time, the Developed Design documentation still had not been completed, or endorsed by DIMIA. Instead, the Schematic Design Report (endorsed on 16 April 2004) was issued with the the Main Works Contract RFT with the RFT advising tenderers that:

The Schematic Design Report issued with the RFT documents are issued for information only, and are to be used by Tenderers in their planning of management and logistics for their Tender. The Schematic Design Report should not be used as a basis to determine the tendered Construction Budget, risk pricing or tendered GMP.

Midway through the Tender Period, Finance will issue the further Drawings, technical notes, the finalised Preliminaries to the Specification, and the Schedule of Prices for the purpose of determining the prices for the Tender.

Tenderers are required to base their prices for the Construction Budget and GMP on the issue of further documentation midway through the Tender Period.

The documentation will be further developed during the Investigation Period and issued as construction issue Drawings at the conclusion of the Investigation Period.

**5.10** The Developed Design documentation was issued to tenderers on 1 June 2004, as an addendum to the RFT. The Developed Design documentation was issued to tenderers before DIMIA had endorsed the design<sup>111</sup> and more than three weeks after the RFT was issued on 6 May 2004.

**5.11** Due to the amount of documentation, the Cost Manager was unable to complete the Schedule of Prices associated with the Developed Design that was to have been released to tenderers on 31 May 2004. The Schedule of Prices was provided by the Cost Manager to the Project Manager on 11 June 2004 and released to tenderers on 15 June 2004.<sup>112</sup> The Cost Manager advised Finance in June 2004 that:

During the preparation of the Schedule of Prices, [*the Cost Manager*] identified a number of areas where the design had not progressed sufficiently to enable the Tenderer's to price the works accurately. These grey areas, together with other areas scheduled by the consultants, were addressed by either inserting Provisional Sums for those works or making and clearly identifying assumptions within the measured items of work.

**5.12** As a result of the delay in receiving the Schedule of Prices, the tenderers requested an extension of time so as to accurately estimate the cost of the project. A one month extension to the Main Works Contract tender period (from 28 June to 3 August 2004) was granted by Finance. The delays to the provision of the Schedule of Prices and the extension of time granted to tenderers resulted in a one month deferral of the milestone for award of the Main Works Contract, and pushed the planned date for commencing the main works out to 3 December 2004.

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<sup>111</sup> The Developed Design and related Endorsement Package was provided to DIMIA on 24 May 2004. DIMIA submitted its initial comments on the Developed Design on 11 June 2004 and endorsed the package on 18 June 2004, within the timeframe allowed in Table 4.1.

<sup>112</sup> An addendum to the Schedule of Prices was issued on 28 June 2004 to reflect more accurate quantities on the civil works.

## Pre-tender estimate

**5.13** The Main Works Pre-tender Estimate was prepared by the Cost Manager on 28 July 2004 and issued by the Project Manager on 2 August 2004, prior to the close of tenders on 3 August 2004. The total estimated GMP was \$205 982 949. The Main Works Pre-tender Estimate included an explanation of how the estimate was developed, how rates were tested and allowances estimated using information from various industry sources. It was prepared in the same format as the Tender Sum Breakdown required in the RFT. This was a prudent approach in preparation for comparing each tenderer's Tender Sum Breakdown against the Pre-tender Estimate.

**5.14** In preparing the Pre-tender Estimate, the Cost Manager tested it against information from industry suppliers and sub-contractors to confirm the robustness of the estimate. This included:

*...[the Cost Manager] has priced the items given in the Schedule of Prices, tested rates and allowances using information from various subcontractors and suppliers, calculated the anticipated number of man-hours in the construction of the project, estimated the cost of accommodation and meals associated with running the construction camp during the period of construction, calculated the estimated costs of flights, estimated the cost of shipping and prepared an indicative Preliminaries analysis for the supervision of the construction works and plant and equipment. [The Cost Manager] has also provided an estimate of the indicative allowance for builders profit and overheads.*

**5.15** This approach represents good practice.

**5.16** The Pre-tender Estimate issued on 2 August 2004 was presented in isolation and no comparison was made against the Finance Budget Allocation so as to identify if the project was within budget. In March 2009, Finance advised ANAO that:

The pre-tender estimate was received by Finance on 2 August 2004. While the Pre-Tender Estimate did not specifically report against the Budget Allocation, further commentary was provided in the July 2004 and August 2004 Cost Manager monthly reports. The pre-tender estimate was reported against the total budget allocation in both of these monthly reports, although this was not at a detailed elemental level. These reports indicated an over-run of approximately \$59 million.

Also of note was that Government had agreed through its decision of February 2003, that the market should be tested, and if the initially allocated project funding was exceeded, then following vigorous value management, additional funding might be sought from the Prime Minister. The Project Manager's



monthly report of July 2004 reflects this, indicating *The Main Works tenders to be received on 3 August will provide a market assessment of the project and thereby provide a formal basis for resolving any budget issues.*

## Receipt and evaluation of tenders

**5.17** Both of the remaining two shortlisted firms submitted a tender to Finance by the amended closing date of 3 August 2004. Tender evaluation was scheduled to take place between 4 August and 24 August 2004. The evaluation involved several specific assessments including against threshold criteria, price and the delivery methodology.<sup>113</sup> Tender workshops were also held with each tenderer to allow them to clarify their proposals and to enable an assessment of the team they nominated to carry out the project.<sup>114</sup>

**5.18** Both tenderers passed the threshold criteria and were then evaluated against the weighted assessment criteria.

**5.19** As noted, a decision had been made to proceed with the Main Works tender in order to determine a market view of the cost. In this respect, the cost of one of the tenders was below the Cost Manager's pre-tender estimate. The other tender was \$23 million above the pre-tender estimate. Nevertheless, the lower priced tender still involved a tendered GMP that was expected to result in a budget overrun of \$59 million (including \$6 million contingency allowance). The Cost Manager advised Finance that:

The tenders received compare favourably to the pre-tender estimate and generally reflect fair and reasonable pricing given the prevailing market conditions where resources are stretched and competitive interest is perhaps less keen than in recent years.

**5.20** The Tender Evaluation Report was dated 25 August 2004 with a recommendation to the then Finance Minister that he note that Baulderstone

<sup>113</sup> More specifically, tenders were evaluated in six stages, by the same panel that assessed the ROI. Stage 1 involved an assessment against threshold criteria which needed to be met in order to proceed to Stage 2 (which, in turn, involved weighted assessment criteria). The third stage involved an assessment of price (being the Construction Budget, the amount of proposed delay damages, the fee for services to be performed under the Preferred Tenderer Deed during the Investigation Period and Group 2 risks). Stage 4 involved Tender Evaluation Workshops being undertaken with each tenderer to examine their response to critical project issues and to enable a more comprehensive evaluation to be completed. The workshops were followed by Stage 5 which involved a preliminary assessment of value for money by the Evaluation Team with this assessment used in Stage 6 to select the Preferred Tenderer.

<sup>114</sup> The process also included the Principal Consultant and the Cost Manager attending the tender evaluation workshops held in Canberra on 11 and 12 August 2004, with each of the Principal Consultant and the Cost Manager providing tender evaluation reports on extracts of tenders submitted for the Main Works package.

Hornibrook Pty Ltd would be selected as Preferred Tenderer, and that Finance would enter into a Preferred Tenderer Deed with Baulderstone Hornibrook for the Investigation Period.

## Investigation Period under the Preferred Tenderer Deed

**5.21** The Investigation Period was the third and final stage of the Main Works Contract procurement process. For GMP contracts, the Preferred Tenderer Deed governs the negotiations between the preferred tenderer and the Principal until such time as a contract is signed or, where no contract is signed, to the date that negotiations cease. This is referred to as the Investigation Period. The Investigation Period also includes the Preferred Tenderer's:

- examination of the design and site to enable it to accept all risks associated with the contract;
- proposals for design development, buildability and logistics, and Group 2 risk transfer which is to be assessed, negotiated and accepted for inclusion in the construction budget (subject to an assessment of value for money); and
- coordination and submission of the amended construction budget at the conclusion of the investigation period, inclusive of the amendments resulting from the accepted proposals, and transfer of the accepted Group 2 risks.

**5.22** In this respect, Finance's Project Manager advised it in March 2004 that:

Following the preferred tenderer's audit of the Request for Tender documents and the site, it will be required to make proposals to amend any item within the construction budget to improve value for money. This process will essentially be a value engineering process for each element of the construction budget.

The result of these negotiations will be the acceptance by Finance of all or some of the preferred tenderer's proposals. The criteria for acceptance will be

value for money ensuring the Guaranteed Maximum Price is not exceeded, and overall price reduction.<sup>115</sup>

The proposals that have been accepted will be a component of an amended construction budget, with improved value for money, at the conclusion of the investigation period.

**5.23** In May 2009, Finance advised ANAO that, while maintenance of costs within the GMP (except for limited circumstances) was of importance to it, the main objective of the Investigation Period was to maximise value for money for the Commonwealth.

**5.24** The Preferred Tenderer Deed terms were agreed and signed by the Preferred Tenderer and Finance on 31 August 2004. The Investigation Period started on 7 September 2004 and was due for completion 12 weeks later (on 29 November 2004). The Preferred Tenderer's fee for the Investigation Period was set at \$701 227.

**5.25** Difficulties were experienced with progressing the Investigation Period. In its October 2004 report to Finance, the Project Manager advised Finance that the combination of a demanding documentation program and the attendance required by the Preferred Tenderer during the Investigation Period was causing strain on the consultant team and that, whilst every effort was being made to meet deadlines, some milestones had not been met.<sup>116</sup>

**5.26** In relation to the implications of this situation for facility construction costs, in its October 2004 report, the Cost Manager advised that:

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<sup>115</sup> The then Finance Minister was advised in April 2004 that the Investigation Period would allow the Preferred Tenderer to gain a fuller understanding of the detail of the design and contract documentation thus mitigating the likelihood of future claims for errors and omissions. In this respect, the RFT for the Main Works Contract stated that the Guaranteed Maximum Price, which was to be provided with the tender, was to remain unchanged throughout the Investigation Period and the construction phase (except for scope and approved delay costs) so as to meet Finance's requirement for certainty of a maximum end price at the time of the tender.

<sup>116</sup> The Project Manager further advised Finance that the Principal Consultant had reported that potential delays to the issuing of construction documentation related to:

- changes in surface treatments such that it was predicted that documentation would not reach full scope definition for the 4<sup>th</sup> interim issue;
- changes have been made to exit and security strategies such that documentation would not be finished for the 4th interim issue;
- attendance during the Investigation Period by key personnel had caused delays to the production of scope definition and documentation for the 4th documentation package;
- delays in receiving the self harm issues report would delay the issue of architectural documentation for construction; and
- resolution of directional and regulatory signage.

The magnitude and scope of the developed design documentation is such that it is apparent that the tender price submitted by the preferred tenderer will be exceeded. In preparing the revised schedule of prices, *[the Cost Manager]* is noting significant design development issues and has alerted the Project Manager to these changes. *[The Cost Manager]* is also aware that the preferred tenderer has identified a number of areas where the tender price is expected to be exceeded. *[The Cost Manager]* has reported its concerns on the perceived lack of ownership of the project budget displayed by the project team and the apparent over-design and over elaborate solutions. *[The Cost Manager]* has recommended that a value management workshop be held to focus on the technical aspects of the design and to properly address concerns raised by the Preferred Tenderer, the Project Manager and *[the Cost Manager]* on such issues as buildability, logistics, the requirement for 'island friendly' design solutions, elaborate detailing and the like.

5.27 In June 2009, the Principal Consultant advised ANAO of its perspective, as follows:

It is important to note that design consultants rely on the cost management team for guidance on costs and budget, and that the design team relies on the project management team for guidance on the matching of scope and quality to budget. The Cost Manager's statement identifies two issues that hampered design progress and Finance decision making for the entire duration of the design and documentation period:

- The first and primary issue was the gross mismatch between budget and the scope and quality expectations of the client department DIMIA. The design consultants could not design out a mismatch of this magnitude and also could not achieve the client's scope and quality expectations without direction from and difficult decision making by the project team.
- The second was that, other than DIMIA, the project management team's (Finance, Project Manager, Cost Manager) did not have experience in security projects. This resulted in not understanding the level of design and detailing required for a project of this nature, resulting in a reluctance to believe and make monetary allowance for the cost issues raised by design consultants advice.

...A third significant issue was that the consultants were not openly advised of the budget issues—in June 2004, when the Principal Consultant's contract was signed, it was based on \$164.1 million. It appears that it was known by the Cost Manager, Project Manager and Finance that the true cost of the project was significantly more than this figure. It was not until reading of this

proposed [ANAO] report that PSC finally understood the budget position at the various stages of the project.

It is interesting to note that rigorous investigation of alternatives and challenging of the consultants approaches, and later 'value management' failed to identify 'the apparent over-design and over elaborate solutions'. Measures subsequently taken were primarily cost cutting by reducing briefed and agreed scope and quality.

## Construction documentation

5.28 The Principal Consultant's contract described construction documentation as follows:

This phase involves the development of properly coordinated documents suitable for tendering and subsequent construction. The documents and the project must have all relevant Authority approvals.

A pre-tender cost estimate will also be prepared by the Cost Manager with the assistance of the Principal Consultant to demonstrate that the project budget requirements will be achieved. Cost estimates for building services will be provided by the relevant Subconsultant for coordination and checking by the Cost Manager.

Prepare design documents for the calling of a traditional lump sum tender for the Early Works and for a lump sum construction price with a Guaranteed Maximum Price for the Main Works Contract. The Consultant has made sufficient allowance to provide assistance to the Preferred Tenderer during the period of performance of the Preferred Tenderer Deed. Any errors or omissions found in the design and documentation shall be rectified by the Principal Consultant at no cost to [Finance], and any suggestions made by the Preferred Tenderer to improve value will be treated as a value management item, and the cost of any redesign included in the cost of the suggestion for evaluation by [Finance]. During the period of the Preferred Tenderer Deed, the Preferred Tenderer shall carry out at least the following tasks:

- Review the contract documentation.
- Review constructability.
- Review materials selected.
- Review level of standardisation and potential prefabrication for construction efficiency.

5.29 However, as noted, the design had not been developed to the construction documentation stage before the tender process was completed.

The delay in preparation of facility designs was reflected in the terms of the Preferred Tenderer Deed which stated that:

The Preferred Tenderer acknowledges that design documentation for the Project was incomplete at the time of issue of the RFT documents and also acknowledges that during the Investigation Period the Superintendent will issue further drawings and specifications to the Preferred Tenderer in order to progress the design. Any further drawings and specifications issued later than 3 weeks prior to the expiry of the Investigation Period shall be disregarded for the purpose of determining the content of any deemed offer by the Preferred Tenderer...

**5.30** The preparation of construction documentation commenced at the beginning of June 2004, with a targeted completion date of 9 November 2004. When the Preferred Tenderer Deed was signed on 31 August 2004, the date for completion of Approved for Construction documentation remained unchanged at 9 November 2004.

**5.31** From the beginning of the development process, there were concerns that the Approved for Construction documentation would not be completed on time. For example, the Project Manager's June 2004 report to Finance advised that:

The completion of construction documentation is under pressure of delay due to the ongoing issue of plant selection, the potential changes from the value management workshop and DIMIA's comments on the Design Development endorsement package.

**5.32** Subsequently, the Project Manager advised Finance in its November 2004 monthly report that late design documentation and difficulties in developing a proactive approach by the design consultants<sup>117</sup> to the Preferred Tenderer's alternatives were limiting the benefits of the Investigation Period. The Project Manager further advised that:

The design team have struggled to maintain their program during the month and Issue 3 documents were distributed progressively over a six week period. This has in turn delayed the process of pricing by the Preferred Tenderer.

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<sup>117</sup> In June 2009, the Principal Consultant advised ANAO that: 'During the Investigation Period the Principal Consultant's team attended every requested meeting with the Preferred Tenderer, and investigated and reported on every alternative proposed by the Preferred Tenderer. This was not easy to achieve concurrently with a challenging documentation program.'

A further complication has been encountered through the distribution of Issue 4 documentation. This document issue was unplanned and proposed by the Principal Consultant in recognition of the delay in producing Approved for Construction documentation.<sup>118</sup> It was resolved not to formally transmit Issue 4 documents as it was perceived that this would confuse the process of revising the Schedule of Prices for Issue 3. Schedule of Prices *[for]* Issue 3 was completed on 26 November 2004.

However, *[the Cost Manager's]* review of the Issue 4 documentation revealed substantial new information that helped significantly in the interpretation of the Issue 3 documents. It was therefore resolved to combine the measurement of both sets of documents into a further revision of the Schedule of Prices which is expected to be available in early December. This Schedule is being released to the Preferred Tenderer on a trade by trade basis and priced progressively. The pricing that was provided in the initial tender is proving to be of significant benefit in the re-pricing process between the Cost Manager and the Preferred Tenderer.

In pricing the documentation packages, *[the Cost Manager]* expects that the fourth Developed Design will result in a construction budget in excess of the tender price submitted. Further value management will be required to extract better value for money for the project.

**5.33** Finance agreed to a recommendation from the Project Manager that the Investigation Period be extended by three weeks to 17 December 2004 so as to mitigate the impact of delays in issuing design documentation and to further pursue cost savings. The issue of Approved for Construction documentation was rescheduled to 10 December 2004 and the Investigation Period fee payable to the Preferred Tenderer was increased by \$97 500 to \$798 727.<sup>119</sup>

<sup>118</sup> In June 2009, the Principal Consultant advised ANAO that it did not consider this statement to be correct. The Principal Consultant further advised that: 'It eventuated that the combination of alternatives finally selected and the cost saving options finally adopted from a later value management (cost reducing) workshop resulted in significant design change, requiring significant investigation, re-design, coordination and re-documentation which extended the program for the progressive issue of 'for construction' documents well into 2005.'

<sup>119</sup> In November 2004, the value of the Preferred Tenderer Deed had been increased by \$1 725 768 to provide for the estimated cost of items the Preferred Tenderer had identified as having long lead times for ordering or that otherwise needed to be procured prior to commencement of the Main Works Contract (so as to ensure the 17 month construction timeframe could be met). If the Preferred Tenderer was not awarded the Main Works Contract, this amount was payable under the terms of the Preferred Tenderer Deed. As the Main Works Contract was awarded to the Preferred Tenderer, payment for the early procurement items was instead included as part of the GMP and the value of the Preferred Tenderer Deed was reduced (in November 2005) by \$1 725 768.

## Unplanned further issue of design documentation

5.34 An unplanned further issue of the design documentation (referred to as Version 4 or Issue 4 Documentation) was issued on 5 November 2004 to the Preferred Tenderer as the basis on which it was to finalise the construction budget and GMP. In this respect, the Project Manager's Design Manager advised in the November 2004 monthly report to Finance that:

The current Master Program Issue G indicates that the contract documentation phase was due to be completed on 9 November 2004 with the issue of Approved for Construction documents. This would enable the amendment of the Schedule of Prices by the Cost Manager for final pricing by the Preferred Tenderer.

The Preferred Tenderer Deed sets out the final issue of drawings that can be considered under the Deed for pricing being 5<sup>th</sup> November 2004. In mid-October, *[the Project Manager]* met with the *[Principal Consultant]* and discussed an additional issue date (Issue 4) beyond those previously planned, to facilitate the issue of final scope information. This proposal was accepted *[on]* the basis that the majority of scope would be adequately defined in the prior issue of mid-October.

The issue of 5<sup>th</sup> November 2004 (4<sup>th</sup> Interim Issue) proved to be far more significant than advised by *[the Principal Consultant]* and consequently resulted in an extension of the Preferred Tenderer Deed period to enable pricing of these documents by the Preferred Tenderer.<sup>120</sup>

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<sup>120</sup> In this respect, in its monthly report for November 2004, the Cost Manager stated that: 'It was always recognised by the Project Manager and project team that the documentation program was compressed and that there would inevitably be issues to be resolved as design progressed. Prior to the release of the Issue 3 documentation remeasure, Issue 4 documents were released comprising some 800 drawings plus schedules and specifications. Included in Issue 4 documents were numerous revisions to drawings, specifications and schedules plus a significant number of new documents reflecting design development. *[The Cost Manager]* progressively reviewed these documents on a trade by trade basis and progressively issued revised trades to the preferred tenderer.

...Excluding Issue 4 documentation and excluding delay, disruption and other costs, *[the Cost Manager's]* revised estimate is in the amount of \$207 949 909.' (*sic – the Cost Manager's actual 26 November 2004 estimate was \$213 295 848; the amount included in the written report was actually the Preferred Tenderer's GMP included in the 3 August 2004 tender – Schedule W12, as shown by the attachment to the Cost Manager's November 2004 report.*)



Beyond this, a revised date of 10<sup>th</sup> December 2004 for the issue of Approved for Construction documents was agreed with the Principal Consultant.<sup>121</sup> Document changes advised by [*the Principal Consultant*] included in coordination of services, construction detailing, set out and dimensioning. In their opinion this information would result in no significant cost issues. Some minor packages such as signage and line-marking would be completed and issued as part of this Approved for Construction issue and would require minor provisional sums in the pricing exercise.

**5.35** The design delays were further reflected in the Main Works Contract being amended prior to signature to include clause 8.1A<sup>122</sup> as follows:

The parties agree that as at the date of this Contract, the drawings<sup>123</sup> have not been provided to the Contractor. The drawings will be progressively provided to the Contractor in accordance with a program to be agreed between the parties.

## Completion of the Investigation Period

**5.36** Following a series of workshops dealing with potential cost savings and the terms of the contract, the Investigation Period was completed on 17 December 2004. On that date, the Preferred Tenderer advised Finance's Project Manager that the process for putting in place a contract for the works could not be finalised because the final GMP, construction budget and contract terms had not been resolved. The Preferred Tenderer noted that a number of the services that were to be provided by Finance and its consultants had not

<sup>121</sup> In June 2009, the Principal Consultant commented to ANAO that: 'This extract does not record the outcome of the issue of Approved for Construction documents. A reader may in error either understand that the Approved for Construction drawings were issued on that date or that the Principal Consultant failed to issue on that date. After this issue date was agreed, a further meeting was held at [*the Principal Consultant*] offices with representatives of Finance, the Project Manager, Preferred Tenderer and Principal Consultant present. At that meeting the potential impact on documentation of the probable adoption of alternatives and cost savings options by Finance was discussed. The resource impact on both the Preferred Tenderer and Cost Manager of reviewing, scheduling and costing both the proposed Approved for Construction issue of 10 December 2004 and a later further issue of documents incorporating alternatives and cost saving options changes was discussed. It was resolved that the proposed Approved for Construction issue would not proceed and that Approved for Construction documents would be issued following Finance decision on adoption of alternatives and cost saving options and following the subsequent re-design, coordination and re-documentation.'

<sup>122</sup> Legal advice to Finance in June 2005 noted that: 'Clause 8.1A was inserted into the Main Works Contract in circumstances where at the time of execution, the drawings had not been completed to the stage it was anticipated and which enabled Baulderstone to provide all the necessary documentation warranties. As a compromise, it was decided to incorporate a review process, whereby Baulderstone could propose amendments to the drawings, which, once incorporated, would enable Baulderstone to give all the required warranties.'

<sup>123</sup> The contract defined 'drawings' as 'the for Construction Drawings and the specifications for the work under the Contract to be provided by the Principal to the Contractor'.

been performed in accordance with the specific timing requirements of the Investigation Period. The Preferred Tenderer submitted an adjusted GMP of \$230 604 226 with an alternate position (incorporating various proposed savings options) involving a GMP of \$205 021 976.

## First budget increase

**5.37** A risk assessment undertaken by Finance in June 2003 had identified a 'high' risk associated with:

Funding:

- Design cannot be contained within budget
- Market conditions blow out const[ruccion] costs.

**5.38** The existing controls, which were assessed as 'effective' were:

Cost planner appointed providing independent cost advice, Design Meetings, Endorsement Plan.

**5.39** However, no risk-based cost assessment was undertaken in relation to the exposure associated with design and market condition risks. Nor was any time period assigned to the risk, for example, an allowance of time to seek approval of funds.<sup>124</sup> In these respects, in May 2009, Finance advised ANAO that:

The cost planning process undertaken by *[the Cost Manager]* included the consideration of various risks. We note that the pre-tender estimate was in-line with the lowest tendered fee indicating that design and market condition risk had been factored into the cost assessment.

**5.40** Value management exercises were undertaken in September 2003 and April 2004 respectively to assess opportunities to improve the design and value engineer aspects of the facility and design, including capital, fabric (cost and serviceability), services and constructability. The value management exercises also assessed whether the design met the Design Brief and project objectives.

**5.41** As noted, the Schematic Design Project Cost Report was approved by Finance in June 2004 showing a forecast budget overrun of \$35 million.

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<sup>124</sup> The programme provided in the Cost Manager's and Principal Consultant's contracts allowed approximately four months to evaluate the tenders including approximately 14 weeks to obtain 'Finance and Cabinet Approvals'. However, the actual time taken was almost five months, including 16 weeks to obtain Finance and Cabinet approvals.

Similarly, the monthly reports following the Pre-tender Estimate indicated that the budget was likely to be exceeded by some \$59 million. No evidence was sighted of Finance providing direction or guidance to the project team as to how the budget overrun was to be managed. In March 2009, Finance advised ANAO that this was because market testing (a prerequisite to seeking additional funding from Government) was to occur prior to investigating budget reduction measures.

**5.42** In November 2004 Finance prepared a briefing paper for its then Minister entitled 'Funding and Scope Review, November 2004'. The briefing paper advised that the tender price of \$208 million submitted by the Preferred Tenderer should be accepted, but that the budget would be exceeded by \$59.3 million.

### *Options analysis*

**5.43** The November 2004 Ministerial briefing paper prepared by Finance described how Finance, in consultation with DIMIA and the Cost Manager, reviewed three scope options to complete the project, namely:

- Option 1—reduce scope to meet current facility Budget of \$197.7 million, involving a significant reduction from 800 to 196 accommodation places, deletion of the warehouse, recreation and three educational buildings;
- Option 2—maintain existing scope and seek additional capital funding of \$59.3 million (increased total facility Budget of \$257 million). This would require rephasing of expenditure projections over the fiscal years, but would 'not increase the price of the main works contract as the tendered price is a Guaranteed Maximum Price (GMP)', which covers all events except client scope changes or uninsurable events; and
- Option 3—reduce scope and seek additional capital funding of \$35.2 million (increased total facility Budget of \$232.9 million), involving a reduction from 800 to 612 accommodation places and the deletion of two educational buildings.

**5.44** DIMIA reviewed the options and indicated that Option 1 would not meet the policy objectives in relation to mandatory detention. That option did not allow for the separation of individuals and groups and, together with a lack of educational and recreational facilities, would create significant management difficulties and higher operating costs. Similarly, Option 3 did

not allow for separation of groups and individuals during education/recreation periods, which would result in management difficulties.

**5.45** DIMIA preferred Option 2 as it considered that it provided the most functionally efficient facility and best value for money. In addition, DIMIA considered that there were three key functions of the CIIDC requiring separate facilities to maintain the integrity of the visa protection system: reception and induction facilities (initial screening by various Government agencies); processing facilities (lodging and initial assessment of protection claims, interview facilities); and administrative detention facilities (such as accommodation, medical, kitchen, laundry). Given that these facilities could not be reduced or deleted, the main cost saving opportunities were found to be in reducing the size of the accommodation capacity and detainee activity facilities. However, it was found that it was more cost effective to remove a facility completely, rather than reduce its capacity.<sup>125</sup> In support of this, Finance advised its then Minister that:

Christmas Island has inadequate infrastructure and building services to support a project of this size. The project requires the successful main works contractor to source all materials and most labour from markets off Christmas Island. [*The Cost Manager*] advises that the cost penalty of construction on Christmas Island is 80 per cent over equivalent construction on mainland Australia. This results in an abnormal percentage of the project cost being allocated to logistics, mobilisation and site establishment costs. This, together with the cost of securing and servicing the site, means that the reduction in capital costs achieved by deleting project buildings is significantly less than would normally be expected.

**5.46** Although options were considered in the assessment of the budget overruns, there was no breakdown provided against the Total Project Budget or Finance Budget Allocation. Such a breakdown would have informed the decision-makers and the project team of the recommended revised budget allocations across all items, including in this instance other construction packages (including early works and rising main), contingency allowance and costs associated with consultants, Finance, DIMIA and DOTARS. It is not clear how the project team would have been able to provide effective budget oversight and management without the breakdown being included with the request for additional funds. In March 2009, Finance advised ANAO that:

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<sup>125</sup> Future upgrades were expected to carry a cost premium of 50 per cent plus escalation.

It is acknowledged that a breakdown of the increase against the budget allocation line items would have provided an additional level of information in requesting the additional funds. However, the absence of such a breakdown in the funding request in no way reduced the ability of the Project Team to provide effective budget oversight and management. We note that the elemental breakdown in the Ministerial Brief that sought additional funds maintained a similar format to the Concept Design Cost Report and Schematic Design Cost Report breakdowns. That is, elemental line items A through K remained consistent. Therefore notwithstanding that the information wasn't presented in a consolidated form within the funding request itself, the project team could easily track cost movements through direct comparison of the funding request breakdown with the prior Concept and Schematic Cost Plans.

### *Approval of budget increase*

**5.47** On 22 November 2004, Finance recommended that Option 2 be supported by its Minister and requested additional funds of \$59.3 million. Finance provided the following advice in relation to the urgency of the request:

Consideration by 25 November 2004 will provide the Prime Minister and Treasurer 10 working days to consider the matter, and would allow the Department of Finance and Administration (Finance) to enter into the Main Works Contract in accordance with the project timetable should this be the preferred way forward.

**5.48** The then Minister signed letters to the Prime Minister and Treasurer on 25 November 2004 requesting consideration of the approval of an additional \$59.3 million. The letters indicated that:

To proceed with Option 2 within the current tender process and in accordance the project timetable, it would be necessary to enter into the main works contract with BH in December 2004.

**5.49** On 30 December 2004, the then Prime Minister approved the additional funding of \$59.3 million.

## **Spending approval and contract execution**

**5.50** Part 4 of the FMA Regulations, *Commitment to spend public money*, sets out a hierarchy of requirements that must each be satisfied, in the appropriate sequence, in order for a commitment to spend public money to be lawfully

entered into. The FMA Regulations establish important statutory obligations for approvers (including Ministers, Chief Executives and officials).<sup>126</sup>

**5.51** Under the Preferred Tenderer Deed, on 24 December 2004, seven days after the expiry of the Investigation Period the Preferred Tenderer may have been deemed to have irrevocably entered into a binding contract on the basis of:

- the construction budget (including preliminaries and profit and overheads) of \$207.949 million specified in a schedule to the Deed;
- a 17 month period for achieving practical completion commencing on the date of the contract;
- the contract annexed to the Deed, subject to any variations agreed in writing; and
- the design documents supplied as part of the RFT process together with all further drawings and specifications received by the Preferred Tenderer no later than three weeks prior to the expiry of the Investigation Period.

**5.52** However, Finance was unable to accept the deemed offer as the Prime Minister had not yet approved the additional project funding of \$59.3 million that had been sought to cover the tendered price, authorisation had not yet been obtained from the Finance Minister under FMA Regulation 10, and the proposed expenditure on the main works had not yet been approved under FMA Regulation 9.

## **FMA Regulation 10 authorisation**

**5.53** Advice from Finance to agencies is that:

FMA Regulation 10 prohibits the approval of a spending proposal that is not fully supported by an available appropriation, unless the Minister for Finance and Deregulation (Finance Minister) has given written authorisation for the approval.

This means that an approver—whether a Minister, Chief Executive or official—does not have the authority to approve a spending proposal unless:

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<sup>126</sup> Finance Circular No. 2008/06, *Commitments to Spend Public Money (FMA Regulations 7 to 13)*, 20 June 2008, p. 2.

- there is sufficient uncommitted appropriation available (in an Act or a Bill before the Parliament) to cover the maximum amount that may become payable under the spending proposal; or
- the Finance Minister (or his/her delegate) has provided a written authorisation under FMA Regulation 10.<sup>127</sup>

**5.54** On 22 December 2004, Finance sought the then Finance Minister's Regulation 10 authorisation so that officials could consider approving the spending proposal (under FMA Regulation 9) to enter into a binding Main Works Contract for the CIIDC project. The Finance Minister was advised that:

- the then Prime Minister was expected to give approval by 23 December or 24 December<sup>128</sup> to the request for additional funding of \$59.3 million for the project to cover the tendered price for the contract, that this additional funding would then be included in the 2004–05 Additional Estimates and, once appropriated, would provide sufficient uncommitted forward estimates to cover the expenditure under the contract; and
- the GMP of the contract would be \$208 million over the 2004–05, 2005–06 and 2006–07 financial years.

**5.55** Authorisation under FMA Regulation 10 was provided by the then Finance Minister on 5 January 2005 in the amount of \$208 million, although this was not the maximum amount that could become payable under the contract, particularly as Finance had underwritten the value of cost savings for alternatives identified by the Preferred Tenderer.<sup>129</sup>

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<sup>127</sup> Finance Circular No. 2008/06, *Commitments to Spend Public Money (FMA Regulations 7 to 13)*, 20 June 2008, p. 6.

<sup>128</sup> The Prime Minister's approval was obtained on 30 December 2004.

<sup>129</sup> In addition, the \$208 million figure did not reflect the potential for the Main Works Contractor to be paid a bonus in the event that the total value of contracts awarded to Christmas Island subcontractors and suppliers was greater than the target amount of \$10 million (referred to as Local Business Development). On 7 June 2007, Finance approved a variation to the Main Works Contract to increase the value by \$200 000 in respect to the Local Business Development bonus.

### *Finance's underwriting of tenderer alternatives*

**5.56** The Preferred Tender included Tender Alternatives<sup>130</sup> of \$13.79 million and, if these Tender Alternatives were accepted by Finance, the contract sum would have been reduced by \$13.79 million to \$194.16 million (see Table 5.1). However, during the three month Investigation Period, and prior to the award of the Contract, the Contract Sum of \$207.95 million was revised to:

- increase by \$13.054 million the amount payable to the Main Works Contractor for construction works; and
- which was then reduced by \$13.054 million of 'Value Engineering savings underwritten by Finance' so as to allow the 'headline' GMP amount to remain at \$207.949 million, although the real GMP was \$221.004 million. In this respect, the contract provided (at clause 2.3A(b)) that:

If the fixed savings amount does not equal the sum of \$13,054,317.00 then the Contract Sum and the GMP will be increased by an amount equal to the difference between the sum of \$13,054,317.00 and the fixed savings amount.

**5.57** As early as its February 2005 report, the Project Manager was advising Finance that there was likely to be a significant shortfall in the achievement of savings.<sup>131</sup> As it eventuated, \$8.21 million of cost savings included in the Contract at award could be realised. This left a shortfall of \$4.84 million. Accordingly, the second budget increase (see paragraphs 6.42 to 6.49) for the facility project included \$4.9 million arising from a shortfall of expected savings. On 21 September 2006, Finance approved a variation to the Main Works Contract to increase the value by \$4 839 559 to reflect the unrealised amount of savings that Finance had underwritten.

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<sup>130</sup> Tenderers were required by the Main Works RFT to complete a construction budget and GMP pricing schedule identifying the total price for the construction budget and GMP. The RFT also permitted tenderers to submit alternative proposals that offer Finance improved value for money through alternative construction and site establishment methodology and/or alternative materials, equipment, plant and finishes (but only if the alternative proposal or solution was submitted with a conforming tender).

<sup>131</sup> In the February 2005 report, the Project Manager advised Finance that 'a little over \$9 million in savings are in various stages of agreement. Efforts are continuing to achieve the best possible yield from this process. The lag of \$4 million in agreed savings will impact seriously on the remaining contingency of \$4.5 million.'



**Table 5.1****Main Works Contract Guaranteed Maximum Price Details**

Item	Tender \$	Contract \$
Profits and overheads	15 597 102	15 597 102
Logistics, catering and accommodation, other preliminaries, trade packages and provisional sums	187 952 807	198 657 124
Price of program for August 2006 completion		2 350 000
<b>Total construction budget price (lump sum)</b>	<b>203 549 909</b>	<b>216 604 226</b>
Group 2 risks	4 400 000	4 400 000
<b>Sub-total</b>	<b>207 949 909</b>	<b>221 004 226</b>
Less: Tenderers alternatives/Value engineering savings	13 787 498	13 054 317
<b>Total</b>	<b>194 162 411</b>	<b>207 949 909</b>

Source: ANAO analysis of Finance data.

**FMA Regulation 9 approval of the spending proposal**

5.58 FMA Regulation 13 requires that a person may not enter into a contract, agreement or arrangement under which public money is or may become, payable unless a proposal to spend public money for the proposed contract, agreement or arrangement has been approved under FMA Regulation 9 and, if necessary, in accordance with FMA Regulation 10.

5.59 In this context, FMA Regulation 9 requires that, prior to approving a spending proposal, a Minister, Chief Executive or duly authorised official must make reasonable inquiries in order to be satisfied that the proposed expenditure:

- is in accordance with the policies of the Commonwealth,
- will make efficient and effective use of the public money, and
- if the proposal is one to spend special public money, is consistent with the terms under which the money is held by the Commonwealth.

5.60 After obtaining the Finance's Minister's Regulation 10 authorisation on 5 January 2005, on 6 January 2005 the Acting Finance Secretary was asked to approve, under FMA Regulation 9, the spending of \$208 million of public money on the Main Works Contract for the CIIDC.

**5.61** The tender process, results of the tender evaluation and outcome of the Investigation Period provided a basis for the Acting Secretary to decide whether entering into the Main Works Contract was in accordance with the policies of the Commonwealth and would make efficient and effective use of public money. In addition, the Acting Secretary was advised that, on 10 December 2004, Finance's Executive Board had endorsed the execution of a Guaranteed Maximum Price contract, valued at \$208 million, subject to:

- the Government's agreement to fund and proceed with the tendered scope of the project; and
- the Preferred Tenderer's agreement on the contract terms and conditions.

**5.62** The approval documentation did not identify that the completion of Approved for Construction drawings remained a major risk to the project and that these delays would have an impact upon the mobilisation of the workforce leading to potential delays to the completion date and an increase in cost.

**5.63** FMA Regulation 9 approval was provided on 6 January 2005. However, like the FMA Regulation 10 authorisation, this approval was premised on a Guaranteed Maximum Price contract of \$208 million whereas, as outlined at paragraph 5.56, the Guaranteed Maximum Price was \$221.004 million (excluding the maximum potential Local Business Development bonus of \$200 000).

**5.64** Once the spending proposal had been approved, Finance wrote to the Preferred Tenderer advising it that:

- it was in a position to award the contract to the Preferred Tenderer, subject to the Preferred Tenderer's agreement to the terms outlined in the correspondence, the draft contract, the RFT documents, its tender submission and the Preferred Tenderer Deed;
- Approved for Construction drawings had not been issued and Finance proposed that the works proceed based on the Revision 4 drawings issued to the Preferred Tenderer on 29 November 2004;
- the works program would need to be modified to take account of the date of contract award and agreement reached on critical dates for the submission of Approved for Construction drawings and other issues; and

- Finance had elected not to accept the deemed offer under the Preferred Tenderer Deed but to award a contract for a Guaranteed Maximum Price of \$207.95 million calculated as follows:

Trade Packages Version 4	\$198 657 124
Trade Packages – New Program <sup>132</sup>	\$2 350 000
<b>Trade Package Total</b>	<b>\$201 007 124</b>
Overheads/Profit	\$15 597 102
Less Value Engineering Savings	-\$13 054 317
Group 2 Risks	\$4 400 000
<b>Contract Sum/GMP</b>	<b>\$207 949 909</b>

**5.65** The Main Works Contract was signed by the Preferred Tenderer on 21 January, and by the Commonwealth (represented by Finance) on 25 January 2005.

### Recommendation No.3

**5.66** ANAO *recommends* that the Department of Finance and Deregulation, prior to committing funds to a major construction contract:

- provide decision-makers with an assessment of any factors that may be reasonably expected to increase the overall cost to the Commonwealth, or reduce the scope or quality of the works; and
- support spending authorisation and approval processes by advising decision-makers on the maximum amount that may become payable under the contract, as well as an assessment of the most likely cost.

#### *Agency responses*

**5.67** Finance, DIAC, AGD and DITRDLG agreed to the recommendation. Finance noted that it:

has since implemented a range of procedures to improve the assessment and mitigation strategies for project risks and escalation variability. These include the Gateway Review Process and the Better Practice Guide for Finance officers in the Property and Construction Division.

<sup>132</sup> For August 2006 practical completion.

## 6. Construction works

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*This chapter examines the delivery of construction works for which Finance was responsible. It outlines how the decision to undertake the main facility works tender process and sign a construction contract prior to detailed design being completed inhibited the planned transfer of risk to the construction contractor under a Guaranteed Maximum Price contract and, ultimately, contributed to project delays and increased costs to the Commonwealth.*

### Background

**6.1** Prior to the termination of the original construction contract entered into by DIMIA, a fully operational construction camp had been built, and some land clearing bulk earthworks for the CIIDC facility had been undertaken. A two-stage project delivery model was adopted by Finance for the remaining construction work for the CIIDC facility. The first stage was the 'Early Works' which were carried out under a lump sum contract arrangement and involved bulk earthworks. The second stage was the 'Main Works'.

**6.2** The key project delivery parameters of the then Government's 18 February 2003 decision to respecify the CIIDC project and transfer delivery responsibility to Finance involved a Budget Allocation of \$197.7 million for Finance to manage the project from 19 February 2003 to completion, which was expected to take 34 months (that is, completion by December 2005). Tenderers for the Project Manager role were informed by Finance that a construction budget of \$150 million should be assumed with a broad project timetable involving:

- development of the project delivery model, completion of schematic design and completion of detailed design and documentation over a 12 month period;
- conduct of the Main Works Tender over a four month period; and
- a 17 month construction period, with practical completion achieved by 31 December 2005.

### Early Works

**6.3** The Project Manager's June 2003 *Project Delivery Strategy* report provided to Finance recommended (on pages 1 and 2) that:

A competitively tendered early works package needs to be investigated further, but would include at least final benching and compacting of the earthworks to make use of the locally available earthmoving and compaction equipment, and the possibility of warehousing facilities.

...Early works can be carried out while tenders are being called for the Main Works. This means an overlap of construction and tendering of the Main Works which may allow early involvement of the local community, and time saving against the overall construction program as the final benching and compacting of earthworks is a critical path activity.

**6.4** However, the tender process conducted for the Early Works Contract was for a considerably reduced scope of work than that proposed in the Project Manager's *Project Delivery Strategy* report. As outlined below, after the tender process had been completed and a contractor appointed, the scope of the Early Works Contract was later amended for a broader scope of works, similar to that proposed in the *Project Delivery Strategy* report.<sup>133</sup>

## Tender process

**6.5** ROI submissions were sought by way of a public process through advertisements placed in relevant newspapers on 19 and 20 December 2003. Contractors were invited to register their interest in tendering for the construction of either or both of two Early Works packages:

- bulk earthworks for the visitor car park and approach road situated between the southern site boundary and the main reception gate. The work was expected to generally involve cut and fill, rock removal, earthworks, surveying and compaction testing; and
- a nursery package involving the supply of mature indigenous plants for landscaping the CIIDC, including maintenance of plants up to the handing over of plants to the Main Works Contractor.

**6.6** Registrations closed on 22 January 2004, with eight responses received, six of which expressed interest in both packages. The remaining two expressed interest in the nursery package alone. Four parties were shortlisted to tender for one or both packages. At this time, Finance's assessment was that:

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<sup>133</sup> In June 2009, Finance advised ANAO that its records outline that the scope of the existing contract had been based on the limited project design available at the time of tender and that, since that time, design levels had been determined following endorsement by DIMIA of the Design Development stage.

While the works proposed are relatively minor in nature and value (expected approximately \$3 million), the package is important to the project because:

- the earthworks will form the storage and access platform for the Main Works contractor (minimising any earthworks they have to perform), as well as allowing them to expeditiously commence construction;
- in order to have mature, suitable plants ready for the completion of the project their cultivation must begin before mid 2004;
- it will be a good public relations exercise that demonstrates the Government's commitment to proceed with the project (dispelling some rumours on the Island); and
- it will allow Christmas Island businesses to bid either outright for the work or for sub-contractor positions, and this is consistent with the Public Works Committee's recommendation that Finance continue to liaise and engage with the Island community.

**6.7** As the Early Works tender process was conducted concurrently with the commencement of the Main Works tender process, the March 2004 Main Works Contract Request for Expressions of Interest document advised potential tenderers that Finance was calling for tenders for the Early Works and that the scope of work was expected to involve the two elements outlined in paragraph 6.5. A similar scope for the Early Works was outlined to shortlisted Main Works tenderers.

**6.8** Prior to the close of the Early Works Tender on 26 February 2004, the Cost Manager issued Finance the Early Works Tender Estimate. The Early Works Tender Estimate included a table listing the items comprising the estimate of \$2 378 510.50. The pre-tender estimate was calculated to a level of accuracy of two decimal places. Generally, at pre-market estimate, the order of accuracy may be in the order of +/- 15 per cent.

**6.9** Four tenders were received and evaluated by a team chaired by Finance and including Finance's Project Director and the Project Manager. Finance reserved the right (at clause 2.21 of the RFT) to proceed with only one part of

the proposed scope of works. On the basis of the evaluation of the tenders received,<sup>134</sup> Finance decided to:

- select BMD Constructions Pty Ltd as the Preferred Tenderer for the earthworks package with Finance to negotiate with the Preferred Tenderer to resolve minor outstanding issues prior to signing a contract; and
- not proceed with the nursery package on the basis that all tendered prices significantly exceeded the Cost Planner's pre-tender estimate.<sup>135</sup> Instead, alternative options would be canvassed for the nursery component, including direct discussions with Parks Australia (with Parks Australia subsequently delivering the package under a MoU with Finance at a cost of \$443 365)

**6.10** The Early Works Contract for bulk earthworks was signed on 18 May 2004 with a fixed price of \$1 964 678.

### Scope increase

**6.11** In July 2004, Finance adopted a strategy to extend the work under the Early Works Contract to include a series of additional packages to construct building platforms for the CIIDC site. This work was originally envisaged to be part of the Main Works Contract that was, at that time, being tendered. The envisaged advantages to the strategy were:

- the works would be completed in the dry season when the quality and timeliness could be better assured;
- the cost of construction was likely to be significantly less as the Early Works Contractor was established on site and their contract prices had been assessed as representing good value for money;

<sup>134</sup> Tenders were evaluated in four stages. The first stage involved an assessment on a Go/No Go basis against certain mandatory criteria. This was followed by an assessment of the capacity of the tenderers to complete the works in accordance with weighted evaluation criteria that included an initial evaluation of the tendered price and consideration of alternative proposals. The third stage involved a preliminary assessment of value for money that weighed the tender price against the merit/capacity of each tender. The final stage involved Finance determining which tender(s) offered best value for money and the Preferred Tenderer(s) with which it would enter into contract negotiations.

<sup>135</sup> Whereas the successful tender submitted for the bulk earthworks package was 11 per cent under the pre-tender estimate of \$2 215 510, all tendered prices submitted for the nursery package were well in excess of the pre-tender estimate (the lowest tender price of \$523 647 was 221 per cent above the pre-tender estimate of \$163 000).

- the strategy would offset the impact of the extension of the Main Works tender closing date on the project program;
- the strategy would allow the Main Works Contractor to focus on building works and assist them in achieving the project practical completion date of March 2006; and
- the Christmas Island community would benefit from participating in accelerating the work, as the work undertaken by the Early Works Contractor would be extended over an additional four months.

**6.12** Finance advised its Executive Board in July 2004 that:

Design documentation is currently progressing and we anticipate having at least two packages of work available to *[the Early Works Contractor]* to price over the next two months. The first of these packages is expected to cost approximately \$0.8 million and be available in mid July. This allows adequate time to agree a variation sum with *[the Early Works Contractor]* based on their tendered rates, before their current contract is completed on 18 August 2004. Further packages totalling approximately \$3.5 million of work could be incorporated into the *[Early Works Contractors's]* contract as design documentation is completed. While the total value of possible additional work is a large increase over the initial contract value, the unit rates for earthworks are very competitive and the price will be reviewed against prices for this work in the Main Works tenders.

The current Main Works tender cost plan has an allowance of \$4.3 million for site preparation. If the full earthworks preparation was packaged into the *[Early Works Contractor]* contract, this work would be deleted from the Main Works Contract. After the Main Works tender closes on 3 August 2004, we will have a figure to compare against the *[Early Works Contractor]* pricing of the additional packages. We expect the *[Early Works Contractor]* pricing will be substantially lower than the Main Works prices.

**6.13** A variation to the Early Works Contract was negotiated to include civil works at the northern boundary of the CIIDC site. The initial submission from the Early Works Contractor priced the estimated cost of the works at \$1.66 million. Finance's Cost Manager identified some of the rates being used as too high and these were adjusted to be in accordance with the contract rates and, for new work items, to reflect value for money. The result was an agreed variation of \$1.3 million.



## Practical completion and final cost

6.14 Some extensions of time were granted, including for the northern boundary works, to the contracted date for practical completion, extending it to 23 November 2004. The Early Works Contract reached practical completion on 30 November 2004. After making adjustments for issues such as the final quantity of bulk earthworks (the Contract included provisional quantities as the actual quantity of earthworks is not determined until excavation is completed), the final cost of the Contract was \$3.51 million.

## Rising Sewer Main and Pumping Station

6.15 As part of the delivery of the CIIDC facility project, Finance funded the construction of a sewerage pump station and a rising main. These works were project managed by Water Corporation on behalf of Finance using an existing contract with DOTARS for the construction and maintenance of water supply and sewerage assets on Christmas Island.

6.16 The pumping station was commissioned on 30 August 2005 (see Figure 6.1). The total cost of constructing the pumping station and rising main was \$2.95 million.

Figure 6.1

### Sewer Rising Main Pump Station



Source: ANAO site visit, March 2009.

**6.17** Under the Main Works Contract, Finance funded the ongoing maintenance of the pumping station and rising main. The amount paid by Finance for the ongoing operating and maintenance of the pumping station and rising main was \$108 439, with a further \$85 264 paid to upgrade the CIIDC facility water tanks to meet water quality standards and meet firefighting water requirements. The asset was transferred in December 2008, with Finance advising ANAO that the delay was largely due to new Administrative Arrangements Orders transferring responsibility for Indian Ocean Territories from the former DOTARS to the Attorney-General's Department.

## Facility construction

**6.18** As noted at paragraph 4.12, it was recognised by Finance and its Project Manager in 2003 that delays during the design phases would ultimately cost less in time and money than if delays occurred in the construction phase. However, as outlined above, the delivery approach was changed from a traditional sequential process to instead involve an overlap of the design and tendering processes, with the tendering process completed and a Main Works Contract<sup>136</sup> signed based on incomplete design documentation. ANAO's analysis is that the changed approach had a number of adverse impacts on the project during the construction stage.

## Finalisation of Approved For Construction Documentation

**6.19** One consequence of Approved for Construction drawings not being completed prior to the end of the Investigation Period and the Main Works Contract being signed was that the Contract Price of \$198 657 124 for 'logistics, catering and accommodation, other preliminaries, trade packages and provisional sums' (see Table 5.1) included \$9 599 796 in Provisional Sums<sup>137</sup> relating to 20 work items. The two largest Provisional Sum items were

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<sup>136</sup> In July 2006, the Project Management and Superintendency Contract was varied to increase its value by \$250 000 to, amongst other things, pay for the provision of specialist legal advice to modify the form of the Main Works Contract and to produce the Preferred Tenderer Deed. The cost of this advice was \$46 974.

<sup>137</sup> Provisional sums for certain items of work or equipment in a construction contract are estimates only, and do not represent a maximum limit for that item of equipment or work. This is because it is not possible to accurately predict the cost of those items or work at the time of entering into the contract, or it is uncertain as to whether items of work will be required. (Source: Article by Scott Laycock, Gadens Lawyers, *Australia: Provisional Sums: Closing a Loophole*, 27 March 2008 downloaded on 5 March 2009 from <http://www.mondaq.com.au/article.asp?articleid=58778>.)

\$5 million for 'Loose Furniture, Fixtures and Equipment' and \$3 million for the 'Complete landscaping and irrigation'. The Provisional Sum items also included \$100 000 to cover what was expected to be minor changes in documentation from the Version 4 to Approved for Construction drawings. However, significant changes were found to be necessary.

**6.20** By way of example in relation to the Provisional Sums, the second budget increase for the facility project (see paragraphs 6.42 to 6.49) included an additional \$7.7 million provision for 'Escalation of provisional sum items currently being tendered for landscaping and furniture, fixtures and equipment'. In September 2006,<sup>138</sup> Finance approved a 200 per cent (\$6.0 million) increase to the Provisional Sum allowance for landscaping works. This increase was necessary to allow the Main Works Contractor to award a landscaping subcontract in the amount of \$6 453 827 with the remaining amount of \$2 546 132 for the Main Works Contractor to proceed with the supply of 'miscellaneous landscape materials'. Finance's assessment was that the increases reflected low Provisional Sums rather than high tender prices.<sup>139</sup>

**6.21** From the time the Main Works Contract was signed, the Contractor expressed concerns about the quality of the Approved for Construction documentation. In its March 2005 report, the Project Manager advised Finance that it was considering the engagement of a third party independent reviewer<sup>140</sup> to 'ascertain the depth of the problems being communicated by the Contractor'. The report of the reviewer concluded that:

While the documents were "issued for construction but not coordinated" I can conclude that given the status of the documents purported to have been delivered up to and including the 10/12/2004 (identified in clause 3) that I would not have been able to proceed to construct the facility without recourse to considerable RFI's [*Requests for Information*] as the documentation, was in my opinion, variously not complete and/or clear and/or unambiguous so far as the lead in works were concerned.'

<sup>138</sup> Finance's approval of the increase was delayed until it had obtained Government approval for additional project funding.

<sup>139</sup> In May 2009, Finance advised ANAO that, prior to the award of the landscaping contract, its Project Manager met with the Main Works Contractor and the preferred subcontractor to identify and price possible cost savings. Finance further advised that this exercise resulted in a cost reduction of \$814 500 to the subcontractors contract price.

<sup>140</sup> The cost of the independent reviewer was met by Finance reimbursing \$12 240 to the Project Manager.

6.22 Whilst the review was informative, it was conducted too late to have any impact on the design development process.

6.23 In May and June 2005, Finance conducted a review and risk assessment of the design services delivery options for the construction phase of the CIIDC project. The options considered were to continue to engage the Principal Consultant to coordinate design services or to restructure the delivery of design services by terminating the Principal Consultant for the construction phase component of the contract, and confirming the design portion of the contract that remained in place. Finance decided to continue with the existing contractual arrangement.

6.24 Approved for Construction documentation was 'substantially achieved' on 16 May 2005, one year after the RFT was issued (on 6 May 2004) to the three companies that had been shortlisted to tender. As a result of Approved for Construction documentation not being finalised for pricing during the Investigation Period, risk for design errors and omissions was unable to be transferred to the Contractor prior to contract signature, but had to be negotiated at the same time as construction was being undertaken. The transfer of risk for design errors and omissions during the Investigation Period was an important aspect of the procurement strategy and the result was that the completion of important Investigation Period activities extended well into the construction phase. This approach negated some of the benefits from the adopted project delivery method.

6.25 The Main Works Contract provided an eight week period in which the Contractor was to notify Finance's works Superintendent (a role filled by the Project Manager) of any necessary changes to the Approved for Construction documentation provided in May 2005. However, the review process was not finalised until 21 September 2006, when the First Deed of Settlement (see paragraph 6.46) was signed which, amongst other things settled and fully resolved:

the finalisation of the Contractor's review of the drawings under clause 8.1A (the Drawing Review) and provision of the warranty in relation to those drawings.

## **Scope changes**

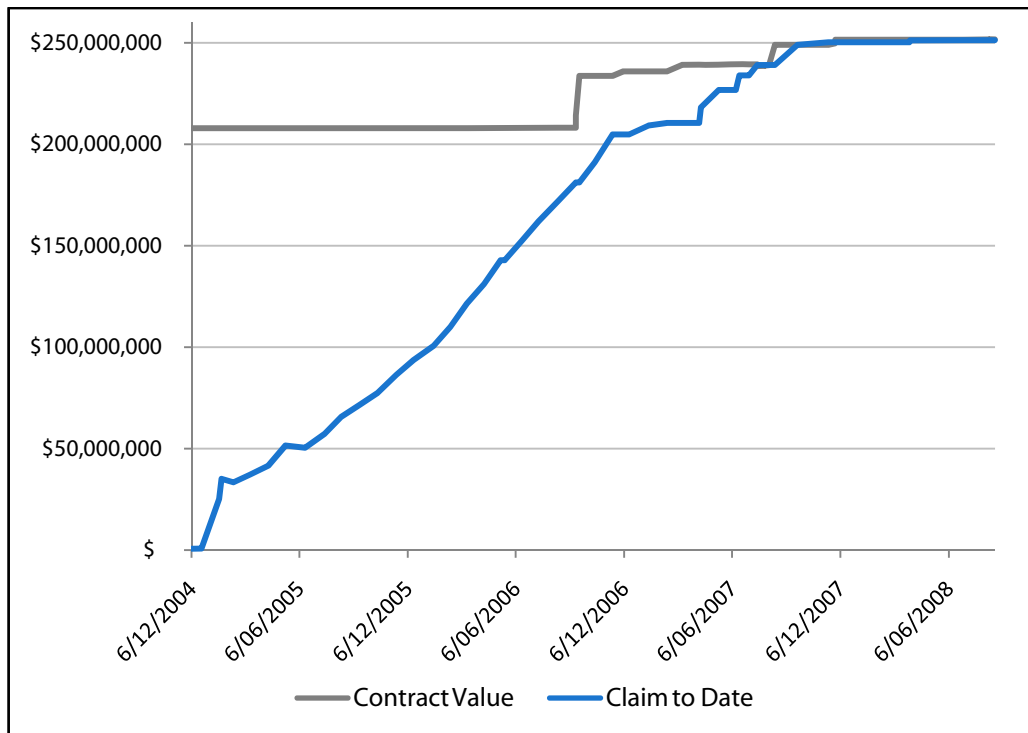
6.26 Finance's decision to enter into the Main Works Contract was based on an assessed Guaranteed Maximum Price of \$207 949 000. The value of the Main Works Contract was varied on 25 occasions between May 2006 and August

2008. As illustrated by Figure 6.2, the final value of the Main Works Contract was more than \$251.6 million, a figure 21 per cent higher than the 'headline' GMP of \$207.9 million assessed by Finance at the time the Contract was signed (see Table 5.1). In addition to payments attributed to the Contract, a further \$1.34 million was paid to the Main Works Contractor in relation to:

- repairs and maintenance of the construction camp (\$605 516); and
- three of the four crane journeys (\$736 263—see paragraph 6.35).<sup>141</sup>

**Figure 6.2**

**Main Works Contract Value and Contract Payments**



Source: ANAO analysis of Finance data.

**6.27** There were also other works originally intended to be delivered under the Main Works Contract that were delivered through other means, specifically:

<sup>141</sup> The costs of the fourth crane journey were included in the various claims from the Main Works Contractor settled by Finance for a total payment of \$10 million.

- a variation to the Early Works Contract was negotiated to include \$1.3 million of civil works at the northern boundary of the CIIDC site—see paragraph 6.13; and
- various deferred and additional works<sup>142</sup> that were completed by Finance (through its contracted Project Manager acting as a Construction Manager) in order to bring the facility to a ‘fit for purpose’ condition such that it could be handed over to DIMIA—\$2.35 million<sup>143</sup> including \$115 275 in contract administration fees paid to the Project Manager (in effect, the Project Manager performed a role similar to that of a Construction Manager—see paragraphs 2.28 and 3.13—although its contract was not amended to address this extended and different role).<sup>144</sup>

**6.28** In May 2009, Finance advised ANAO that:

We note that the specific impacts of the late completion of design documentation were resolved through the first Deed of Settlement and the Version 4 to Approved for Construction Provisional Sums. The ‘scope changes’ elements mentioned in paragraphs 6.26 and 6.27, including: crane and barge journeys, Deferred and Additional Works, the early works variation and construction camp maintenance were all unrelated to the contract being signed based on incomplete design documentation.

## **Project program**

**6.29** Following its engagement, Finance’s Project Manager undertook a detailed review of the project program. Its initial assessment was that project completion could be delayed by six months from December 2005 to June 2006. At the completion of the program review, a provisional revised date for practical completion of March 2006 was established. In its monthly report to Finance for August 2003, the Project Manager advised that the revised master program had been further validated that month by a review of the overall construction phase which had provided a further level of confidence that the completion of construction by 31 March 2006 was realistic.

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<sup>142</sup> At the time the handover of the facility to DIAC there were 213 items of deferred works and 22 items of additional work (which had increased to 40 items by July 2008).

<sup>143</sup> The Project Management and Superintendency contract had been varied by a total of \$2.36 million to enable the delivery of the Deferred Works (\$1.66 million) and the Additional Works (\$700 000).

<sup>144</sup> See paragraph 2.26.

**6.30** However, the revised project timetable was based on a short timetable for developing designs and having them endorsed by DIMIA. In addition, the facility construction budget was consistently under pressure from an early stage of the design development process. Due to the tight design timetable, whilst various value management exercises were undertaken with options identified to reduce the project cost,<sup>145</sup> achieving the savings required design changes but advice to Finance was that the program for the various stages of design could not absorb any scope changes arising from the value management exercises.<sup>146</sup> ANAO notes that, where the project timeframe does not allow design options to be investigated, there is a reduced benefit in undertaking value management exercises.

**6.31** This situation was exacerbated by delays in the development of designs, and provision of them to the shortlisted tenderers for the Main Works Contract. The impacts were felt throughout the project, both in respect to the project delivery timetable and the cost of construction. In particular:

- as outlined in Chapter 5, the Main Works Contractor appointment process was conducted based on designs that were not completed or coordinated. The Main Works Contract was signed in late January 2005 (with an amended date for Practical Completion of 31 August 2006, a delay of five months), but construction work did not commence on site until April 2005 and Approved for Construction designs were not completed and accepted by the Contractor until September 2006; and
- the design documentation issues led to a number of time extensions being approved (extensions of time are granted where there is an allowable delay under the contract and the assessment of any claim is to compare what was supposed to happen with what actually occurred and then identify the reasons for any difference).

**6.32** It was also significant that, had the design and tender processes progressed in accordance with the revised timetable agreed following the Project Manager's appointment, then the project construction phase would

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<sup>145</sup> Finance's better practice guide indicates (the flow diagram on page 49 of the guide) that value management reviews should be undertaken when preparing the schematic design, detailed design and approved for construction documents. However, the guide does not indicate how value management exercises are to be integrated with risk assessments and the risk management plan.

<sup>146</sup> In May 2009, Finance advised ANAO that this did not prevent the achievement of some \$8.2 million of cost savings being identified and implemented outside of the programmed timeframe.

have commenced during the wet season of November to April. Specifically, Issue B of the Master Program involved:

- the Main Works tender process being completed on 10 November 2004;
- the Main Works Contractor establishing itself on site during December 2004 and January 2005; and
- construction works commencing in February 2005, to be completed in March 2006 (14 month duration).

**6.33** This meant that construction works under the Main Works Contract were planned to commence in the second half of the 2004–05 wet season and be completed in the second half of the 2005–06 wet season.

**6.34** Finance did not consider seeking Government approval to reschedule the tender period so that more developed designs could be provided to tenderers and to allow time for options identified through value management exercises and buildability input (during the Investigation Period) to be designed and priced with a target of the Main Works Contractor commencing on-site at the end of the 2004–05 wet season.<sup>147</sup> Adopting the planned 17 month construction period with a commencement date in, say, May 2005 would have meant that the project timetable would have included only one full wet season. Instead, the project was planned to include two wet seasons and, as it eventuated, extended across three wet seasons.

## **Cost of works**

**6.35** Finance’s contract with its Project Manager noted that:

It is not the Principal’s intent that there will be variations either to the upper limit of the Cost Plan or to the Works Contract. However, variations may include changes to the intended scope of the Works arising from:

- (A) a Direction issued by the Principal which seeks to increase or decrease or amend the scope or nature of the Works;

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<sup>147</sup> In this respect, in July 2004 when proposing to its Executive Board that the Early Works Contract scope be extended to include earthworks that was originally envisaged to be part of the Main Works Contract, Finance advised that, under the programmed awarding of the contract in November 2004 for a March 2006 practical completion, the Main Works Contractor would ‘need to commence construction of building platforms immediately. Unfortunately, this is at the start of the Christmas Island wet season and construction using the available material, which has a high proportion of phosphate, will be difficult and expensive in wet conditions.’



- (B) an unforeseeable contingency, which should not reasonably have been previously included in the scope or nature of the Works; or
- (C) an amendment that affects the content of the Works Contract which arises after that Works Contract has been let, and the amendment to that contract is necessary for the incorporation of the amendment in the Works.

**6.36** The aggregate net increase to the contract amount was \$43.7 million. Of this amount, \$25.98 million (59 per cent) was attributed to delays in design preparation and/or shortcomings in the design documentation. The major elements of the design-related increases were:

- \$14.73 million paid under the First Deed of Settlement signed on 21 September 2006 (see further at paragraph 6.47);
- \$6.33 million in aggregate net costs relating to the conversion of design documentation to Approved for Construction status; and
- \$4.72 million as the aggregate net increase for items for which Provisional Sums had been included in the Main Works Contract (including extra profit, attendance and preliminaries associated with the net increase that was payable to the Main Works Contractor under clause 3.7 of the Contract).

**6.37** In addition to additional costs for construction works, consultant costs also increased. For example, the fee payable to the Project Manager was increased as a result of the:

Change in delivery approach to that at the time of tender which was a traditional sequential process, whereas now we have overlap of the design and tendering processes (as well as the introduction of an Early Works package).

**6.38** In aggregate, additional fees paid to the Project Manager due to changes to the design program, procurement processes for Early Works and Main Works and extensions of time more than doubled the value of its contract. In total, 22 of the 37 variations made to the value of the Project Management and Superintendency contract related to these issues, with a total increase of \$3.56 million, resulting in the fees and disbursements payable to the Project Manager being 128 per cent higher than that originally contracted.

**6.39** In addition, the Cost Manager contract was varied on 11 occasions, with a number of the variations directly relating to the design issues and related program delays. The total amount involved was \$669 378 (a 43 per cent increase on the original total contract value), comprising:

- contract cost administration services on the extended Early Works Package—\$22 000;
- remeasurement of design documentation issues 1, 2 and 3—\$143 000;
- reviews and measurement of the differences between the interim drawings on which the contract was tendered and the Approved for Construction documentation—\$319 346,<sup>148</sup> and
- the extended construction period resulted in the Cost Manager providing services for this stage over a longer period. The contract signed by Finance involved a lump sum fee of \$204 000 paid at the rate of \$12 000 per month (representing the planned 17 month construction period). The construction period fee was varied by a total of \$185 032 (a 91 per cent increase) on four separate occasions.<sup>149</sup>

**6.40** The following table summarises the various increased external costs that resulted directly or indirectly from design delays and the change in delivery approach from a traditional sequential process to instead involve an overlap of the design and tendering processes, with the tendering process completed and a Main Works Contract signed based on incomplete design documentation. ANAO estimated that these costs were \$39.6 million.

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<sup>148</sup> Finance documentation approving the increase to the contract value for this additional work stated that: 'The Cost Manager contract requires a variation to cover the measure of the cost savings options and Approved for Construction drawings. This was never envisaged as the construction contract was originally anticipated to be tendered on Approved for Construction drawings.'

<sup>149</sup> Separately, the disbursements budget was increased by \$30 000 to allow a further six trips to the Island.

**Table 6.1****External cost increases related to design delays, changes to the Main Works procurement strategy and consequential effects**

Item	\$m
Increased cost of facility construction works	
Main Works Contract	25.98
Increase to scope of Early Works package	1.31
Deferred and Additional Works	2.35
<b>Total construction works increase</b>	<b>29.64</b>
Increased consultancy costs	
Principal Consultant	5.15
Project Management and Superintendency	3.56
Cost Manager	0.67
<b>Total consultancy cost increase</b>	<b>9.38</b>
Finance's contracted Project Director	0.54
<b>TOTAL</b>	<b>39.56</b>

Source: ANAO analysis of Finance records.

**6.41** Delays in the delivery of the Main Works Contract, and additional costs, also resulted from:

- the new crane at Flying Fish Cove being taken out of service in January 2006 due to the discovery of major foundation faults during routine maintenance. The crane was out of service for some six months while the foundations and footings were repaired and/or replaced. The two main effects on the works were that:
  - the Main Works Contractor was required to reschedule deliveries of equipment and materials to the Island, and to use inefficient unloading processes (that is, tug and barge) at the port, noting that the second port at Nui Nui (where the predecessor crane was located to) is not able to be used for unloading cargo other than a standard 20 foot container<sup>150</sup>. The value of the Main Works Contract was increased by

<sup>150</sup> Such 'out of gauge' cargo included structural steel, roofing sheets, prefabricated ensuite and 40 foot containers.

\$4.63 million in relation to the effects of the crane being taken out of service; and

- the Contractor had to mobilise a 100 tonne site crane and a 45 tonne site crane (to breakdown and reassemble the 100 tonne crane both at the site and at the port) to the port for the purpose of unloading cargo, which prevented the cranes from being used for construction works and led to the hire and importation of a further 50 tonne crane. The Main Works Contractor was paid \$736 263 for the first three journeys, with the Contractor's claim for costs in relation to the fourth journey included in the Second Deed of Settlement;
- on 31 August 2006, power to the CIIDC site failed due to a fault in the underground high voltage main cable connecting the facility to the Island's power supply.<sup>151</sup> Power was interrupted fully for two days and was not fully restored until 9 September 2006;<sup>152</sup> and
- inclement weather—in total, nine extensions of time were granted for wet weather between September 2006 and May 2007 (not including further extensions of time agreed to as part of a Second Deed of Settlement—see paragraph 6.48).

## Second budget increase and Deed of Settlement

**6.42** In June 2006, a request for additional funds of \$60 million was made by the then Finance Minister to the Prime Minister and Treasurer, summarised in Table 6.2. The Minister was advised that the cost increases were the:

result of the breakdown of the Christmas Island port crane, the flow-on effect of the other unexpected delays, a shortfall in anticipated savings, full development of the design, and final tendered costs in some cases being higher than estimated.

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<sup>151</sup> In November 2002, DOTARS had installed on Christmas Island an 11kV power cable running between the Christmas Island Power Station and the CIIDC in two sections (the first of 4400 metres and the second of 5880 metres).

<sup>152</sup> Amongst other things, the power failure resulted in Finance increasing the value of the Principal Consultant contract by \$20 580 in October 2007 for the design and documentation of a temporary power solution for the CIIDC so as to mitigate the risk of further power failures to the facility.

Table 6.2

**Second additional funding request breakdown (excl GST) (June 2006)**

Funding request—Details of costs	\$ million
Settlement of all determined extension of time claims by the Main Works Contractor, Baulderstone Hornibrook (Baulderstone), arising as a result of the late completion of project design documentation and other delays to 31 December 2005. The extended date for practical completion is to be 31 January 2007.	14.7*
Costs associated with a savings shortfall expected to be realised on the project. The contract originally awarded to Baulderstone identified an amount of \$13.0m of possible cost savings. A review of actual cost savings by the Cost Manager, WT Partnership, has identified \$8.1m of savings leaving a \$4.9m shortfall.	4.9*
Additional consultant fees for design, cost management and project management services arising from the extended duration of the Project (effectively 10 months) and the documentation of cost savings.	5.8*
The main works contract provides for the adjustment of a provisional sum to accommodate changes between original contract documentation and the final documentation issued for construction. A remeasure following the issue of final documentation identified additional costs associated with the provisional sum items.	7.4*
Escalation of provisional sum items currently being tendered for landscaping and furniture fixtures and equipment.	7.7*
Reinstatement of a contract contingency (originally \$6.0m).	4.5*
Provision of extension of time claims associated with the port crane breakdown.	8.0
Costs associated with cost mitigation efforts as a result of the port crane breakdown, including the hire and transportation of the on-site crane, barges and special delivery orders.	2.5
Additional project costs for management and supervision related to the port crane breakdown.	1.5
Provision of a contingency amount in relation to the crane breakdown.	3.0
<b>TOTAL FUNDING REQUEST</b>	<b>60.0</b>
* Items included within the \$45.0 million Contingency Reserve <sup>153</sup> allocation.	

Source: Letters from Finance Minister to Prime Minister and Treasurer of 22 June 2006, Attachment A.

**6.43** The then Treasurer advised of his support of the additional funding on 19 July 2006. He noted that:

<sup>153</sup> The contingency reserve (other purposes function) is an allowance, included in aggregate expenses figuring, to reflect anticipated events that cannot be assigned to individual programs in the preparation of the Australian Government budget estimates. The reserve is expected to ensure that the budget estimates are based on the best information available at the time of the Budget. It is not to be a general policy reserve. Allowances that are included in the reserve should only be drawn upon once they have been appropriated by Parliament. These allowances are removed from the reserve and allocated to specific agencies for appropriation and for outcome reporting closer to the time when they eventuate. Source: Based on Budget 2005–06, Budget Paper No.1, Statement 6: Expenses and Net Capital Investment, Appendix B: The contingency reserve.

this is expected to be the last such request for extra funding, as the project is due for practical completion in the first quarter of 2007.

**6.44** Approval of the additional funding was granted by the then Prime Minister on 4 August 2006. The then Prime Minister indicated his concern on hearing of the significant increases in the cost of the construction of the Christmas Island facility. He stated that he was aware that the breakdown of the port crane 'was unanticipated and unavoidable' as well as that:

due to the need to build the facility as rapidly as possible, the request for tender process commenced prior to the final design documentation being finalised, and that due to greater complexity in the project than anticipated, this resulted in the commencement of construction being delayed.

**6.45** As with the first Budget increase above, there was no breakdown provided against the Total Project Budget or Finance Budget Allocation (see paragraph 5.46).

### **First Deed of Settlement**

**6.46** During the course of the construction work, various claims and issues arose that required clarification and resolution. In September 2006, a Deed of Settlement was agreed by Finance and the Main Works Contractor. The Deed set out the parties' agreement regarding the claims and issues raised in relation to the Contract and the works under construction up to 31 December 2005, with the exception of:

- claims made in relation to the failure of the Flying Fish Cove Port Crane; and
- claims arising from the relocation of the Main Works Contractor's crawler crane to Flying Fish Cove to compensate for the failure of the port crane – four such 'journeys' were undertaken;

**6.47** The Deed resulted in the value of the Main Works Contract being increased by \$19.57 million, comprising:

- \$14.73 million to finalise a wide range of issues relating to the standard of documentation available pre- and post-tender for the Main Works Contract and the cost issues that had resulted from this problem; and
- \$4.84 million representing the shortfall in cost savings under the Main Works Contract. As outlined at paragraph 5.57, Finance had underwritten these cost savings.

## Second Deed of Settlement

**6.48** In May 2007, the Main Works Contractor lodged seven notices of dispute with Finance. At that time, the Contractor claimed that the extension of time that was in dispute was 198.8 days and the amount of extension of time costs in dispute was \$40.1 million. As of August 2007, after allowing for prolongation of Principal-caused delays, the Contractor claimed that an extension of 234.9 days was in dispute with costs of \$46.89 million. After allowing for the concurrency of some claims, the days in dispute were identified by Finance as representing a delay of 89 days with an amount in dispute of \$19.45 million.

**6.49** A conference between Finance and the Main Works Contractor was unable to resolve the dispute. In accordance with the procedures set out in the Main Works Contract, the dispute proceeded to mediation. Having regard to, and consistent with, advice it had received, Finance settled the dispute. A Deed of Settlement was executed on 25 September 2007 which provided for a payment by Finance of \$10 million. Under the Deed, Finance also agreed to release to the Main Works Contractor liquidated damages it withheld in respect of the failure to achieve Practical Completion by 19 April 2007, and waived its right to impose liquidated damages up to and including 13 October 2007.

## Practical Completion and Handover

**6.50** The awarding of Practical Completion was predicated on the achievement of certain infrastructure commissioning and testing milestones. In particular:

- 33 days prior to the planned date of Practical Completion, a 28 day infrastructure commissioning period was to commence; and
- five days prior the planned date of Practical Completion, a five day 'fault-free' testing period of the completed infrastructure was to be undertaken, with the five day period to recommence if any substantial defect was identified.

**6.51** Practical Completion of the Main Works Contract was awarded on 13 October 2007, although construction phase services by Finance's Project Manager continued until 19 October 2007,<sup>154</sup> together with additional work by

<sup>154</sup> This was reflected in the 25<sup>th</sup> variation to the Project Management and Superintendency contract.

the Principal Consultant to finalise various minor outstanding items that were incomplete.<sup>155</sup> However, various deferred and additional works had to be completed by Finance (through its contracted Project Manager) in order to bring the facility to a 'fit for purpose' condition such that it could be handed over to DIMIA.<sup>156</sup>

**6.52** The transfer of the CIIDC facility to DIMIA occurred on 7 April 2008. This represented a total project elapsed time of 61 months from the date the project was transferred to Finance, 27 months (79 per cent) longer than the anticipated timeframe when the respecified project was transferred to Finance for delivery. In total, construction work had taken 38 months from the time the site had been handed over to the Main Works Contractor (35 months since construction commenced on site) compared with the planned construction period of 17 months.

## Recommendation No.4

**6.53** ANAO *recommends* that the Department of Finance and Deregulation promote improved project delivery outcomes by:

- (a) providing decision-makers with a comprehensive assessment of risks and how they can be managed prior to making any significant departures from the planned project delivery strategy; and
- (b) implementing strategies aimed at promoting greater collaboration and teamwork between key consultants (including project managers, cost managers and designers) in working toward the established project objectives.

### *Agency responses*

**6.54** Finance, DIAC, AGD and DITRD LG agreed to the recommendation.

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<sup>155</sup> This was reflected in variation 45 to the Principal Consultant's contract.

<sup>156</sup> In April 2009, Finance advised ANAO that it does not expect the Final Certificate to be issued before 30 June 2009.



## 7. Project outcomes and evaluation

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*This chapter summarises the outcomes of the facility construction project in terms of its objectives, examines Finance's reporting of budget increases to the Public Works Committee and assesses the steps taken by Finance to learn lessons from the project.*

### Introduction

7.1 The objectives of the project were included in the MoU between Finance and DIMIA as well as the Requests for Tender (RFT) issued by Finance to appoint its Project Manager, the Principal Consultant, Cost Manager and Main Works Contractor. The objectives were to:

- build the first purpose-built CIIDC in Australia that met the design brief and was in accordance with the time, cost and quality requirements;
- achieve the successful completion of the project whilst maintaining support from the Christmas Island community;
- deliver the project with environmental excellence;
- build the project with better than industry performance in respect of Occupational Health and Safety;
- deliver the project in a collaborative environment; and
- enhance the reputations of the Principal (Finance), the Project Manager, and subcontractors of the Project Manager and/or Principal and Works Contractor for excellence in construction.

### Monitoring of performance against project objectives

#### Time and cost

7.2 The key project delivery parameters of the then Government's 18 February 2003 decision to respecify the CIIDC project and transfer delivery responsibility to Finance involved a Budget Allocation of \$197.7 million for Finance to manage the project from 19 February 2003 to completion, which was expected to take 34 months (that is, practical completion by December 2005).

The monitoring of achievement against these parameters was a key ongoing task for Finance and its advisers.<sup>157</sup>

**7.3** The final approved budget for the facility aspects of the project was \$317.0 million. As at February 2009, the out-turn cost of the facility works was \$311.7 million, \$5.3 million or 1.7 per cent below the final budget of \$317 million.

**7.4** The total capitalised value of the works will be in the order of \$326.2 million, comprising

- the construction camp (with a capitalised value of \$3.8 million) that was transferred to DIAC on 31 January 2008 to be capitalised;<sup>158</sup>
- the CIIDC (with a capitalised value of \$313.3 million<sup>159</sup>) transferred to DIAC on 7 April 2008;<sup>160</sup> and
- \$9.1 million costs (as at February 2009) associated with the Defects Liability Period (which was to have ended in October 2008). In March 2009, Finance advised ANAO that the Defects Liability Period costs had not been finalised as this period was ongoing pending the completion of one outstanding major defect (failure of the epoxy paint used in wet areas for waterproofing). Once the Defects Liability Period is completed, these costs will be transferred to DIAC for its capitalisation.

**7.5** The capitalised cost of the CIIDC does not include any costs borne by DOTARS in acquiring the land on which the facility was constructed or providing essential infrastructure for its operations.

## **Meeting client agency needs**

**7.6** The CIIDC facility comprises more than 50 buildings and associated landscaping works so as to provide:

- 416 purpose designed places for detainees and 384 overflow contingency places in a basic standard of accommodation;

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<sup>157</sup> ANAO analysis of the design and construction of the facility is examined in Chapter 4.

<sup>158</sup> Department of Finance and Deregulation, *Annual Report 2007–08*, p. 181.

<sup>159</sup> This amount included \$10.7 million of initial early works undertaken by DIAC which was transferred to Finance as work-in-progress when Finance was given the responsibility to manage the project meaning that, of the \$313.3 million in capitalised costs transferred to DIAC, \$302.6 million was associated with Finance expenditure against its Budget Allocation

<sup>160</sup> *ibid.*

- a 20 place high security management unit;
- a perimeter security and detection zone, including outer and internal patrol roads, security fencing and a cleared landscaped zone;
- central facilities comprising induction/visiting, main reception, administration centre, conference centres, kitchen, laundry and stores, medical centre and utilities building;
- education and recreation facilities; and
- external facilities including a warehouse, visitor processing building, visitor and staff car park and entry road.

7.7 DIMIA commissioned a review of the CIIDC and its security arrangements so as to report on whether the facility meets the stated intent of the PWC submission on the proposed facility, and whether it conforms to the recommendations of the Palmer Report, the Comrie Report and the PWC findings in relation to the Maribyrnong Immigration Detention Centre. The review was completed in December 2007, at which time the facility works were close to being completed. It concluded that:

Finance and DIMIA have built what they set out to achieve as stated to the hearings of the PWC in 2003.

7.8 DIAC advised ANAO that the maintenance of plant and equipment installed during construction and through the Defects Liability Period was the responsibility of the Main Works Contractor, whereas Finance advised ANAO that this responsibility was intended to be split between the Main Works Contractor and DIAC's Detention Services Provider. DIAC further advised ANAO that it was not until well into the Defects Liability Period that a working maintenance schedule that would have been considered best practice was produced by the Main Works Contractor. It was also not apparent to DIAC, who was overseeing implementation of the Main Works Contractor's plan, whether there was any physical sign-off of the maintenance work being undertaken. DIAC also considered that anecdotal and physical evidence suggested a lack of maintenance across systems.<sup>161</sup>

7.9 In March 2008, onsite DIAC staff and its facility maintenance contractor commenced formally tracking the outstanding maintenance/defect issues. This

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<sup>161</sup> As an example, ANAO observed during its site inspection of the facility in March 2009 that one of the three chillers used in the air conditioning plant was out of service.

tracking was referred to as the 'snag list'. ANAO analysis of this list highlighted issues across the facility in relation to the correct and complete installation of fixtures (such as hand dryers and billi water units, curtains and door numbers through to exit lights), comprehensive testing of the fire system (including the caps being left on the smoke detectors throughout the complex and not ensuring that the external fire bells worked); and plumbing issues such as taps not working as expected and faulty hot water systems. The snag list also captured areas within the complex that had already started to show a large amount of rust or corrosion. For example, the external fittings such as fire sprinklers, hand rails, roller doors and fixed tables and chairs were being reported as having rust, as did internal fixtures such as toilet bowls and sinks throughout various accommodation blocks.

**7.10** In total, in the seven months (between 20 March 2008 and 16 October 2008) that the snag list was being kept, some 980 issues were identified. Some of these related to an individual location, others to particular blocks and five related to the whole complex. The list reported that 72 per cent of the issues had been resolved but that 28 per cent of issues were still outstanding when the list stopped being updated.

**7.11** In June 2009, Finance's Project Manager provided ANAO with detailed comments on its perspective concerning defects liability and maintenance matters indicating a different view to that of DIAC. Finance also commented on these issues, in the following terms:

For the full 12-month defect liability period, *[the Project Manager]* and *[Main Works Contractor]* had a full-time site presence. *[The Main Works Contractor]* largely completed its contracted maintenance and maintenance logs were kept by *[the Main Works Contractor]* and reviewed by *[the Project Manager]*. A review of maintenance logs and the defects list was also undertaken by key consultants in September 2008 prior to Final Completion. In Finance's view, it is DIAC's Facilities Management (FM) provider and particularly its early lack of resourcing that contributed to the problems reported by DIAC. We note that the DIAC FM was barely operating on site up until early to mid 2008, some six months following Practical Completion. This was obviously detrimental to the condition of the Centre. There was a maintenance responsibilities matrix that was forwarded to DIAC on 25 September 2007. It was suggested that DIAC's FM review this and conduct a gap analysis to assess the activities that would be performance by *[the Main Works Contractor]*, so that it could pick up the balance of the work. However, we are not aware that this exercise was ever undertaken.

**7.12** Similarly, the Main Works Contractor advised ANAO that:

- in respect to paragraph 7.8, it developed and implemented a complete maintenance regime for the items included under the Main Works Contract for the 12 month defects liability period, that this maintenance was overseen by the Project Manager's representative on the Island, was quarterly audited by the Project Manager on its periodic visits to the Island and that complete evidence and records are held in respect of the maintenance that was undertaken;
- in relation to paragraphs 7.9 and 7.10:
  - it did not have any design responsibilities and did not participate in any material selection (its responsibilities being limited to construction and buildability only) and it was unaware of any shortcomings as the Principal Consultant and its consultant team in conjunction with the Project Manager signed-off all aspects of construction as being built in accordance with the contract documentation;
  - the Project Manager and the Main Works Contractor updated the consolidated list of official defects of outstanding items required to be rectified by the Main Works Contractor on 15 February 2008 and that all agreed defects, defects arising during the defects liability period and additional defects arising from the Facilities Manager 'snag list' that were the responsibility of the Main Works Contractor were completed and signed-off by the Project Manager's representative on 8 December 2008;
  - the 'snag list' between DIAC and the Facility Manager contained, for the most part, items outside the Main Works Contractor's contractual scope and generally related to maintenance issues; and
  - upon Practical Completion, the Main Works Contractor provided a complete set of maintenance manuals for all aspects of the project but that, from its on-site presence and frequent visits with the Project Manager during the defects liability period it was apparent that the facility was not being maintained in accordance with the maintenance manuals.

## Remaining project objectives

**7.13** Whilst the measurement of performance against the remaining project objectives was not carried out in a formal sense, Finance advised ANAO that it monitored aspects of these objectives during the course of the project (see Table 7.1).

**Table 7.1**

### Finance’s monitoring of project objectives

Objective	Finance monitoring action
Achieve the successful completion of the project whilst maintaining support from the Christmas Island community	Monitored through site visits, ongoing consultation with key stakeholders, notices in local media etcetera. Site induction for new contractors had a large focus on the local community and local values. The Main Works Contractor assisted with fund-raisers and provided assistance with minor works to island organisations and community projects. Minimal complaints received.
Deliver the project with environmental excellence.	Finance commissioned a bio-diversity monitoring study, the contractor developed an Environmental Management Plan (EMP) which was reviewed by the former Department of Environment and Heritage. Audits of the EMP occurred.
Build the project with better than industry performance in respect of Occupational Health and Safety.	Measured by the Main Works Contractor against established benchmarks and reported through its monthly report.
Deliver the project in a collaborative environment.	A collaboration workshop was held in December 2005 following a difficult/labour intensive period to promote better relationships.
Enhance the reputations of the Principal (Finance), the Project Manager, and subcontractors of the Project Manager and/or Principal and Works Contractor for excellence in construction.	One measure would be awards from professional industry bodies. The CIIDC has not been entered for any awards.

Source: Finance advice to ANAO, March 2009.

### *Delivering the project with environmental excellence*

**7.14** Obtaining value for money in construction projects involves optimising the combination of whole-of-life facility costs and quality to meet user

requirements.<sup>162</sup> As future costs associated with the use and ownership of an asset are often greater than the initial acquisition cost<sup>163</sup>, it is important in planning the construction of major facilities to consider the ongoing maintenance and whole-of-life cost of those facilities.<sup>164</sup> According to the UK's Office of Government Commerce (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.<sup>165</sup>

**7.15** ANAO Audit Report No.25 2008–09 *Green Office Procurement and Sustainable Office Management* outlines that, whilst there are some policy documents and better practice guidance available, the Commonwealth does not have any comprehensive sustainability requirements.<sup>166</sup> The better practice guidance includes an ESD (Ecologically Sustainable Development) Design Guide, the third edition of which was released in March 2007. This guide

<sup>162</sup> Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Whole-life costing and cost management*, 2007, p. 4.

<sup>163</sup> ANAO Better Practice Guide, *Life-cycle costing*, December 2001, p. 3.

<sup>164</sup> ANAO Audit Report No.37 1999–2000, *Defence Estate Project Delivery*, Canberra, 4 April 2000, p. 37.

<sup>165</sup> Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Whole-life costing and cost management*, 2007, p. 5.

<sup>166</sup> ANAO Audit Report No.25 2008–09 *Green Office Procurement and Sustainable Office Management*, Canberra, 11 March 2009, pp. 37–39.

provides an introduction to the key environmental issues relevant to office and public buildings. It also outlines what can be done to address these issues in building projects.

**7.16** Against this background, Finance had an objective of delivering the project with environmental excellence. This was an important objective given the national park status of the land that surrounds the site.<sup>167</sup>

**7.17** In March 2009, Finance advised ANAO that ESD related issues were considered within the various design milestone reports (concept, schematic, development), but primarily within the Schematic Design Report. Issues considered included the orientation and siting of buildings, energy efficiency, re-use or rainwater, hot water supply, waste and wastewater management and stormwater and light impacts on the Abbots Booby. However, ANAO analysis is that the pressures on the construction budget made it difficult for environmentally sustainable approaches to be pursued unless they had short pay-back periods.

**7.18** For example, rainwater re-use was assessed at the Value Management Workshop held in September 2002. A business case was prepared by one of the design sub-consultants which concluded that the pay-back periods for re-use meant that a decision to proceed with any rainwater harvesting and re-use options would have to be driven from an environmental perspective and not an economic basis. In March 2004 it was decided not to proceed with rainwater re-use due to the 37-year return on capital expenditure at an 800-person capacity. Rather, the CIIDC obtains its water from the town-water supply with water pumped to the site using the town's diesel generator. The town-water supply is also used to water the grounds. In many locations throughout the facility, rainwater is initially captured by gutters, but which subsequently open onto the ground (see Figure 7.1).

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<sup>167</sup> ANAO Audit Report No.38 2002–03 *Referrals, Assessments and Approvals under the Environment Protection and Biodiversity Conservation Act 1999* outlined (on page 93) a breach by a DOTARS contractor (when DIMIA had project delivery responsibility) of that Act relating to the bulldozing of a track through rehabilitated mine site adjacent to a forest where the endangered Abbott's booby is known to nest.



**Figure 7.1****An example of a gutter opening onto ground**

Source: ANAO site visit, March 2009.

**7.19** Similarly, a business case was prepared by the same design sub-consultant in relation to hotwater systems, including the possible use of solar hot water. The business case noted that, when electricity tariffs are relatively high, as they are for Christmas Island, the economic supporting case for implementation of alternate technology is high and that, when considering the economic case alone, the greater the population of the CIIDC, the more benefit and the stronger the case is for an alternate technology.

**7.20** The assumption made about the level of occupancy had a large impact on the recommended solution. Heat pumps were recommended for the scenarios of 200 people, 400 people and 800 people. Conventional electric (the cheapest capital cost option) was recommended for the scenario of 100 people. The option pursued was that of heat pumps. In terms of maintenance, the business case noted that the short life expectancy of heat pumps meant that a stock of units would have to be maintained at the facility at all times and that sufficient maintenance staff would be necessary to undertake the replacement

program (approximately 40 hot water units per year). However, ANAO's March 2009 site inspection revealed that units were being cannibalised due to a shortage of spare parts and a stock of units not currently being available on-site.

**7.21** For the construction stage of the project, performance against the environmental objective was promoted by:

- the Main Works Contract requiring the Contractor to satisfy all legislative requirements as well as requiring that the Contractor to prepare an Environmental Management Plan (EMP) and that this EMP be in accordance with all relevant Australian Standards, Commonwealth and State Government legislation and local government regulations.<sup>168</sup> Finance advised ANAO that the then Department of the Environment and Heritage was consulted in the preparation of the EMP;
- a Biodiversity Monitoring Program (BMP) being established to monitor the effects on biodiversity of constructing the CIIDC. The September 2008 report from the Director of National Parks to Finance concluded that:
  - the main impacts from the construction of the CIIDC included damage to the foraging habitat of the Christmas Island pipistrelle;<sup>169</sup> increased road mortality of robber crabs and red crabs; increased road mortality of birds; and disturbance of forest along national park boundaries; and
  - ongoing impacts are expected when the CIIDC is operating. These are associated with lighting around the facility, affecting nesting of Abbott's boobies and pipistrelle foraging; landscaping activities bringing in weeds; an increase in the threat of invasive species as supplies are shipped in; and problems with stormwater flowing from the site into the national park (see Figure 7.2 and Figure 7.3). In addition, road mortality rates are expected to remain high due to increased commuting traffic.

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<sup>168</sup> The Early Works Contract included similar obligations with respect to the preparation of an EMP.

<sup>169</sup> The Christmas Island pipistrelle *Pipistrellus murrayi* is a tiny insectivorous bat that is confined to Christmas Island. It is one of the smallest bats in the world.

**Figure 7.2**

**Stormwater headwall (overgrown) and rock-lined gully close-up**



Source: ANAO site visit, March 2009.

**Figure 7.3**

**Rock-lined gully for initial stormwater runoff (western boundary)**



Source: ANAO site visit, March 2009.

## Post implementation review

**7.22** Measuring construction projects' performance is essential for ensuring that planned improvements in cost, time and quality are achieved and for identifying potential for improved approaches.<sup>170</sup> For example, in June 2008, Finance advised the PWC that the experience on the Christmas Island project was a large reason for introducing the two-pass approval process.<sup>171</sup>

**7.23** In addition to measuring performance, 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.<sup>172</sup> These reviews seek to assess whether the expected business benefits have been

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<sup>170</sup> United Kingdom National Audit Office, *Modernising Construction*, HC 87 Session 2000–2001, 11 January 2007, p. 7.

<sup>171</sup> Parliamentary Standing Committee on Public Works, *Proof Committee Hansard*, Thursday 26 June 2008, Canberra, p. PW11.

<sup>172</sup> Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Improving performance: project evaluation and benchmarking*, 2007, p. 5.

achieved from the investment in the facility that was justified in the business case<sup>173</sup> 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.<sup>174</sup>

**7.24** 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.<sup>175</sup> 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.

**7.25** In the context of ANAO’s recent audit of the Approval of Funding for Public Works, Finance advised ANAO that it supports the post implementation review of projects in order to improve the future management of capital works projects, but that the decision to conduct a post implementation review is the responsibility of the relevant agency. For its own projects, the AMG better practice guide sets out the processes required to be undertaken following completion of a construction project and includes a section on Post Occupancy Evaluation. The Post Occupancy Evaluation is to be undertaken in two steps, namely:

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<sup>173</sup> 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.

<sup>174</sup> *ibid.*, pp. 5–6.

<sup>175</sup> Office of Government Commerce, *Achieving Excellence in Construction Procurement Guide—Improving performance: project evaluation and benchmarking*, 2007, p. 5.

- Step 1—a technical review of the asset and engineering services, the anticipated outcome of which is to assess whether an efficient building has been constructed that meets the stakeholders' requirements; and
- Step 2—a review of the overall project to identify areas for improvement. The intention is that the Step 2 review be a comprehensive review of the project, with a final report that details the positive and negative aspects of the project in order to inform future projects. The Step 2 review also involves comparing the business case objectives against the final outcomes; comparing the completed facility against design requirements; and reviewing the commissioning, testing and handover processes.

**7.26** Finance's better practice guide recognises that, in order to conduct a successful Post Occupancy Evaluation, the building/construction works need to be fully complete, commissioned and occupied by the users. The CIIDC was an unusual construction project in that, following handover of the facility it remained unused for a period of time. This remained the situation at the end of the Defects Liability Period in October 2008. Against this background, to date, there has not been a Post Occupancy Evaluation undertaken and Finance advised ANAO in February 2009 that it is unlikely it would conduct one for the following reasons:

- the centre has still not been used on more than a limited basis;
- the period of time that has passed since Practical Completion (October 2007) is significant whereas Post Occupancy Evaluations are best done soon after handover while the majority of stakeholders are available and have not moved on to other projects; and
- the consultant's and contractor's contracts did not contain a provision for such a service, and there may be limited interest in participation given the time that has passed.

**7.27** On this last point, by way of comparison, in its conduct of major asset sale transactions, Finance has adopted a consistent practice of having its key

sale advisers prepare, with departmental input, sale completion reports. This is made a requirement of the consultancy contract.<sup>176</sup>

**7.28** In respect to the CIIDC project, Finance had attempted to hold a lessons learned workshop late in 2008, although this did not occur as some attendees were unavailable and the Principal Consultant advised Finance that it would not be accepting the invitation to attend. Finance advised ANAO that it agreed that a lessons learned workshop would be valuable and that it would keep the matter under review subject to availability of funds and resources. However, Finance expected it would be difficult to assemble the relevant parties considering the time that has passed since Practical Completion, and noting that key project staff had moved on some time ago.

## Recommendation No.5

**7.29** ANAO *recommends* that the Department of Finance and Deregulation require its key project management and other advisers to participate in a post-project review of major construction projects soon after they are completed so as to identify aspects and processes that have been particularly successful as well as those where lessons can be learned.

### Agency responses

**7.30** Finance, DIAC, AGD and DITRDLG agreed to the recommendation. Finance noted that it:

has already implemented the requirement for its key project management and other advisers to participate in post-project reviews. These procedures are also included in the Better Practice Guide for Finance officers in the Property and Construction Division.

**7.31** In addition, DIAC commented that:

Now the facility has been in operation for several months, it would be appropriate to do this [*conduct a post-project review of completed works*]. I strongly support this happening.

<sup>176</sup> For example, for the Sale of Sydney (Kingsford Smith) Airport, the services to be provided that were specified in the Business Adviser contract included 'post-sale assistance, as required, including preparation of a comprehensive sale report'. Similarly, the Project Management Joint Global Coordinator (PMJGC) contract for Telstra 3 required that the PMJGC's ensure each working group and sale committee provide Finance with a separate post-completion report of their performance. Among other things, these reports outlined the activities that had been undertaken, assessed the outcomes that had been achieved and suggested improvements that could be made in any future equity capital market offerings undertaken by the Commonwealth.



## Notification to the Public Works Committee of increases to the project budget

**7.32** The PWC Manual requires<sup>177</sup> 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.

**7.33** In Audit Report No.20 2008–09, ANAO concluded that existing arrangements have not resulted in timely advice of project changes being provided to the Committee.<sup>178</sup> Specifically, 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 but in no instance had this reporting occurred.

**7.34** Similarly, one of the findings of the follow up internal audit review of the CIIDC project undertaken by Finance was 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 PWC inquiry) had not been reported as required by the PWC's Manual. In response to the Internal Audit review, Finance wrote to the PWC on 10 January 2008, advising the Committee of the budget increases, as follows:

The former Prime Minister provided the authority for a \$59 million increase on 30 December 2004, following market testing of the Main Works Construction contract through an open tender process. This funding was approved in the February 2005 Additional Estimates process and increased the project budget from \$276 million to \$335 million. This revised budget included the funding for the Department of Immigration and Citizenship (DIAC) and the former Department of Transport and Regional Services (DOTARS).

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<sup>177</sup> Parliamentary Standing Committee on Public Works, *Manual of Procedures for Departments and Agencies*, March 2008, Edition 7.2, p. 38.

<sup>178</sup> ANAO Audit Report No.20 2008–09, *Approval of Funding for Public Works*, Canberra, 5 February 2009, p. 17.



Authority for a further increase of \$60 million to the project budget was provided by the former Prime Minister on 4 August 2006. This increased the total budget from \$335 million to \$396 million. The contributing reasons for this increase during construction included cost increases resulting from the breakdown of the Christmas Island port crane, the flow on effect of unexpected delays, a shortfall in anticipated savings and the full development of the design and final tendered costs for landscaping being higher than expected.

**7.35** In June 2008, the Committee announced that it would receive a briefing from Finance and DIAC on the development of the CIIDC. The Committee's announcement stated that it would focus on the increase in the cost of the work from an estimated \$276 million in 2003 to \$396 million. A public briefing was held on 26 June 2008.

**7.36** Subsequent to the public briefing, the PWC wrote to the ANAO (with copies provided to the Finance Minister and the Minister for Immigration and Citizenship) advising that it had concerns about the project costing provided to it in September 2003, and the subsequent management of the project. In response, in August 2008 the Finance Minister advised the Committee 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.<sup>179</sup>

**7.37** In September 2008 the Committee reported on its consideration of increases to the project budget, raising concerns that advice from Finance concerning the increases was not timely.

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<sup>179</sup> Audit Report No.20 2008–09 included an examination of the extent to which the Gateway Review processes and two-stage approval processes have been applied to public works projects. ANAO concluded that these processes have yet to have a significant effect on the planning and delivery of public works and that 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.

### *Information provided to the PWC*

**7.38** Finance provided the Committee with breakdowns of the current budget of \$395.5 million and consultant fee increases. The information provided on the construction component of the financial reconciliation was limited, with only a total figure provided (see Table 7.2). Breakdowns of the separate works packages were not provided. Nor were any details advised to the Committee of the remaining works being undertaken by the Project Manager (see paragraph 6.27).

**7.39** Finance included its internal staffing costs within the consultant fee breakdown. Notwithstanding the project delays, there was no evidence sighted of increases to Finance's internal staffing costs, apart from travel costs. In March 2009, Finance advised ANAO that the total cost to 17 February 2009 in terms of its staffing (including contractor costs) was \$2.32 million.

Table 7.2

## Budget increases as presented to the Committee in June 2008

		Committee Budget (2003) \$	Increase 1: Construction Works Market Testing (Dec 04) \$	Increase 2: Project Delays (Feb 05) \$	Current Budget \$
Finance	<b><u>Fees</u></b>				
	Project Management	2 800 000	-	3 700 000	6 500 000
	Design	8 790 000	-	6 710 000	15 500 000
	Sundry fees and costs	500 000	-	4 500 000	5 000 000
	<b>Total fees</b>	<b>12 090 000</b>	<b>-</b>	<b>14 910 000</b>	<b>27 000 000</b>
	<b><u>Construction</u></b>				
	Building Works (Accom)	33 909 000	-	-	-
	Building Works (Ancillary)	39 543 000	-	-	-
	External Works	24 024 000	-	-	-
	Works off site	5 944 000	-	-	-
	Other costs	50 213 000	-	-	-
	<b>Total Construction</b>	<b>153 633 000</b>	<b>59 300 000</b>	<b>45 090 000</b>	<b>258 023 000</b>
	<b><u>Allowances</u></b>				
	Contingency	7 532 000	-	-	-
	Escalation	4 500 000	-	-	-
	<b>Total Allowances<sup>1</sup></b>	<b>12 032 000</b>	<b>-</b>	<b>-</b>	<b>12 032 000</b>
	<b>Subtotal</b>	<b>177 755 000</b>			
<b><u>Expenditure prior to 2003 hearing</u></b>	<b>19 945 000</b>	<b>-</b>	<b>-</b>	<b>19 945 000</b>	
<b>Finance</b>	<b>197 700 000</b>	<b>59 300 000</b>	<b>60 000 000</b>	<b>317 000 000</b>	
<b>DOTARS</b>	<b>58 000 000</b>	<b>-</b>	<b>-</b>	<b>58 000 000</b>	
<b>DIAC (previously DIMIA)</b>	<b>20 500 000</b>	<b>-</b>	<b>-</b>	<b>20 500 000</b>	
<b>TOTAL</b>	<b>276 200 000</b>	<b>-</b>	<b>-</b>	<b>395 500 000</b>	
Note 1: 'Allowances' can be treated as construction costs, and have been expended.					

Source: Appendix B Report 7/2008 Update Report: The Christmas Island Immigration Detention Centre Project, Public Works Committee, September 2008.

## *DOTARS and DIMIA Budget Allocations*

**7.40** The budget allocations for DOTARS and DIMIA in Table 7.2 also remained the same as that presented to the Committee in September 2003. Notwithstanding that it provided advice to the PWC on these budget allocations, no attempt was made by Finance to confirm the actual costs at completion for the DOTARS and DIMIA works items. In March 2009, Finance advised ANAO that:

There is no reason for the Finance project team to investigate or report against the fund(s) appropriated to agencies other than Finance.

**7.41** As a result, whilst the advice to the PWC referred to increases to the 'total project budget' of \$276.6 million (which included the DOTARS and DIMIA Budget Allocations and the evidence given by Finance to the Committee in June 2008 referred to infrastructure work undertaken by DOTARS (such as the construction of bridges and tunnels for crab crossings) the financial reporting to the PWC:

- stated that DOTARS' Budget Allocation was \$58.0 million when that department was provided with in excess of \$80 million<sup>180</sup> for works associated with the project. The figure provided to the PWC excluded DOTARS' one-off operational costs as well as amounts relating to the common-use infrastructure port and road upgrades and the dedicated sports facilities for the Island;
- advised that the total budget provided to DIMIA and DOTARS remained at the 2003 figure of \$78.5 million but this amount did not reflect that the DOTARS Budget Allocation was increased in October 2007 by \$5 million for DOTARS to replace the main power supply cable to the site that had been installed as part of the DOTARS infrastructure works but which had subsequently failed (see further below);
- did not inform the Committee of the actual costs borne by DIMIA. In this respect, DIAC's total costs for the project were \$23.5 million comprising:

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<sup>180</sup> Specifically, DOTARS one-off operational costs of \$21.8 million and DOTARS capital projects of \$60.7 million.

- construction costs in 2002–03 of \$20.419 million (which were funded from within the Budget Allocation of \$20.5 million advised to the PWC);
- external design and management costs and internal costs between 2001–02 and 2007–08 of \$3.048 million (which had been met from within a separate Budget Allocation of \$3.1 million that was not advised to the PWC—see paragraph 3.20); and
- did not inform the Committee of the actual costs borne by DOTARS. In this respect, ANAO also sought a breakdown from AGD<sup>181</sup> against the DOTARS Budget Allocation. AGD provided ANAO with financial data but this information did not represent a comprehensive reconciliation against the respecified Budget Allocation of \$58.0 million referred to PWC. Instead, AGD:
  - calculated the residual funds from the \$68.6 million appropriated to DOTARS for the construction of three common-use infrastructure projects on Christmas Island as part of an overall \$100 million package to facilitate the development of a space centre on the Island;<sup>182</sup> and
  - included advice on expenditure in relation to new port construction costs (\$6.3 million), claims against DOTARS from the receiver of the building company that went into liquidation whilst working on the project (\$1 million) and construction of the new link road (\$10.0 million). This latter advice does not appear likely to be accurate in that the expenditure reported to ANAO exactly matches the budget provision for the link road and, at the time of ANAO's March 2009 visit to the Island, the link road upgrade had still not been undertaken. In May 2009, AGD advised ANAO that:

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<sup>181</sup> As a result of the November 2007 Federal election and subsequent changes to the Administrative Arrangement Orders, all relevant Territories staff and records associated with the CIIDC project and related infrastructure services for which DOTARS had been responsible for were transferred to AGD. The formal transfer occurred on 25 January 2008, with the physical relocation of the Territories staff occurring in March 2008.

<sup>182</sup> The majority (\$51.3 million) of the \$68.6 million related to an airport upgrade project which was later separately referred to, and reported on, by the PWC. The remaining \$17.3 million related to the additional port on the east coast of Christmas Island (known as the Nui Nui Port) and the new link road from the east coast to Lily Beach Road.

In 2007, DOTARS determined, following stakeholder consultation, that an upgrade of the existing Linkwater Road was preferred rather than the construction of a new road with a total realignment. This was because the requirement to move heavy goods associated with the proposed spaceport was unlikely to eventuate and an upgrade would deliver a more cost-effective result.

In November 2008, [an] engineering firm was appointed to manage the project. [The engineering firm] is currently reviewing the Shire of Christmas Island's quote for construction and improvements to Linkwater Road. At this stage practical completion is expected to be reached by 28 September 2009. The latest cost estimate is \$2.662 million.

**7.42** In May 2009, Finance advised ANAO that there was no requirement for it to provide information to the PWC on DIMIA's and DOTARS' costs and that it should, perhaps, have focused its reporting on the Finance Budget Allocation.

## Recommendation No.6

**7.43** ANAO *recommends* that the Department of Finance and Deregulation:

- (a) when seeking additional funds for its capital works projects, develop budget breakdowns that clearly identify the elements that are proposed to be revised; and
- (b) explicitly recognise within its internal guidance material the requirement to report significant project changes, including to the budget, to the Public Works Committee.

### Agency responses

**7.44** Finance, DIAC, AGD and DITRD LG agreed to the recommendation.

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Ian McPhee  
Auditor-General

Canberra ACT  
23 June 2009

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