Office of the Auditor General
CAYMAN ISLANDS

Management of Major Capital Projects

June 2012




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EXECUTIVE SUMMARY

1. This audit reviewed the Government's management framework for major capital projects to determine if it is good enough to achieve results and ensure good value-for-money for approximately $150 million per year or approximately 25% of core government's expenditure. To assess the framework, we reviewed the Government's policies, processes and practices for managing major capital projects and used two "case studies", the *High Schools Projects* and the *Government Office Accommodation Project (GOAP)* as examples to determine how well the framework was working. The recommendations in this report are focused on improving the management framework for Government and for how it can better manage major capital projects in the future. The audit has three major findings:

2. **Major Finding 1 - Government does not have a sound governance framework for the development of major capital projects:** The Government needs to develop the necessary framework and leadership to: provide the direction and guidance for the development of major capital projects; and, ensure value-for-money for significant amounts of public expenditure. At present certain key elements are missing such as:

    - the development of comprehensive business cases linked to the Government's strategic objectives and priorities,
    - clearly defined roles and responsibilities for procurement and project management activities, including clear delineation of the roles of politicians and officials;
    - establishment of sound financial management practices; and
    - the development of basic quality standards for how major capital projects such as buildings should be constructed.

3. The current weakness and gaps in the management of major capital projects have helped contribute to a waste of scarce resources and a lack of accountability for public expenditure.

4. Without a sound governance framework and acknowledgement that expenditures for major capital projects need to be better managed, the Government will continue to risk not achieving best value from the use of public resources. We have made several recommendations to improve the practices being followed, the most important of which is to provide leadership of the function by creating a centre of excellence responsible for setting out the policies, processes and practices necessary to effectively manage major capital projects in the future.

5. **Major Finding 2 - Project management practices for the new high schools projects were deficient:** Without a robust governance framework in place, we were not surprised to find that the project management practices for the building of the new high schools were deficient impacting on the planned costs and timeframes for delivery. The assignment of responsibility for the building of the

schools came under the Ministry of Education, who did not have the management expertise or the experience in delivering building infrastructure projects. There was no business case developed for the eventual design concept used to proceed for tendering the contract; a significant missing element required for good governance of a major capital project.

6. The lack of an experienced project manager, together with the involvement of politicians in the conceptual design phase of the project resulted in the projects being poorly managed and controlled leading up to the signing of the contract with the general contractor in 2008.

7. **Major Finding 3 - Government Administration Building employed good project management practices:** We found that the Government assigned a well qualified and experienced project manager to GOAP who employed industry accepted project management practices that should be considered as standard practice for the management of all future major capital projects. As a result of employing this individual, within the parameters given to him, the project was able to overcome significant challenges and came in on time and, generally, within budget. The project manager also ensured the effective management of significant changes resulting from decisions that were made during the construction process.

8. There were, however, several issues identified during the audit. Most significantly the process used at the outset to determine the business needs, including the size of the building needed to accommodate public sector administration, was weak. The building is only 60% occupied and is underutilized. There are continued excess expenditures for leased Government offices estimated to be about $2.1 million per year for entities that were planned to be located in the building.

9. **Clearance of this report:** As part of our standard process for finalizing our audit reports, we requested comments from the Government on the content, factual accuracy, and recommendations contained in our reports. Comments were requested on the second draft of this report from the relevant Government officials on 17 February 2012 with a deadline for responses by 29 February 2012. After agreeing to a number of requests for delays, the OAG sent an email to all parties on 19 March 2012 setting a final deadline of 23 March 2012 for these responses. Responses were received on April 13 and 20, 2012 from Government officials that further delayed the issuance of this report.

BACKGROUND

WHY DID WE DO THIS AUDIT?

10. The Government invests in capital projects from time to time as part of its responsibility to deliver its programs to citizens. Capital projects are integral to the ability of the Government to achieve its programme mandate. As outlined in our three-year performance audit plan, we plan to conduct a number of performance audits on how government manages major capital projects. This audit looks at the overall framework that Government has in place for the management of major capital projects and uses examples of projects, or case studies, to demonstrate the impact of any issues related to the overall framework and the attributes we expected to find when we conducted our audit.

11. The three active and one cancelled projects that we examined are currently estimated to cost $296 million when completed. None of these projects were fully complete when we examined them. However, when completed, the Government will have acquired a general office accommodation building in George Town, a multipurpose high school campus on Frank Sound Road, a partially completed high school campus in George Town and a vacant lot that was to have been a high school in West Bay.

12. While the spending for these projects is over multiple years, it still represents a significant part of overall annual Government spending. Exhibit 1 provides a comparison of capital to total spending by cash flows for the Government over the period 2006-07 until 2011-12. The Exhibit reflects the importance of capital spending to Government finances.

Exhibit 1: Comparison of capital spending to total spending - 2006-07 through 2011-12

Year	Capital Spending ($000)	Total Spending ($000)	Capital as % of Total Spending
2006-07	133,480	578,741	23.06%
2007-08	201,173	670,301	30.31%
2008-09	190,736	711,166	26.82%
2009-10	150,007	651,061	23.04%
2010-11	147,838	653,623	22.62%
2011-12 (Budgeted)	116,148	651,657	17.82%

Source: Annual Plan and Estimates and Cash Flow Statement

13. In July 2011, the Office of the Auditor General tabled its report entitled *Management of Government Procurement*. That audit report focused on the overall practices used by Government to procure and acquire supplies, assets and services. The procurement of supplies and services are a critical part of the management of major capital projects. Therefore, this audit focuses on major capital projects which are intended to support the procurement of major physical assets and which, in effect, is one type of procurement.

14. In conducting our audit work, we were made aware of certain operational issues that affected the scope of our audit. Due to the complexities associated with ongoing legal actions surrounding the construction phase of the John Gray and Clifton Hunter high schools, this and future phases are not part of this current audit.

HIGH SCHOOL PROJECTS

15. On February 22, 2005, Cabinet considered the proposal for a long-term redevelopment and rebuilding program for secondary schools. Within the Ministry of Education's concept paper there was provision for three high schools to be developed over the period 2005-09, at locations in Grand Cayman: West Bay – Beulah Smith ($30 million cost estimate), George Town – John Gray ($35 million cost estimate) and Frank Sound – Clifton Hunter ($30 million cost estimate). Therefore, the Ministry of Education ("the Ministry") estimated that the three high schools would cost $95 million, not including the furniture, fittings and equipment.

16. Cabinet advised that approval should be given for the proposed long-term rebuilding and redevelopment plan for secondary schools on Grand Cayman. It also called for the preparation of business cases for the three high school projects. Cabinet indicated that, if possible, the Ministry's business cases should provide for maximum unit cost of $20 million for the two new schools and maximum cost of $22.5 million for redevelopment of the John Gray High School.

17. According to the Ministry, the cost estimate provided in 2005 did not reflect the complete strategy ultimately pursued by the Minister of Education that changed the design to include a new education delivery philosophy, community and sporting facilities, and hurricane shelters. This significant change for the business needs for the school projects would have had a significant impact on the cost of the project and the timeline for their construction. Despite this change, there was no attempt to develop a robust business case at that time.

18. The development history for the high schools is complex and has gone on over a lengthy period of time spanning a number of different government administrations, even dating before the Ministry's 2005 concept paper. In Exhibit 2, we provide a summarized chronology of key events according to information provided to us by the Ministry.

Exhibit 2: Summary of key events in the development of the three high school projects

Date	Summary of Key Events
2000	Original design brief for a new high school at Frank Sound with an estimated cost of $25 million.
2003	Plans revisited as a Private Finance Initiative; plans cancelled.
2004	Cabinet approves the building of a high school in Frank Sound (became Clifton Hunter High School) with a projected cost of $31.3 million using a design build construction approach. Land was acquired.
February 22, 2005	Cabinet approves the proposed long-term rebuilding and redevelopment plan for secondary schools on Grand Cayman. It also called for the preparation of business cases for the three high school projects planned for West Bay, George Town and North Side.
2005	Preliminary planning and design work undertaken by PWD
June 2006	Decision made to go from a design build delivery to the more traditional design-bid-build approach (See Exhibit 7)
July-October 2006	Procurement of planning and design services for a new design for three high schools that moved away from standard one-building educational complex to a campus complex with facilities in multiple buildings.
August 2007	New design largely finalized
August 2007	Procurement started for site work and demolition
November 2007	Tender invitation for construction of 3 high schools
June/November 2007	Land parcels purchased for Beulah Smith
January 2008	Tender submission and evaluation – John Gray
February 2008	Tender submission and evaluation – Clifton Hunter and Beulah Smith
April 2008	Ministry of Education report to the Minister on project costs and confirmation of instructions to proceed
April 2008	Central Tenders Committee accept bids – John Gray and Clifton Hunter
May 2008	Notice to contractor to proceed - John Gray and Clifton Hunter
May 2008	Contract signing and work begins - John Gray and Clifton Hunter
August 2008	Central Tenders Committee accept bid – Beulah Smith
September 2008	Notice to contractor to proceed – Beulah Smith
December 2008	Work ceased – Beulah Smith
November 29, 2009	Contract terminated – John Gray and Clifton Hunter
February 2010	Tender invitation for construction manager - John Gray and Clifton Hunter
July 2010	Settlement with contractor – Beulah Smith
September 2010	Central Tenders Committee accept bids – John Gray and Clifton Hunter
September 2010	Contract signed - John Gray and Clifton Hunter
October 21, 2010	Work resumed - John Gray and Clifton Hunter

Source: Ministry of Education (September 2011)

19. As at March 2012, the two remaining high schools (Clifton Hunter and John Gray) were forecast by the Ministry to cost a total of $197 million to complete. The Clifton Hunter High School is scheduled to be completed and available for use in September 2012. The completion of the John Gray High School in George Town is scheduled to be phased over a longer period. The initial phase will see the outer shells of four of the original eight planned buildings finished. It is anticipated that the second phase will see these four shells and an additional fifth building completed and made available for use. The Ministry has indicated that the total projected cost includes the further phases to complete all eight buildings for use at some point in the future. It should be noted that we were not provided with any supporting information related to the plans or cost estimates nor did we review their reasonableness as this was outside the scope of the audit.

20. Exhibit 3 shows the spending on the three high school projects from 2006-07 until 2011-12. The spending in 2011-12 is only up until September 2011. Also, this Exhibit does not reflect the costs incurred in acquiring land and site work completed in 2004 for the Clifton Hunter High School.

Exhibit 3: Expenditure on the high school projects from 2006-07 until 2011-12

Fiscal Year	John Gray High School	Clifton Hunter High School	Beulah Smith High School	Total
2006-07	$ 356,298	$ 361,189	$ 1,084,065	$ 1,801,552
2007-08	2,164,297	8,782,629	2,802,411	13,749,337
2008-09	25,027,185	30,195,034	1,673,748	56,895,967
2009-10	12,475,364	12,835,900	239,408	25,550,672
2010-11	10,950,702	17,346,449	90,367	23,387,518
2011-12	1,473,886	3,958,201	-	5,432,087
Total	**$ 52,447,732**	**$ 73,479,402**	**$ 5,889,999**	**$ 131,817,133**

Source: Ministry of Education

GOVERNMENT OFFICE ACCOMMODATION PROJECT

21. Government requires office accommodation space to run its operations either in leased or owned space. It has long had plans to build at least one new office building near George Town. In fact, since 2002, Government has twice started the planning to have such a building constructed but both initiatives were cancelled by Government before they progressed to a commitment to undertake the project. The current General Office Accommodation Project (GOAP) began in March 2006. Originally, the GOAP was to include the building of two general office space buildings and the demolition of the existing General Administration Building, also known as the Glass House. At the time of our audit, the GOAP incorporated the design and construction of a new 233,000 square feet General Administration Building (GAB) that includes about 185,000 square feet of office

accommodation, public service facilities, and a small amount of underground parking. The GOAP also included onsite and nearby offsite above ground parking. Government has not demolished the unoccupied Glass House, part of the project, and is still considering what should be done with it.

22. The new GAB is designed and constructed as a signature building that is considered high performance. That is, it incorporates high performance concepts such as energy efficiency, hurricane resistance, earth quake resistance, high health and safety standards, and flexibility in ongoing use.

23. The GAB was substantially completed in February 2011 with new tenants moving in over a period shortly thereafter. The building is operational, although not fully occupied, and there are still several matters being resolved between the Ministry of District Administration, Works, Land and Agriculture (DAWLA) and the contractor. At the end of the audit, DAWLA reported that $90.2 million has been spent on GOAP. A further $2.8 million is forecast to be needed to finish the project, although there is uncertainty about this amount as it relates to finalization of close-out issues with the contractor. Therefore, at the end of our audit, GOAP is forecast to cost about $93 million when completed. Exhibit 4 shows Government Office Accommodation Project costs to the end of September and amounts forecast to be paid out.

Exhibit 4 - Government Office Accommodation Project costs to date and amounts forecast to be paid out

Costs to date:	
Design and build contract	$ 77,665,058
Offsite parking lot – land and construction	6,502,453
Construction insurance	1,282,950
Project management salaries	1,080,032
Consultants	1,042,021
Government fees	712,217
Other costs	1,922,234
Total paid out	**$ 90,206,965**
Forecast to be paid:	
Design and build contract - retention	$ 2,565,900
Consultants	250,000
Total forecast to be paid	**2,815,900**
Total forecast cost of Government Office Accommodation Project	**$ 93,022,865**

Source: Ministry of District Administration, Works, Land & Agriculture - fall 2011

GOVERNMENT'S PROCUREMENT PROCESSES FOR MAJOR CAPITAL PROJECTS

24. The Government's procurement framework for major capital projects is governed under Part IX – Procurement and Part XII Capital Projects, *Financial Regulations (2010 Revision)* of the *Public Management and Finance Law (2010 Revision)*. These regulations set out broad requirements to be followed by all Government entities. Requirements that are specific to major capital projects, those greater than $300,000, include:

    - Submission of specified information to a Public Sector Investment Committee for review and recommendation on viability to Cabinet;
    - Offer for public tender; and
    - Tender evaluation by a Central Tenders Committee.

25. In June 2008, the Financial Secretary released guidance on the Government's Open Tendering Process. This guidance summarized the key steps in the tendering process, including certain regulatory changes. The Open Tendering Process provides guidance that includes:

    - Development of the business case/rationale for the investment;
    - Identifying and evaluating procurement options;
    - Specific tendering guidelines for construction;
    - Contract management; and
    - Post implementation reporting.

26. Generally, there are four distinct phases for major capital procurement projects:

    - Project governance and planning – A strategic framework guides the governance and planning for major capital projects to ensure that proposed projects are well researched, planned and meet the Government's legislative requirements, strategic objectives and operational needs. Frameworks consist of legislation, policies, and practices that establish clear responsibility for the procurement, identify the risks associated with the procurement, and establish effective project management practices and procurement strategies to mitigate the identified risks;
    - Procurement/contracting - Procurement processes lead to an approved contract with qualified contractors that support an effective partnership with them to deliver the project in terms of the identified procurement strategies and with due consideration of cost, time and quality - the key elements of value-for-money;
    - Construction - The physical construction of the asset in accordance with the project design and contract documents. The project management team, often supported by specialists under contract, oversees construction and the often numerous players who have an impact on the project in terms of cost, time and quality. The project management team ensures that the contract deliverables are being met; and
    - Completion close-out leading to operation – Once construction is nearing completion, project close-out activity protects the interests of Government by ensuring that all contract

requirements, in terms of cost, time and quality, are met, and that a post-project evaluation of the benefits realized is completed.

FRAMEWORK FOR FISCAL RESPONSIBILITY

27. The Cayman Islands Government has signed an agreement with the United Kingdom Government on a revised Framework for Fiscal Responsibility. In the Framework document, the parties affirmed the need for capital projects to have a business case completed to demonstrate the economic need, and that there should be a fully costed risk and impact assessment, a robust cost-benefit analysis and that the business case should specify the benefits that the project is intended to deliver.

ABOUT THE AUDIT

28. The objective of the audit was to determine whether the Government is effectively managing major capital projects and that there is a sufficient and appropriate management framework in place to ensure that the Government is getting value-for-money from these significant investments.

29. We reviewed the Government's strategic framework for identifying and selecting major capital projects to determine whether they best match the Government's strategic objectives and priorities, and are affordable. We reviewed the governance and project management frameworks for the Government Office Accommodation Project and the three high school projects. The review of the schools projects was limited to the point in time the contracts were signed with the construction companies.

30. To conduct the audit, we reviewed the Government's overall management framework and used four major capital projects as examples (or case studies) to assess how well the Government's framework is working and the impact of any deficiencies.

31. The objective of the audit was to determine whether the Government is effectively managing major capital projects to ensure that:

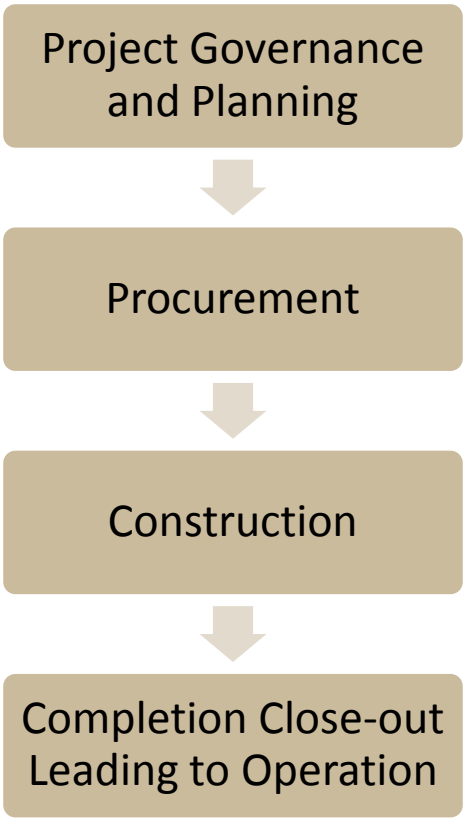
    - projects are defined in advance with an appropriate evaluation of their merits conducted;
    - the scope and design addresses the approved business needs;
    - procurement is fair and transparent while ensuring best value-for-money;
    - construction costs are properly managed;
    - building completion deadlines are met;
    - the projects meet the country's building standards and environmental requirements;
    - decision makers are adequately informed and provide their approval as required; and
    - laws, regulations, and guidance relating to major capital projects are followed.

32. More information "About the Audit" including the scope and criteria can be found in Appendix 1.

AUDIT FINDINGS AND RECOMMENDATIONS

33. The findings and recommendations are reported by the four phases of a typical major capital project (see Exhibit 5). That is, project governance and planning, procurement, construction, and completion close out leading to operation. Procurement is used in this report to refer to the contracting phase of the asset lifecycle. We have provided a short description of what we expected to find, what was found in general, specific observations for the projects examined, and the relevant recommendations. The three high school projects were only examined to the point of contract signing at the end of the initial procurement phase.

Exhibit 5: Four phases of a typical major capital project



PROJECT GOVERNANCE AND PLANNING

GOVERNANCE FOR MAJOR CAPITAL PROJECTS SHOULD BE IMPROVED

34. Clearly articulated governance arrangements that are based on an effective legal and regulatory environment, that set out clear organizational mandates, that define levels of authority and decision making, that promote accountability and transparency, and that are supported by appropriate management and financial practices increase the likelihood that projects will ultimately succeed. Therefore, we would expect to find that:

    - the legislative and regulatory environment support good project management;
    - agencies proposing projects have clear mandates compatible with what is being proposed;
    - decision making authority has been set that is supportive of good project management;
    - accountability relationships are clear and sufficient to hold key players in the process accountable; and
    - appropriate management and financial practices are in place to support project management.

35. Part of an appropriate governance framework is a clear delineation between the political process of Government and the administrative responsibilities of Government agencies in the delivery of major capital projects. Good governance in the public sector procurement requires that there is a clear division of responsibilities and accountability between Ministers and Cabinet, and administrative officials.

36. For the projects that we examined, the governance arrangements varied considerably. For example, the role of Cabinet, and Ministers was much different for the high school projects and the GOAP. For GOAP, significant Cabinet decisions were documented in formal Cabinet decision documents that were forwarded to the Governor. The Ministry of Education informed us that the process for the high school projects was less formal where key decisions may not be fully documented and not recorded as decisions of Cabinet. Not documenting key decisions made by Cabinet or Ministers for the high school projects represents a significant weakness in the overall governance framework which makes the determination about accountability for decisions made and actions taken difficult, if not impossible.

37. For both the high school projects and GOAP, Ministers played an active role in the development of the projects. Sometimes these roles are well documented and at other times they are not. While politicians have an important role to play within the governance of major capital projects, we found that what that role should be is not clearly set out in either legislation or policy and, in practice, can vary substantially.

HIGH SCHOOL PROJECTS

38. Our examination of the high school projects has been limited by the availability of information about the role of Cabinet in the approval of the initial decision to proceed and subsequent important planning decisions. On February 22, 2005, Cabinet considered a Ministry of Education concept paper for the long-term rebuilding and redevelopment of secondary schools on Grand Cayman which included plans to develop three high schools. Within the Ministry's concept paper there was provision for three high schools to be developed over the period 2005-2009, at locations in Grand Cayman: West Bay ($30 million cost estimate), George Town ($35 million cost estimate) and North Side ($30 million cost estimate). Therefore, the Ministry of Education estimated that the three high schools projects would cost $95 million, not including furniture, fittings & equipment.

39. Cabinet approved the rebuilding and development plan but called for the preparation of business cases for the development of three high school projects indicating that, if possible, the Ministry should provide for maximum unit cost of $20 million for two new schools and maximum cost of $22.5 million for redevelopment of John Gray High School. These business cases were never developed even though the Ministry's own estimate for the cost of the 3 high schools, which it had included in the 2005 concept paper, was $32.5 million higher than provided for in the Cabinet subsequent approval. Business cases, even if they were prepared, could not be submitted to the Public Sector Investment Committee because the Committee was not in existence.

40. The Ministry provided the audit team with a timeline of key decisions made and actions taken during the planning and procurement phases of the high school projects (see Exhibit 2 above). There is no reference to Cabinet's review and approval of business cases or an initial decision to proceed with any of the proposed high schools. In our view, the February 22, 2005 Cabinet approval was for the long-term rebuilding and redevelopment plan concept and not an approval for the initial development of each of the high schools. Further, the Ministry's submission would not constitute what we consider a business plan but rather a proposal for how new high schools would meet educational needs at the time.

41. The initial decision to proceed is a key stage where the political process should provide direction to the Ministry whether it should proceed with major procurement activities that ultimately would lead to an investment decision or the awarding of the main project contract. In our view, based on the documentation that was provided to us, the Ministry was not provided with clear formal direction to proceed with procurement other than through annual budgetary appropriations.

42. The Ministry has indicated that there are records of meetings, briefings and approved budgets, which demonstrate that all of the key players were engaged in the evolution and development of these projects. During the audit, we examined many such documents and we believe that they do demonstrate how the projects evolved over time. However, they do not constitute a formal record of the approval of Cabinet and the instructions that were provided to the Ministry. We are concerned that key decisions were made that have not been captured by the formal records.

43. For example, we examined the Ministry's overall briefing to the Central Tenders Committee (CTC) on the tendering results for the John Gray, Clifton Hunter and Beulah Smith High Schools. The Ministry indicated in the briefing that Cabinet had made a decision to proceed with the construction of Clifton Hunter and Beulah Smith High Schools immediately but that John Gray High School would be delayed. We requested access to all information provided to Cabinet and the decisions of Cabinet relative to the three high schools. We were not provided with any evidence of these decisions arising from Cabinet discussions.

44. In effect, we confirmed that Cabinet was never presented with nor did they approve the final project designs leading to the tendering process. Without Cabinet involvement, we believe there was insufficient oversight and controls to deter abuse of process.

GOVERNMENT OFFICE ACCOMMODATION PROJECT

45. The Cabinet decision in March 2006 to proceed with the GOAP only provided direction about the Government Administration Building (GAB) contract and the authority to use consultants to support the project management team and not the full GOAP. Cabinet indicated that a steering committee headed by the Leader of Government Business would manage the GAB project but that all final decisions would be taken by Cabinet.

46. In June 2006, Cabinet clarified the specific areas where its authority was required. Otherwise, the project management team would be responsible to the steering committee, which included representation from across Government. The project management team prepared papers and decisions to be considered by the steering committee. The steering committee either ratified the information provided or requested changes. Ultimately, DAWLA reported to Cabinet. DAWLA also chose what matters were reported to Cabinet.

47. There was a lack of clarity over the responsibility for identifying which Government agencies were to be tenants in the new building. We could not identify a Government ministry that had the overall responsibility for determining the Government's accommodation policies and needs. DAWLA, the project management team and the steering committee did not have the mandate to determine which agencies would eventually be housed in the building. Ultimately, it was left to the project management team to propose what the accommodation needs were and what the accommodation standards should be. It had to do this so that it could finish planning for the building. Numerous lists of potential tenants were prepared, considered by the steering committee, and then presented for approval by Cabinet. However, for various reasons, some of which are not clear to us, the lists continued to change from the date of Cabinet approval to proceed with the project, throughout the development of the request for proposals, after the construction began, and even after construction was substantially completed.

48. These changes to the list of tenants drove up the cost of the building and led to delays in the completion of the project. For example, the project management team was directed by Cabinet in January 2008 to incorporate in the building design a 10 percent increase in the staff population that

would be accommodated in the building. This instruction to increase the planned accommodation space coincided with the start of construction in January 2008.

49. From the beginning, a key agency to move into the GAB was the Cayman Islands Monetary Authority (CIMA). The building design called for a custom built office space of over 22,000 square feet for 204 persons for CIMA. It also included a purpose built secure file room and data center. In January 2011, it was announced that CIMA would not move into the building. This was only one month before construction was substantially completed. As at the completion of our fieldwork, CIMA had not moved into the GAB even to make use of the purpose built secure file room. CIMA continues to pay for leased space and the GAB is not fully occupied. During 2011, former tenants of the Glass House were moved into the space designed for CIMA. This decision has made use of that space but the space is not specifically designed for these new tenants and the space remains underutilized.

50. While Cabinet was warned about the impact that changes could have in terms of additional costs and project delays, the changes continued nonetheless. The ineffectiveness of the reporting relationships to ensure that there was better control over project governance was clearly documented in the files we examined. These documents reflected a situation where some agencies refused to relocate to the GAB and others made unreasonable demands for changes to the design even into the construction period. These requests came despite many of these organizations being represented on the steering committee. While these situations have cost Government, the foresight of the project manager to propose that the building be designed for flexible use ensured that the extent of that cost has been minimized. The project management team has informed us that it estimates the additional cost from these changes to the proposed list of tenants to be about $1.5 million.

51. At the end of our audit, the General Administration Building housed about 580 staff. The building was built with plans for 1026 staff. Therefore, it currently only accommodates about 60 percent of planned staffing levels. This indicates that the General Administration Building currently has both considerable unoccupied and underutilized space.

52. In addition, the project management team never was provided clear direction about its responsibility for aspects of the project beyond the construction of the GAB. The project management team indicated to us, “We never had too much interest in the project budget from Ministry or anyone else until into 2010. We had to get Cabinet approval for construction cost [that is, the GAB] but never project [GOAP] budget cost. We asked but never got a definition of what constituted the project budget - Still don’t have that.”

    Recommendation #1: Government should ensure that there is clear guidance on the roles and responsibilities for both the political and administrative aspects of the delivery of major capital projects, that the guidance adheres to legislative requirements, and that the guidance is followed in practice.

Exhibit 6: Government Administration Building (Photo: Radio Cayman)



Exhibit 7: Government Administration Building, 3rd floor, March 2012



DOCUMENTING PROJECT NEEDS AND DEVELOPING BUSINESS CASES IS WEAK

53. Government agencies are responsible for identifying where they have operational requirements for the acquisition of buildings or other significant capital assets to meet their mandate. The proposed major capital projects of Government agencies should be based on soundly researched and planned business cases, and clearly establishes why the project is needed. We would expect to find that the business cases supported the initial decision to proceed with a project's development and that subsequent significant changes in direction be supported by new analysis. Any weaknesses in the analysis supporting the initial decision to proceed can later undermine the development and success of a project.

54. A business case focuses on the project's justification prior to the key decision by Government on approval for development. For example, the procurement of all major capital items should consider the full costs over the life cycle of the asset, often many years, as well as the use of methodologies such as net present value calculations to demonstrate how value is to be achieved. Also, the business case should demonstrate how a project fits with the Government's strategic objectives and policy priorities. These are also the requirements of the Government's Open Tender Process.

55. For the projects we examined, we did not find any comprehensive business cases. We found that ministries provided information to Cabinet that contained some of the expected information. For example, Cabinet received a presentation on the Government Administration Building about life cycle costs and the benefits to be had from investing in the additional costs associated with the energy efficiency elements of the building design. However, the submissions to Cabinet that we examined would not constitute what we would consider comprehensive and soundly researched business cases to support approval to continue with developing such significant projects.

GOVERNMENT OFFICE ACCOMMODATION PROJECT

56. Cabinet had previously approved a similar project using a public financing approach in 2002 but had subsequently cancelled that project late in 2003. Prior to the 2002 approval, a study had been completed that detailed problems with two major Government owned buildings. Another study provided the cost to Government of leased space accommodation. These were important aspects of the justification used for approval of the 2002 project. In an October 2003 report, the Office of the Auditor General observed on matters related to the 2002 GOAP objectives, including the need for Government to review the estimate for future office space requirements for the Government.

57. During 2004 and 2005, there were continuing efforts to obtain approval to proceed with building general office accommodation. The impact of Hurricane Ivan on existing Government buildings, the realization that Government buildings were not hurricane resistant, and the increase in the number and cost of Government leased office space following Ivan provided incentive to revitalize planning for new Government owned office accommodation. While there was much activity during this period, no approval was given to proceed with construction.

58. In March 2006, Cabinet approved the reactivation of GOAP and instructed the project management team to procure general office accommodation through Design Build delivery (see Exhibit 8), not the public financing approach that was being proposed in 2003. We have been informed that the Ministry provided information on these matters to Cabinet prior to this decision but we have not seen it as it could not be found. However, the project management team has agreed that there was no formal business case developed in 2006 that analyzed the identified need and provided analysis about the possible options for meeting that need. We were informed that Cabinet's decision to proceed was largely based on the accumulative studies that had been done prior to March 2006 and the obvious urgent accommodation needs in the post Hurricane Ivan period.

Exhibit 8 – Description of the two options used to deliver construction projects in the Cayman Islands, Design Build and Design-Bid-Build

There are generally two options used to deliver construction projects in the Cayman Islands, Design Build and Design-Bid-Build. These delivery methods were used on the projects we examined. The General Office Accommodation Project used the Design Build delivery, while the high school projects started with Design Build and later moved to Design-Bid-Build delivery method. A short description of each delivery method is provided as background information

1. *Design Build delivery – Where the contractor provides both the design and construction services for development of the building. The contractor assumes the risks associated with design and construction and does so at a predetermined cost. Design Build is used to minimize project risk to the owner and to reduce the delivery time schedule. With risks transferred to the contactor a higher price may have to be paid to the contractor. There may be fewer contactors available to carry out this type of project.*

2. *Design-Bid-Build delivery – In this delivery method, the design phase is completely separate from the construction phase. The project manager plays a key role in coordinating the design team and the eventual selection of a competent contractor to construct the designed building. A complete set of design documents should be available to guide the tendering for construction and should help to estimate the costs to build. This delivery method is well understood to be the traditional construction approach.*

Source: Public Works Department

HIGH SCHOOL PROJECTS

59. For the high school projects, we were unable to find business cases to support decisions to proceed. The Ministry also could not provide us with other documentation, such as submissions to Cabinet and subsequent Cabinet decisions, related to the three projects' justification and approvals as noted earlier in the report.

60. Substantial work and studies were undertaken and concept papers developed during 2005 and 2006. This included "The Future of High Schools in Grand Cayman" and the strategy for the modular design of the high school buildings into a "campus" with open classroom design to facilitate a change in teaching methods and to provide for the additional uses of the schools for sports, community and arts. There is evidence of considerable discussion in the education circles and in Cabinet on the concepts. Discussion papers included:

    - "Critical Questions Concerning New High Schools"
    - "Innovating for Brighter Futures – Together"
    - "National Consensus on Future of Education in the Cayman Islands"
    - The design concept paper was presented to the Ministry's Chief Officer by the contracted architects in a paper titled "Cayman Island High Schools – Architecture and Pedagogy Meet to Transform a Nation".

61. However, we are unable to conclude about how these concept papers were used as the basis for making critical decisions about whether the high school projects should proceed or even how the project was defined at different points in time because of the absence of business cases.

    Recommendation #2: Government agencies should produce business cases, for all proposed major capital projects, that clearly outline management's considerations concerning the business objectives to be achieved, the various options for delivery and the full life time cost associated with each option. A business case should be an important part of Cabinet's consideration of whether to approve a proposed major capital project based on affordability and alignment with policy objectives.

Exhibit 9: John Gray High School, September 2011



GOVERNMENT-WIDE PROCESS TO ASSESS PROJECT PRIORITY AND AFFORDABILITY RE-ESTABLISHED

62. While each Government agency must determine its long-term capital needs and propose to Government how those needs should be met, it is the Government's role to determine the relative overall priority and the affordability of all major capital projects proposed across Government. Often there are more "good" projects than Government has the fiscal capacity to deliver. Government should have a process for ensuring that the capital projects that are approved align with the Government's strategic objectives and policy priorities and for determining whether they are affordable.

63. Part XII –Capital Project Appraisal of the *Financial Regulations (2010 Revision)* requires all projects greater than $300,000 to undergo enhanced levels of scrutiny by the Public Sector Investment Committee (PSIC). In addition, projects greater than $1 million are supposed to have reports produced that analyze the project's financial, economic, technical, social, institutional and environmental factors. These reports are supposed to be reviewed by PSIC. PSIC is supposed to provide Cabinet with its recommendation on whether projects should proceed or not. However, PSIC has not met since July 2003 and it has not provided Cabinet with recommendations about the viability of capital projects since that time.

64. The importance of a Government-wide strategic framework for ensuring that the capital projects align with the Government's strategic objectives and policy priorities and for determining whether they are affordable is demonstrated by the expenditure incurred on the Beulah Smith High School project. In this instance, the Ministry incurred costs $5.9 million before Cabinet decided that the project would not be completed. In the end, value-for-money was not achieved as significant monies were expended for what is now a vacant lot. In addition to the $5.9 million already expended, the Government continues to pay interest on the funds borrowed to finance this expenditure.

65. Near the completion of our audit, the Minister of Finance informed Cabinet of his intention to re-establish PSIC so as to facilitate fiscal discipline among proposing agencies and to contribute to the achievement of the Government's fiscal targets. The submission to Cabinet included a description of a general procedure, consistent with the Financial Regulations, for how PSIC reviews would be done. The revitalized PSIC is to have a membership that reflects ministries and departments that have responsibilities for technical, environmental, social, legal, financial, economic and institutional factors. These are the factors that capital project proposals sent to PSIC are supposed to consider. These are also similar factors that we would consider necessary to be included in the business cases discussed in the preceding section of this report. Secretariat support for PSIC is to be provided by the Economics and Statistics Office.

66. We have confirmed that PSIC has not yet met and begun the process of considering capital projects that require funding in the fiscal year 2012/2013.

Recommendation #3: The Public Sector Investment Committee should ensure that all Government agencies are made aware of the Committee's expectations for future major capital submissions and its review process.

INITIAL ESTIMATED COST AND TIMEFRAME FOR COMPLETION WERE UNDERSTATED

67. The estimated cost and timeframe for project completion are important information required to support Cabinet decisions about whether projects should proceed or not and they are important to accountability for project delivery. Inaccurate cost or timeframe for project completion information can undermine the decision making process and significantly impact the remaining phases of project development. Decisions should be made only when the most accurate cost and time information is available. Each project should have an overall program with relevant milestones for approval.

68. The definition of need, which drives the ultimate cost of construction, changed and expanded during the period between the initial approval of Cabinet and the tendering of the construction contracts. Getting to the final definition of need used to develop tender documents took longer than initially planned.

69. With Cabinet's initial approval to proceed with the development of a major capital project based on a significantly different definition of need and lower cost estimates, Cabinet should be provided with the updated information and its approval obtained when the final investment decision is being made. This ensures that Cabinet considers whether the changed project continues to be affordable and aligned with the Government objectives and priorities. For the high schools, we have been informed that Ministers were fully involved in the key decisions, including the changing concepts and designs, related to the projects. The Ministry of Education indicated that Ministers provided their approval for key aspects of the projects but this was not always documented. It is important that such decisions are formally documented through the existing Cabinet decision making process. Without such documentation, it is difficult to determine the accountability arrangements for the delivery of the high school projects.

HIGH SCHOOL PROJECTS

70. The high school project costs and completion timelines have not met the original or the periodically revised estimated cost or timeframe for completion. In our opinion, the changing definition of need is a significant factor in the rising estimated cost and the delayed timeframe to complete.

71. What was to be delivered has changed significantly over time. In 2000, a single high school was to be built. This changed to be the development of three high schools and then reduced to the present proposed two high schools. Originally, the high schools were to be built as a standard one building educational complex. That changed to be a campus educational complex with facilities in multiple buildings. This campus concept further changed to incorporate additional objectives, such as providing hurricane shelters and community use facilities.

72. Depending on the design concepts, the cost estimate for the development and completion of the high schools has varied considerably over time. For example, over the years from 2000 to 2011, the projected unit cost of the high schools has ranged from $25 million to nearly $100 million each. The Ministry of Education reported to the Finance Committee of the Legislative Assembly in March 2012 that the total cost for completion of the two ongoing high school projects would be approximately $197 million.

73. An August 2004 submission to Cabinet indicated that the Clifton Hunter High School would open in September 2006. A Ministry of Education briefing to its new minister dated 19 May 2005 indicated that Clifton Hunter High School would be completed by September 2007. The current estimate is for it to open in summer 2012 according to information we received from Ministry officials.

74. While there are many factors that impact the changing cost and shifting timeline for the proposed high schools, changing definition of need is a major contributing factor.

75. In addition, the pre-tender cost estimate for construction provided by a contract quantity surveyor in early 2008 for the three high schools was significantly lower than the subsequent tenders received for the buildings' designs that went to tender. It is our opinion that there was insufficient follow-up of the reasons for the variances between the cost estimate and the bids before the completion of the tender process. Exhibit 10 shows the estimated cost for all three projects prepared by the quantity surveyor for the Ministry compared to the lowest tender bid received.

Exhibit 10: Estimated cost for all three high schools projects prepared by the quantity surveyor in early 2008 for the Ministry compared to the lowest tender bid received.

	Clifton Hunter High School	John Gray High School	Beulah Smith High School
Estimated cost	$44,811,535	$54,804,784	$40,948,503
Lowest tender bid	$62,880,562	$63,206,285	$53,402,559

Source: Ministry of Education and Central Tenders Committee

GOVERNMENT OFFICE ACCOMMODATION PROJECT

76. Cabinet approved the construction of the General Administration Building (GAB), in March 2006, without an initial cost estimate, although it had cost estimates available from the previously cancelled projects. In March 2006, Government was also considering whether a second building was required but this did not proceed.

77. In October 2006, the project management team provided Cabinet with the first GAB project definition and budget. At that point, the project management team estimated that the GAB, which would include 160,000 square feet of office accommodation space, would cost $57 million with construction being completed in June 2009, or a 26 month period.

78. The project management team had difficulty getting agreement on the Government's current and future accommodation needs. There was no one agency that had responsibility for Government accommodation so each agency was asked to provide this information to the project management team. The list of agencies to be accommodated in the new building was only finalized just before the project was due to go to tender.

79. A January 2007 pre-tender estimate compiled by the project management team provided an estimated cost of construction of $66.6 million for the General Administration Building but the office accommodation space had risen to 185,000 square feet.

80. In response to the Ministry's request for proposal, the sole responding company estimated the cost would be $103.75 million. The Central Tenders Committee hired an independent consultant to provide a critical review of the GAB tendering process. The consultant concluded that the "The current pre-tender price of $66 million does not adequately reflect the requirements of the RFP [request for proposals] and should be revised on the basis of the technical proposal." They recommended that the project team have another cost estimate prepared to provide a comparison with and to facilitate negotiations with the company. A revised cost estimate was not produced.

81. DAWLA signed a letter of intent with the contractor for $85.53 million on December 24, 2007 which allowed for only site preparation and design development to begin. Work began in January 2008. In March 2008, the final contract to construct the GAB was signed. To arrive at the $85.53 million contract amount, the Government eliminated some of its initial requirements and modified others. However, the GAB's high performance concepts, such as energy efficiency and building use flexibility, were maintained.

82. The project management team has informed us that the differences associated with the initial cost estimates and the planned completion can be largely attributed to the ongoing changes made to the project definition. While we believe that their assessment is mostly correct, we also believe that the original planned cost and timelines were not realistic given the magnitude of the project and the state of the Cayman Islands construction market at that time.

    Recommendation #4: The Government should ensure that proposed major capital projects have clearly established objectives and definition of need, which are the basis for realistic estimates of project cost, at the time it makes its decision to proceed with project development and when it makes the decision to proceed with significant major capital investments.

NEED FOR A STANDARDISED APPROACH TO PROJECT MANAGEMENT

83. Good project management does not guarantee that a major capital project will achieve value-for-money but clearly articulated governance arrangements and good project management practices combined increase the likelihood that projects will come in on time, within budget and meet quality expectations. We would expect Government to clearly establish the roles and responsibilities for major capital projects, establish policies and processes to support effective major capital

procurement and project management, and put in place competent, and experienced project management teams with appropriate authority to deliver.

84. The Government does not have standardized policies and procedures for managing major capital projects. Each Ministry or agency is responsible for establishing its own policies and procedures. For each Government organization to hire its own construction project management experts and to establish its own policies and procedures is costly. The use of differing procedures and documentation, such as contracts and construction management practices, places the Government at heightened risk that projects will fail.

85. The major capital projects that we reviewed were the administrative responsibility of the proposing ministry. However, not all ministries have a mandate that is compatible with major capital construction. For example, the Ministry of Education's focus is on providing education to students and not on construction. The Government does not have a "centre of excellence" approach for major capital projects. Such an approach places project management resources under the responsibility of an agency whose authority it is to deliver a major capital project for a "client" ministry. As construction project management is a specialised area, those involved in this activity would have the support of an organization that understands this activity and which has established policies and procedures in place so that a standardised approach is followed and appropriate control is in place over project management activities.

HIGH SCHOOLS PROJECT

86. The Ministry of Education's mandate relates to education and not construction project management. The Ministry had to procure the services of project managers to manage the high school projects as it did not have staff to undertake such functions. Over the years from 2005, up to the point that the contract was signed, the Ministry employed 3 different project managers on the high school projects. One of the project managers was not in Grand Cayman on a full time basis when he was responsible for the three high school projects.

87. The project management responsibilities, up to the signing of the contracts with the construction companies and according to respondents interviewed, were divided between the project managers, senior Ministry officials, and the responsible Minister. Several respondents interviewed indicated that it was unclear to them who had the responsibility for the various elements of project initiation and delivery. Except for the designated project managers, the others did not appear to have experience in the management of capital projects.

88. There is no indication that the Ministry had considered engaging the services of an external firm with adequate construction project management experience with such large and complex projects to provide the expertise and continuity needed for this function. Many of the key officials associated with the high school projects have now left Government. We believe that the lack of expertise and continuity are reasons that project documentation is not readily available.

Exhibit 11: Beulah Smith High School building site, March 2012



Exhibit 12: Beulah Smith High School building site, March 2012



GOVERNMENT OFFICE ACCOMMODATION PROJECT

89. This project was staffed with experienced professional construction project managers from its initial planning phases through to completion. The project has been led by the same project manager during this time. His knowledge and continuity is important to the construction of a building that is capable of meeting Government's accommodation needs. We were informed that the project manager used a recognized United Kingdom construction management approach to guide project management activities.

    Recommendation #5: The Government should consider establishing a centre of excellence for the management of major capital projects which would be responsible for establishing standardised policies and practices for capital project management, to employ, train, and mentor project managers, and to be responsible to manage all Government major capital projects.

PROCUREMENT

90. Procurement processes should lead to an approved contract with qualified contractors and construction service providers that, hopefully, support an effective partnership with them to deliver the project with due consideration of cost, time and quality. We would expect to find that:

    - the roles and responsibilities of all players in the bid and procurement process were clearly identified, in accordance with existing legislative authorities, and supported an independent oversight of the selection process;
    - tender documents matched the approved procurement strategies and the building design documents;
    - bid solicitation was conducted in an open and fair manner that promoted the receipt of competitive bids from qualified contractors;
    - assessment criteria supported the procurement strategy;
    - adequate oversight over the final bid assessments were conducted by people with relevant skills and experience;
    - final procurement and contracting decisions reflected the bids received, the bid evaluation, and were approved by the responsible authorities; and
    - a suitable and approved contract or some other appropriate legal instrument is in place so that the interests of the Government are protected.

91. The GOAP and high school projects were undertaken in the post Hurricane Ivan period where contractors had considerable work both in response to the damage caused by the hurricane and which arose due to the positive economic environment at that time. This is important context that needs to be taken into account in the procurements undertaken by Government at this time.

92. Our audit found that the projects met most of the expectations set for the tendering to contract part of the procurement process, although we observed that a notice to proceed was issued on one of the high school projects without a signed contract.

93. The Government's procurement process was reviewed in 2011 and found to have significant matters that needed to be addressed by management. Those issues are not repeated here. However, we strongly believe that with a more robust management framework for procurement across Government would have supported a more effective procurement of these major capital projects.

GOVERNMENT OFFICE ACCOMMODATION PROJECT

94. The project met most of the expectations set for the tendering to contract part of the procurement process. There were clear roles and responsibilities for all players in the bid and procurement process and it was carried out in accordance with existing legislative authorities. The Central Tenders Committee engaged an independent consultant to provide a critical review of the tendering process with a view to whether value-for-money was being achieved. The consultant concluded that the request for proposals reflected the approved procurement strategies and the building design documents. It reviewed the bid solicitation process and found that it was done in an open and fair manner. Due to circumstances surrounding the bid solicitation and the "heated" construction market in the Cayman Islands at the time, only one of the three prequalified contractors eventually submitted a bid. The bid assessment criteria were supportive of the procurement strategy and there was adequate oversight over the final bid assessments which were conducted by people with relevant skills and experience.

95. The Central Tenders Committee (CTC) played its role as an independent overseer of the procurement function, mostly as it relates to the tendering process. However, the CTC often only provided its input concurrent with or after decisions were formally made by Cabinet. This undermines the independent role expected of the CTC.

HIGH SCHOOL PROJECTS

96. For the high school projects, we found that the final procurement and contracting decisions reflect the bids received and assessments made based on the original procurement strategy.

97. For the Beulah Smith High School, the Central Tenders Committee accepted the contractors bid in August 2008. The Ministry provided authority for the contractor to begin work before a contract was signed. A contract was never signed and the Ministry ordered that work stop on the project in December 2008. The Ministry did not protect the interests of the Government by ensuring that there was a signed contract in place that would deal with unusual circumstances, such as the order to stop work. In July 2010, the main contractor was paid $1,397,000, as part of a negotiated settlement, for the work that was completed on the project before the stop work order.

98. For the high school projects, all steps in the Open Tender Process were followed. We found that the assessment criteria used were supportive of the overall procurement strategy. The tender evaluation committee members consisted of senior Ministry staff, high school projects staff, and the chief representatives from the project's architects, engineers and quantity surveyors. The evaluation committee did not include other Government staff with construction project management expertise. Where the Ministry had limited expertise in construction project management, the inclusion of such experts could have helped support good decision making during this stage of procurement including, for example, addressing the significant differences in price between the estimate provided by the quantity surveyor and the bid price.

99. Because of the lack of a “centre of excellence” and leadership of procurement activity in Government, we found that there was no communication of a relevant assessment made by the tenders committee of the Government Administration Building to the team assessing the tenders of the High Schools projects. While it may not have changed the outcome, we believe this is a significant deficiency in the process resulting from the lack of a robust procurement function.

Recommendation #6: Government agencies should not allow work to commence on major capital projects without a suitable and approved contract or some other appropriate legal instrument to be in place so that the interests of the Cayman Islands Government are protected.

Exhibit 13: Clifton Hunter High School, September 2011



CONSTRUCTION

100. It is project management's responsibility to co-ordinate and to hold accountable the numerous players who have responsibility for the key factors of cost, time and quality in a major capital project. We would have expected to find that appropriate project management practices existed to manage changes in project scope, monitor the quality and quantity of work, monitor costs, and ensure that safety and environmental rules are complied with. Project management reports should be produced to keep responsible officials informed about critical project issues and project progress, and to serve as a means of holding the project management team accountable for key quality, time and cost milestones.

101. We found that Government does not have standardized practices, policies or guidelines for how major capital projects should be managed. The absence of these significant requirements for major capital projects to be successful in meeting their stated objectives creates significant risks for the Government that major capital projects will fail.

102. In this audit of major capital projects, we have examined the high school projects only for the first two phases which includes design through to signing the contract with the general contractor. Therefore, the construction and completion close-out phases were not examined.

GOVERNMENT OFFICE ACCOMMODATION PROJECT

103. For the GOAP, project management practices were sufficiently strong to ensure that key project requirements were monitored and supervised for the quality and quantity of work performed, project scope, costs incurred, time schedule, and key safety and environmental requirements. Monthly project reports were produced by the project manager to keep the steering committee and DAWLA officials informed about critical aspects of project management.

104. One aspect of the criteria that was not met was the monitoring of costs related to the full GOAP and the related budgetary authority, included in the legislated budgets. The DAWLA financial unit did not regularly provide the project management team with reporting on the status of annual budgetary authorities and the expenditure reporting against those authorities. The project management team indicated that they did not receive regular project financial reports. Also, DAWLA does not have a project costing system that could regularly provide a project management team with information about the complete project costs.

105. However, the project management team itself, without financial expertise and tools, maintained and monitored detailed information about the GAB contract, which is the most significant expense in the full GOAP, and regularly reported on this within the project reports to the steering committee and it was the basis of presentations made to Ministers and Cabinet.

Recommendation #7: The Government should ensure that for future major capital projects total costs, not just the building construction elements, are maintained and monitored from a legislated budget perspective and appropriate project costing systems are available so that agency and project managers can maintain control over project activity.

COMPLETION CLOSE-OUT LEADING TO OPERATION

106. While ongoing good project management practices during the construction phase should minimize items in dispute, it is normal that the project manager and contractor must confront items in dispute that have arisen throughout construction. Construction contracts are supposed to contain terms for resolving such disputes. We would expect the project manager to have in place processes and practices to ensure that the Government's interests during close-out phase are protected. Areas where special focus is needed include, claims by the contractor for items not specifically covered under contract terms, failure by the contractor to meet the quality requirements built into the contract, and inadequate testing of building operational systems.

107. In addition, we would expect the project manager would prepare a post-project evaluation of what went right or wrong and whether the desired project benefits have been achieved. Such an assessment is a requirement of the Government's Open Tendering Process.

GOVERNMENT OFFICE ACCOMMODATION PROJECT

108. The close out process for the GAB has met most of our expectations for a good close-out process. The project management team has completed assessments of the final billings and claims by the contractor, outstanding quality issues in construction, and operational status of building components with a view to protecting the Government's interests. The building is still within the one year final completion period, which was set to end in February 2012, so the project manager is still actively engaged in close-out activity. The building is partially occupied and the number of outstanding technical and cost issues is being decreased monthly with only several major items left.

109. A final post-project evaluation has yet to be completed. We have been informed that the project managers contract calls for an evaluation to be completed once the project is fully complete.

110. The project manager has been completing reports as part of his close-out responsibilities on a regular basis that highlight aspects of the GAB's benefits story. For example, the project reports indicate that the building is only about 60% occupied with a number of large ministries or authorities still in high cost leased space. Since the stated purpose of the GAB was to reduce the Government's reliance on high cost leased space, any underutilized space within the GAB represents a lost opportunity to reduce Government's overall accommodation costs. If the original Government agencies included in the GAB planning and design had moved into the GAB, the Government could be saving about $2.1 million a year in leased space (we have used the average lease rate paid by the Government of $28.50 per square foot for space in downtown George Town).

111. Should agencies other than those in the building plan move into the unoccupied space, then the $2.1 million in projected annual savings would be offset by additional one-time refit costs. For

example, the project management team has estimated that there would be a one-time cost of at least $1.2 million to refit the just completed GAB for agencies, not originally planned to be GAB tenants, to move into the unoccupied space. At the end of our audit, Government was considering whether to pursue this option.

112. One example of a key tenant planned for the GAB that did not move into the building is the Maritime Authority of the Cayman Islands (MACI). MACI was supposed to occupy about 10,000 square feet of space planned for 79 staff. On November 17, 2008, MACI signed a new lease for a five year term commencing December 1, 2008 even though it knew that it was a key tenant in the, then being built, General Administration Building. The lease calls for MACI to pay $511,695 annually. Had MACI moved into the GAB these accommodation costs could have been avoided.

113. The GAB was designed to be energy efficient. Recent reports indicate that the GAB electric bills are running at about $90,000 per month compared to the Glass House building which had cost about $40,000 per month. However, the GAB total space is about 6 times greater than that of the Glass House although the building is only about 60 percent occupied. Therefore, energy savings are actually occurring.

114. The lessons learned exercise will demonstrate what benefits can be achieved by moving more Government operations into the GAB from existing leased space and through a better utilization of the existing space. It also can provide information about what has gone right and lessons learned that can be incorporated into future major capital projects.

Recommendation #8: The Government should move to ensure that the Government Administration Building is more fully occupied so that the benefits planned with its construction are more fully realized.

CONCLUSION

115. The procurement of major capital assets represents a significant financial investment by the Government that is important to its provision of services to the public. There is an obligation on the part of all responsible for major capital projects to ensure that value-for-money is achieved.

116. The governance and planning framework for major capital projects should ensure that proposed projects are well researched, planned and meet the Government's legislative requirements, strategic objectives and operational needs. Frameworks consist of legislation, policies, and practices that establish clear responsibility for the procurement, identify the risks associated with that procurement, and establish effective project management practices and procurement strategies to mitigate the identified risks.

117. We found that the governance and planning framework for major capital projects needs to be improved and strengthened to ensure that value-for-money is achieved. We identified the following areas which require strengthening:

- Guidance on the roles and responsibilities to be played by Cabinet and Ministers, and administrative officials. Documentation about key decisions for the high school projects that involved Cabinet and Ministers was either not available or not adequate to clarify key decisions.
- Legislative and policy requirements to prepare business cases that demonstrate the benefits of project proposals have not been met as business cases are either non-existent or inadequate for decision making.
- The legislative requirement for a Public Sector Investment Committee review of project proposals and business cases before Cabinet decisions has not been met as the Committee has not existed since 2003, although the Government has indicated that it intends to re-establish it.
- The Government does not have common policies and practices to guide project management for major capital projects. Major capital projects have been administered by ministries whose mandate does not include construction.

118. The Government has limited resources to spend on maintaining project management expertise and supporting it with policies, practices and procedures that will yield the expected results throughout its many agencies. To obtain maximum value from its resources, the Government should consider a "centre of excellence" approach. That is an approach where project management resources are placed under the authority of an agency whose mandate is to deliver major capital projects for "client" agencies. A "centre of excellence" approach promotes a standardised approach for procuring major capital projects and could help to lessen the risks associated with this very complex and specialised type of procurement.

119. The projects that we examined were delivered at higher cost and later than the original submissions to Cabinet indicated would be the case. A number of factors led to this situation. The project definition or scope continued to change throughout the planning for projects. Estimates of project costs provided by the Ministries' project management teams as part of decision making have proved not to be sufficiently robust.

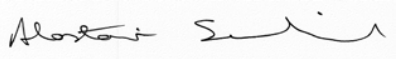
120. Good project management is important to achieve value-for-money in the delivery of major capital projects. We found both strengths and weaknesses in the project management practices that we examined. Where strong project management teams were in place and where there was continuity, we found better project management practices and, overall, better project results.

121. We found that many of the expectations required by legislated procurement practices were generally met, although for one project that we examined, work commenced before a contract was signed. Work continued by the contractor for four months before work on the project was stopped.

122. We found that the project management practices for the General Administration Building construction and close-out phases were sufficient to control construction costs and to ensure that the Government's interests were protected and that key risks were properly managed. A post-project evaluation report is due when the project is completed in 2012. Such a report would provide lessons learned both good and bad, from this project. At the end of our audit, the Building was only about 60 percent occupied despite having been available for occupancy for over nine months. The Government should take action to increase the occupancy of the building as soon as possible.

123. Near the end of our audit, the Cayman Islands Government entered into an agreement with the United Kingdom on a revised Framework for Fiscal Responsibility. Among other things, the Framework commits the Cayman Islands Government to the implementation of key components of a strategic framework for capital projects. Some of these commitments are similar to the requirements of existing legislation and regulations.

124. Given the limited resources available, requirements for compliance to legislation and the Framework for Fiscal Responsibility and achieving results for the people of the Cayman Islands, it is critical that the Cayman Islands Government develop and implement strong strategic, governance and planning, and project management frameworks for major capital projects.



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APPENDIX 1: ABOUT THE AUDIT

OBJECTIVE

The objective of the audit was to determine whether the Government is effectively managing major capital projects to ensure that:

- projects are defined in advance with an appropriate evaluation of their merits conducted;
- the scope and design addresses the approved business needs;
- procurement is fair and transparent while ensuring best value-for-money;
- construction costs are properly managed;
- building completion deadlines are met;
- the projects meet the country's building standards and environmental requirements;
- decision makers are adequately informed and provide their approval as required; and
- laws, regulations, and guidance relating to major capital projects are followed.

SCOPE

Given the focus of the recent procurement audit that reviewed overall Government procurement practices, this audit only examines those specific practices that are necessary to support major capital asset acquisition and it did not focus on the broader Government procurement process.

Part XII –Capital Project Appraisal of the *Financial Regulations (2010 Revision)* requires all projects greater than $300,000 to undergo enhanced levels of scrutiny. Therefore, we have used this limit to define a major capital project, although the projects selected for examination each have current estimated total costs much greater than this limit.

The audit looked both at the across Government strategic-level planning for major capital projects as well as focusing on four capital projects:

- Government Office Accommodation Project, largely the Government Administration Building;
- Clifton Hunter High School;
- John Gray High School; and
- Site preparation for Beulah Smith High School.

The audit reviewed all phases of a typical major capital project including:

- project governance and planning;
- procurement;
- construction; and
- completion close-out leading to operation.

In this first phase of our audit of major capital projects, we have examined the high school projects only for the first two phases which includes design through to signing the contract with the general contractor. At some future point, the Office will undertake the second phase of this audit where we will examine the remaining phases of the high school projects once they are completed and litigation on the construction phase is complete.

CRITERIA

The audit used ten criteria against which we evaluated the audit findings. Senior officials, including the Deputy Governor, agreed with our criteria at the outset of our audit.

a. Establish an appropriate strategic framework for identifying and selecting the Government's major capital needs using an understanding of its fiscal and technical capacity.
b. Establish appropriate governance structures to ensure that prior to the approval of construction of the major capital project it is well researched, planned and meets the Government's legislative requirements, strategic objectives and business needs.
c. Projects should be organized with clear mandates, and delivery arrangements; competent, experienced project teams that have the capability to deliver the project should be put in place.
d. Project design should be critically reviewed to ensure consistency with the approved project proposal and the adopted procurement strategy.
e. The procurement process should fully incorporate the requirements of the approved business case, the building design, applicable legislation, and clear eligibility and assessment criteria.
f. The procurement process should be conducted in an open and fair manner that encourages competitive offers from qualified contractors with a capability to deliver the contract requirements.
g. The procurement process should be subject to appropriate oversight so as to encourage the selection of the best qualified bidder to deliver the business and procurement strategy adopted, and to discourage abuse of process and corruption.
h. Good project management practices should be employed to ensure that key project requirements are monitored and supervised for the quality and quantity of work performed, project scope, costs incurred, completion time schedule, and key safety and environmental requirements.
i. Assessments are made of the final billings and claims by contractors, outstanding quality issues in construction and the operational status of building components with a view to protecting the Government's interests and making the decision to accept the building for operational purposes.
j. A final post-project evaluation is completed that provides lessons learned and determines whether the desired benefits have been achieved.

The sources for these criteria are included in Appendix 2.

AUDIT APPROACH AND METHODOLOGY

The audit was conducted in accordance with International Auditing Standards and used performance audit methodology commonly applied by supreme audit institutions. Specifically, we performed the following audit procedures:

- Interviews with politicians (Hon. Rolston Anglin and Hon. Alden McLaughlin);
- Interviews with senior officials with the Ministry of Education, Training and Employment and the Ministry of District Administration, Works, Lands and Agriculture
- Interviews of contractors, service providers and suppliers
- Review of relevant legislation, regulations, and guidance;
- Documentation of the current major capital project processes and practices;
- Review of documentation supporting the processes;
- Review the documentation supporting the projects selected for audit;
- Preparing a draft audit report including the key findings and recommendations;
- Clear the draft report with Attorney General's Chambers; and
- Clear the draft audit report with Government's key contacts for factual accuracy.

In effect, the audit focused on reviewing the quality management framework we would expect to find for the Government to invest in major capital projects and by reviewing the four projects as part of the audit, we were able to determine the impacts of whether the framework was adequate and whether it was working as management intended.

TIMING AND AUDIT RESOURCES USED

The audit commenced at the beginning of September and was completed in mid-December 2011. .Most of the information contained in the report was gathered during this timeframe. However, in certain cases, we have updated information to a more current date because of the delays in issuing the report. Therefore, the dates of the information are noted throughout the report.

The following individuals conducted the audit:

- Martin Ruben, CGA – Principal, Performance Audit
- Subhas Roy, CA – Consultant
- Kevin Potter, CMA – Consultant

APPENDIX 2- AUDIT CRITERIA AND SOURCES BY ISSUE AREA

Issue Area	Audit Criteria	Source
#1: Major capital project strategic framework	1.1 Establish an appropriate strategic framework for identifying and selecting the Government's major capital needs using an understanding of its fiscal and technical capacity.	*Public Management and Finance Law (Revision 2010)*, Part III Section 18; Part XII –Capital Project Appraisal of the *Financial Regulations (2010 Revision)*; Open Tender Process, Central Tenders Committee (CTC); Management of Government Procurement, OAG Cayman Islands.
#2: Project governance and planning	2.1 Establish appropriate governance structures to ensure that prior to the approval of construction of the major capital project it is well researched, planned and meets the Government's legislative requirements, strategic objectives and business needs. 2.2 Projects should be organized with clear mandates, and delivery arrangements; competent, experienced project teams that have the capability to deliver the project should be put in place. 2.3 Project design should be critically reviewed to ensure consistency with the approved project proposal and the adopted procurement strategy.	Part XII –Capital Project Appraisal of the *Financial Regulations (2010 Revision)*; Open Tender Process, Central Tenders Committee (CTC); Project Management Body of Knowledge, Project Management Institute; Management of Government Procurement, OAG Cayman Islands; Construction Activity Auditing Strategies, Quality Plus & Associates; Review of major capital projects in Scotland – How Government Works, Audit Scotland.

Issue Area	Audit Criteria	Source
#3: Procurement	3.1 The procurement process should fully incorporate the requirements of the approved business case, the building design, applicable legislation, and clear eligibility and assessment criteria. 3.2 The procurement process should be conducted in an open and fair manner that encourages competitive offers from qualified contractors with a capability to deliver the contract requirements. 3.3 The procurement process should be subject to appropriate oversight so as to encourage the selection of the best qualified bidder to deliver the business and procurement strategy adopted, and to discourage abuse of process and corruption.	Part XII –Capital Project Appraisal of the *Financial Regulations (2010 Revision)*; Open Tender Process, Central Tenders Committee (CTC); National Building Codes; Project Management Body of Knowledge, Project Management Institute; Management of Government Procurement, OAG Cayman Islands; Construction Activity Auditing Strategies, Quality Plus & Associates; Review of major capital projects in Scotland – How Government Works, Audit Scotland.
#4: Construction phase	4. Good project management practices should be employed to ensure that key project requirements are monitored and supervised for the quality and quantity of work performed, project scope, costs incurred, completion time schedule, and key safety and environmental requirements.	Project Management Body of Knowledge, Project Management Institute; Construction Activity Auditing Strategies, Quality Plus & Associates

Issue Area	Audit Criteria	Source
#5: Completion close-out leading to operation	5.1 Assessments are made of the final billings and claims by contractors, outstanding quality issues in construction and the operational status of building components with a view to protecting the Government's interests and making the decision accept the building for operational purposes. 5.2 A final post-project evaluation is completed that provides lessons learned and determines whether the desired benefits have been achieved.	Project Management Body of Knowledge, Project Management Institute; Construction Activity Auditing Strategies, Quality Plus & Associates.

APPENDIX 3 - RECOMMENDATIONS AND MANAGEMENT'S RESPONSE

Recommendation	Management Response	Responsibility	Date of planned implementation
1. Government should ensure that there is clear guidance on the roles and responsibilities for both the political and administrative aspects of the delivery of major capital projects, that the guidance adheres to legislative requirements, and that the guidance is followed in practice.	The Deputy Governor's office agrees with this recommendation. The current legislative system only addresses, in a very limited way, evaluation of projects by the PSIC and evaluation of tenders during the procurement process by the CTC, both under the *Financial Regulations (2010 Revision)*. Corresponding administrative guidance is limited. **The objective has to be to legislatively prescribe the roles and responsibilities for the entire project cycle and to compliment and support these with appropriate administrative guidance, systems, resources and support.**		
2. Government agencies should produce business cases, for all proposed major capital projects, that clearly outline management's considerations concerning the business objectives to be achieved, the various options for delivery and the full life time cost associated with each option. A business case should be an important part of Cabinet's consideration of whether to approve a proposed major capital project based on affordability and alignment with policy objectives.	Achievement of the aforementioned objective would address this recommendation.		

Recommendation	Management Response	Responsibility	Date of planned implementation
3. The Public Sector Investment Committee should ensure that all Government agencies are made aware of the Committee's expectations for future major capital submissions and its review process.	Achievement of the aforementioned objective would address this recommendation.		
4. The Government should ensure that proposed major capital projects have clearly established objectives and definition of need, which are the basis for realistic estimates of project cost, at the time it makes its decision to proceed with project development and when it makes the decision to proceed with the investment.	Achievement of the aforementioned objective would address this recommendation.		
5. The Government should establish a centre of excellence for the management of major capital projects which would be responsible for establishing standardised policies and practices for capital project management, to employ and train project managers, and to be responsible to manage all Government major capital projects.	The Deputy Governor's office agrees with this recommendation. The Public Works Department had traditionally filled this role, but not by any legislative or administrative mandate. Once again, the objective suggested in response to recommendation #1 would address this recommendation.		
6. Government agencies should not allow work to commence on major capital projects without a contract or some other appropriate legal instrument to be in place so that the interests of the Cayman Islands Government are protected.	No response		
7. The Government should ensure that for future major capital projects total costs are maintained and	No response		

Recommendation	Management Response	Responsibility	Date of planned implementation
monitored from a legislated budget perspective and appropriate project costing systems are available so that agency and project managers can maintain control over project activity.			
8. The Government should move to ensure that the Government Administration Building is more fully occupied so that the benefits planned with its construction are more fully realized.	No response		

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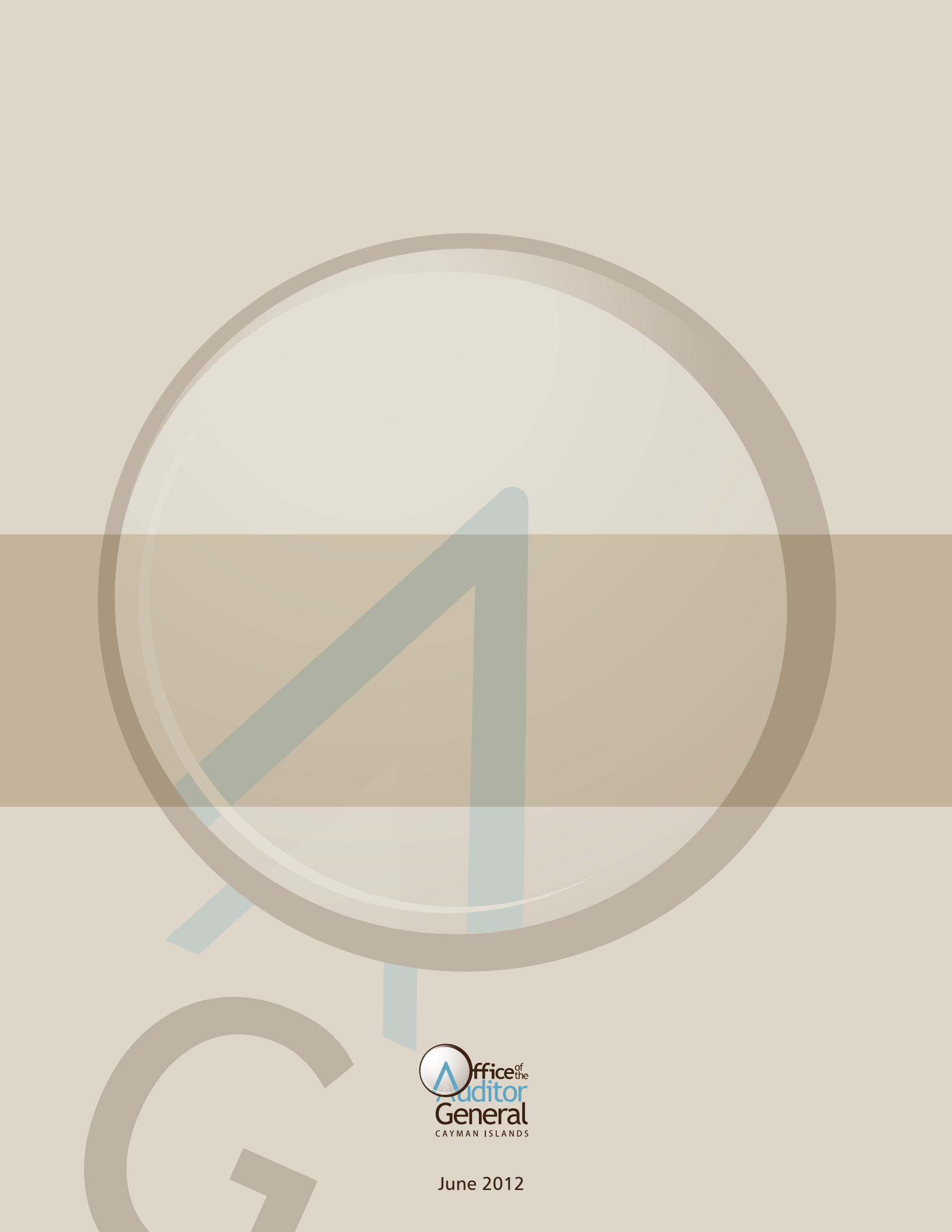
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Media enquiries

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