



BARBADOS AUDIT OFFICE

Special Audit of the Barbados Road Network Infrastructure Improvement Project





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SPECIAL AUDIT

OF THE

BARBADOS ROAD NETWORK INFRASTRUCTURE IMPROVEMENT PROJECT

AUGUST 2009

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7th August, 2009

His Honour Mr. Michael Carrington, M.P.
Speaker of the House
The House of Assembly
Parliament Building
BRIDGETOWN

Sir

I have the honour of submitting to you for laying before the House of Assembly in accordance with Sections 38 (2) and 38 (5) of the Financial Management and Audit Act, 2007 - 11, a special report of the Barbados Road Network Infrastructure Improvement Project.

Yours faithfully

Leigh Trotman
Leigh E. Trotman
Auditor General

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The Auditor General gratefully acknowledges the kind assistance and cooperation given to personnel of the Auditor General's Office during the conduct of this Audit by:-

The Permanent Secretary, Ministry of Transport and Works; and

The Permanent Secretary, Ministry of Finance.

2. Sincere appreciation is also extended to the officers of the Audit Office whose efforts contributed to the successful completion of this assignment.

Special Audit of the Barbados Road Network Infrastructure Improvement Project

Executive Summary

The Barbados Road Network Infrastructure Improvement Project (BRNIIP) was implemented by the Government to improve the flow of traffic through the design and construction of overpasses and the widening of sections of the ABC Highway, the supply and installation of a traffic synchronization system and the undertaking of a Bridgetown Traffic Study review. This Project was conceptualized at a time when the level of traffic had risen substantially and there was increased congestion on the roads.



2. Prior to the introduction of the BRNIIP, the Ministry of Transport and Works (the Ministry) had sought a number of initiatives to improve the situation. These included the conducting of a study, by a U.K based firm, to provide options for types of junctions that could be used on the ABC Highway. In 2002, the Ministry also requested engineering firms to express interest in the design and supervision of a project to widen this Highway. Proposals were submitted, but this project did not proceed to the stage of awarding a contract.

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3. In 2004, a US based firm approached the Ministry with a proposal, which included the construction of steel overpasses and the widening of a section of the ABC Highway.
 4. On 2nd December 2004 the Cabinet of Barbados approved in principle the project now known as the BRNIIP. This project was similar to that recommended by the US based firm.
 5. Approved was the installation of overpass bridges at sites (to be determined) along the ABC Highway, expansion of the Highway to four lanes between the Everton Weekes and Norman Niles Roundabouts, and the introduction of a computerized central control traffic signal system. It was also agreed that financing would be by way of a Build, Operate, Lease and Transfer (BOLT) arrangement, and that permission should be sought to proceed under the procurement arrangements established in Rule 137A of the Financial Administration and Audit (Financial) Rules, 1971 ("the Financial Rules").
 6. Invitation letters were sent to those firms which had submitted proposals in 2002 for the project to widen a section of the ABC Highway. These firms were given five weeks to submit proposals for the BRNIIP, which was a new type of project to Barbados, and required considerable financing. It was therefore not surprising that most of the firms did not submit proposals for the Project.
 7. The scope for the Project was outlined in the letter of invitation to the firms, but subsequent information revealed that at the time of the invitation, the Ministry had not finalized its requirements for the Project. This situation contributed to disagreements between the Ministry and the eventual contractor over the scope, and delays in the Design Phase of the Project.
 8. The report of the Evaluation Committee (a committee formed by the Ministry to evaluate the proposals) indicated that the US based firm was also invited to

tender for the project. However, no documented evidence of this firm's invitation was seen. The Committee reported that a proposal was received from this firm on the 15th December 2004. This would have been eight days before the invitation letter was issued to the other bidders. This raises questions about the integrity of the tendering process.

9. Only one other firm submitted a proposal, and this, along with the proposal submitted in December 2004 by the US based firm, was assessed by the Evaluation Committee.

10. Both proposals failed to fully address the scope outlined in the invitation letter and should have been rejected by the Evaluation Committee. In addition, the two proposals were quite dissimilar in some respects. For example, one proposal, estimated at Bds \$60 million included the building of one flyover, while the other proposal estimated at approximately Bds \$120 million included the building of seven overpasses. A similar comparison of the road-widening element was not possible because the information available to the Audit Office on one of the proposals lacked sufficient detail in this area.

11. The Ministry had developed criteria to be used by the Evaluation Committee to assess the proposals submitted. However, the criteria (see Appendix 1) were deficient, in that they did not provide for the evaluation of the proposed project costs or examination of which financing plan was more beneficial to Government. Despite some reservations by the Committee, the proposal from the US based firm (hereinafter called the contractor) was accepted.

12. In September 2005 a Memorandum of Understanding (MOU) was established between the Ministry and the contractor, to govern arrangements for the Project, until a formal design/build/lease contract was negotiated to the satisfaction of both parties. This MOU included provisions for the creation of road and overpass designs.

13. Approximately eight months after the MOU was signed, the scope of the Project was finalized. However, the required designs were not completed at this time. The contractor, in the meantime, indicated a willingness to commence construction before full designs and construction costs were finalized. Initially, the Ministry was of the view that the Project should not commence without completion of the designs or calculation of the total cost. Subsequently, the Ministry changed its opinion on the matter, and agreed to a Supplemented MOU in order for work to commence. In this arrangement, the contracting firm was given permission to provide road widening designs on a rolling (or ongoing) basis, that is, designs would be completed for a segment of the Project and work would commence while designs for the other segment were being worked upon.

14. The agreed method of executing the Project resulted in the work proceeding and then for cost to be agreed upon later. This placed the Ministry at a disadvantage of having to negotiate with the contractor for work already in progress. In addition, an important element in determining costs for road-works projects is the verification of the quantities of material excavated from the construction site, but the Ministry indicated that it was unable to verify quantities for this project because of a lack of staff.

15. The commencement of the Project without complete designs and agreed costs contributed to disputes between the Ministry and the contractor about the total cost of the Project. The Ministry claimed that at a meeting held with the firm, an amount of \$117 million for Section 1 was agreed on, while the firm claimed that this figure did not include design stage costs and other costs of approximately \$9 million. This matter remains unresolved at the time of writing.

16. The usual practice under BOLT arrangements is that the contracted firm takes responsibility for the financing of the project. It is also to be noted that in its initial proposal the firm contracted for the BRNIIP had identified a potential financier. However, correspondence on file indicates that, prior to the letters of invitation being

sent out, the Ministry of Finance (MOF) held discussions with another financial institution, which was eventually chosen as financier. This financial institution indicated that it had been ready to provide funding to the eventual contractor to start construction.

17. It is not certain why the MOF would have conducted negotiations with a financier, to provide funding to a particular firm, even before letters of invitation were sent out.

18. In other jurisdictions Government would usually compare the cost of the project, if done by the traditional procurement method, with that of a Public Private Partnership (PPP), to determine which was likely to offer better Value for Money (VFM). We found no evidence that such a comparison was undertaken. This comparator would provide information on which method would be more beneficial to Government.

19. An essential component of a PPP is the transfer of risk to those parties best able to handle them. The contractor should have brought to the table expertise in road and overpass construction, financing and the ability to complete work in a timely manner. Government risk would include facilitating the acquisition of any additional land and providing an enabling environment for the firm to carry out its work expeditiously. This transfer of risk however did not occur, and Government assumed responsibility for financial arrangements for the Project. In essence, Government ended up bearing all the administrative and finance risk. The contractor's primary risk related to the quality of the work produced.

20. In order to provide optimum benefits to the Government in PPP arrangements strong competition is necessary among the bidders. In PPPs, as opposed to conventional procurement, competition between bidders is extended beyond the deadline for responding to the tender invitation. After the proposals have been evaluated, discussions are held with short-listed bidders, whose proposals are further analysed and refined before a contractor is selected. This process allows for the achievement of the optimal mix of price, quality and risk transfer, through strong

competition. The competition on this Project ended at the deadline for submission of proposals, which limited the potential benefits to be gained from more extensive perusal of the bids.

21. The Project was characterized by poor decision-making in a number of critical areas. The date allocated for completion, 31st December 2006, was highly ambitious. This date impacted on the tendering process, which was subsequently shortened, and resulted in a number of the invited firms not tendering. The choice of firms requested to submit bids was too restricted, since there was uncertainty over the experience and capacity of some of these firms to execute such a project.

22. A due diligence performed on the contracting firm after the approval was granted to negotiate with the firm, found no evidence of its existence prior to 2003. There was no evidence of this firm having a track record of highway extensions and the building of flyovers. Yet in a paper to the Cabinet the Ministry stated that this firm was one of the few offering steel overpass solutions.

23. It is not clear why the Ministry did not seek external expert guidance on this PPP arrangement, since it was a new concept, and the Ministry did not have any experience in such matters. The Ministry's lack of experience therefore placed it at a severe disadvantage in decision-making on the Project.

Chapter 1

Introduction



Public sector entities such as the Ministry are involved in large scale capital projects. These projects:

- can be complex and, therefore, expose all contracting parties to considerable risk;
- are generally expensive; and
- often involve a number of entities from both the private and public sectors.

1.2 The Government in recent years has been executing some of its projects through the use of PPPs. This method of project procurement has been utilized in other jurisdictions for a number of years, but it is a relatively new procurement method to Barbados. As one of these large-scale projects, and, although the MOF subsequently decided that the Project would no longer be a BOLT, the BRNIIP was selected for review, to determine whether good practice was being followed that would have allowed

for VFM to be achieved, and to assess the adequacy of the Ministry's handling of the PPP process.

Methodology and Scope

1.3 Interviews and discussions were held with the Permanent Secretary, Chief Technical Officer, Project Manager and other members of staff of the Ministry. Interviews were also conducted with the members of the contracting firm.

1.4 Applicable files in respect of the Project were reviewed, along with accounting information, Cabinet decisions, the MOU and correspondence between the main parties involved in the project - the MOF, the Ministry, the contractor and the financial institution which funded the Project.

1.5 Review of literature and audits of various PPPs were undertaken to arrive at an understanding of good practice (internationally) for obtaining VFM in using the PPP procurement approach. In the conduct of this audit, assistance was provided by a consultant from the National Audit Office of the United Kingdom who specializes in the auditing of PPPs.

1.6 The review covered the period August 2002 to September 2008. However, information for the period August 2002 to November 2004 was limited because of missing files. The review did not seek, either to ascertain whether the cost of the Project was reasonable, or to assess the adequacy of the Traffic Synchronization System or the Bridgetown Traffic Study Review.

Background Information

1.7 Barbados suffers from severe traffic congestion, due to limited road capacity relative to the high volumes of vehicular traffic. Information provided by the Ministry revealed that there has been a substantial increase in vehicular traffic on the

roads since 1985 when the number of vehicles registered was 33,100. At 8th November 2004 registered vehicles had increased to 106,335. This represents an increase of 221 per cent from 1985. The increase in traffic has resulted in delays during rush hour on the major arteries into and out of Bridgetown and along the ABC Highway.

1.8 With further increases in traffic levels expected, the Ministry recognized the need to introduce measures to ease traffic congestion. In this regard, the Ministry requested a UK consulting firm to provide options for types of junctions that could be used on the ABC Highway. This information was submitted to the Ministry in December 1997. The majority of the options provided by the firm included using some sort of bridge/overpass at the junctions and some included using a combination of a roundabout and a bridge.

1.9 The Ministry considered other measures to ease the traffic congestion, including the widening of the ABC Highway, and a pilot project to synchronise and monitor the traffic signals at the Pine East-West Boulevard, Highway R (BET) and Highway 6 (Courtesy). In addition, the Planning and Priorities Committee (PPC), a Committee of the Cabinet, decided in November 2002 that the Ministry should make provision for the conduct of a comprehensive traffic management study in its Estimates of Expenditure for the Financial Year 2003/2004.

1.10 In 2002 the Ministry invited expressions of interest by engineering firms for the design and supervision of a project to widen the ABC Highway in two phases. Phase I was from the Garfield Sobers Roundabout to the Norman Niles Roundabout and Phase II from the Norman Niles Roundabout to the D'Arcy Scott Roundabout. Seven firms responded to the invitation but the project did not proceed to the stage of awarding a contract.

1.11 In 2004, the contractor approached Government with a traffic management proposal. This proposal included the construction of overpass bridges on the ABC Highway and the widening of the Highway from two lanes to four lanes

between the Norman Niles and the Clyde Walcott Roundabouts. The firm presented its proposal to the PPC on 19th November 2004. This firm also indicated that it had identified a potential financier.

1.12 On 2nd December 2004 the Government of Barbados approved in principle the project now known as the Barbados Road Network Infrastructure Improvement Project (BRNIIP). The Government among other matters:

- Approved, in principle, the proposal to install overpass bridges at selected sites (to be determined) along the ABC Highway, and to widen the Highway from two lanes to four, between the Everton Weekes (Jackson) and Norman Niles (Haggatt Hall) Roundabouts;
- Approved, in principle, the introduction of a computerized central control traffic signal system;
- Noted that from available information the works could be completed by December 2006, in time for the influx of vehicular traffic anticipated for the Cricket World Cup 2007, once agreement was reached by 31st December 2004.

1.13 The Government also agreed that the method of financing should be through a Build, Operate, Lease and Transfer (BOLT) arrangement, and that permission should be sought to proceed under Rule 137A of the Financial Rules which allows for the waiving of the need to go to public tender if certain conditions prevail. Invitation letters were sent in December 2004 to the seven firms which had submitted proposals in 2002 for the design and supervision of a project to widen a section of the Highway. Only one of these firms submitted a proposal. In addition, the contractor had already submitted a proposal and this was also considered.

1.14 An Evaluation Committee was set up by the Ministry to assess the proposals submitted by the two firms. This Committee comprised representatives from the Ministry, the Ministry of Finance and Economic Affairs, the Town and Country Planning Department and the Ministry of Housing, Lands and the Environment.

1.15 The Committee considered the proposals using criteria developed by the Ministry and recommended, "That negotiations be entered into with the first ranked firm, (the contractor) leading to a signed Memorandum of Understanding (MOU) to allow for a contract to be entered into for the execution of the Project".

1.16 A Negotiation Committee comprising representatives from the Ministry of Transport and Works and other Ministries of Government was set up to enter into negotiations with the selected firm. These negotiations resulted in the development of an MOU, which was signed on behalf of the Government and the contractor on 5th September 2005.

Design Stage

1.17 The Design Phase of the Project commenced after the signing of the MOU, which required that during this Phase, the contractor should develop, prepare and submit completed design documents to the Ministry. During the Design Phase there were disagreements between the Ministry and the contractor as to the final scope of the Project and the drawings provided. In May 2006, the scope of the Project, which related to the area of the ABC Highway between the Garfield Sobers Roundabout and the D'Arcy Scott Roundabout was finalised. The decisions were that:

- The construction of flyovers at five roundabouts, and the construction of two overpasses at the other roundabout and the Barbados External Communications/Upton Junction;
- No roundabout or right turns at the Belle Junction;

-
- The removal of the traffic lights and the provision of left turn only at the Pine East/West Intersection;
 - Construction of a roundabout at the Samuel Jackman Prescod Polytechnic/Caribbean Development Bank entrance;
 - Road widening over the length of the highway to provide two lanes in each direction.

1.18 In July 2006 a Supplemental MOU was signed to allow for the construction phase of the Project to commence. Construction commenced on the Project on 24th July 2006. In spite of the decision to use Rule 137A of the Financial Rules to expedite the Project, construction only started five months before the proposed completion date at the time the Project was approved.



Project Financing

1.19 In a traditional BOLT arrangement the responsibility for providing financing for the project lies with the successful bidder. The contractor indicated that when it approached the Government with the proposal, it had identified a potential financier but this financier was rejected.

1.20 Financing for this Project has been provided by a local banking institution through a Special Purpose Vehicle (SPV) (a company created by the banking institution to manage the project). The financing for this Project was facilitated by bridging finance and commercial paper secured through letters of comfort issued by the Government of Barbados. This was interim funding put in place in order for the Project to proceed, and until the legal documents could be signed, at which time the funding that was arranged for the construction phase could be accessed. The contractor was paid by the financier/SPV based on certificates submitted to the Ministry.

Project Costs

1.21 In November 2007 representatives from the Government and the contractor discussed the contract costs for the Project. A contract sum of Bds \$117 million was agreed for Section 1 of the project but subsequently there was a dispute as to what this represented, whether full cost for Section 1 inclusive of costs for road widening, design fees and payment for the traffic synchronisation, or only the road widening. The contractor claimed that approximately Bds \$9 million for design stage costs and other costs were not included in the Bds \$117 million.

1.22 The Project Manager's Report for the period 29th August 2008 to 30th September 2008 placed total expenditure to date at Bds \$107.6 million.

Chapter 2

Public Private Partnerships

PPPs have been a long-standing method of public procurement of infrastructure and services in the UK, where it has been used widely by many parts of the public sector. Elsewhere in the world it is gaining popularity as an approach to procuring major infrastructure projects and related services in the public sector. The **Build, Operate, Lease, Transfer** arrangement is a form of PPP, wherein a private entity finances, designs, constructs, leases and operates a facility for a specified period, often as long as 20 or 30 years. After the concession period ends, ownership is transferred back to the granting entity. It should be noted that PPPs may consist of all or some variations of the conditions outlined above.

2.2 PPPs can provide advantages to Governments, such as early project delivery, gains from innovation, obviating the need to borrow to finance infrastructure investment, and access to improved services. In some circumstances, PPPs may offer better VFM than conventional procurement. PPPs were also used as a means of keeping certain debts off Government books since only annual lease payments were recorded. It should be noted that a major reason advanced for this project to be a PPP was the fact that Government wanted to contain the debt to GDP ratio. When the decision was made the debt obligation would not have appeared on the books of Government.

2.3 A major advantage of PPP is the inclusion of maintenance costs in the contract sum. It is suggested that the private sector firm would be cognizant of the need to produce a product of high quality since it would be responsible for the maintenance throughout the contract period.

2.4 There are disadvantages to PPPs, such as the cost of private finance being higher than if the Government borrowed the funds to finance the project, and the

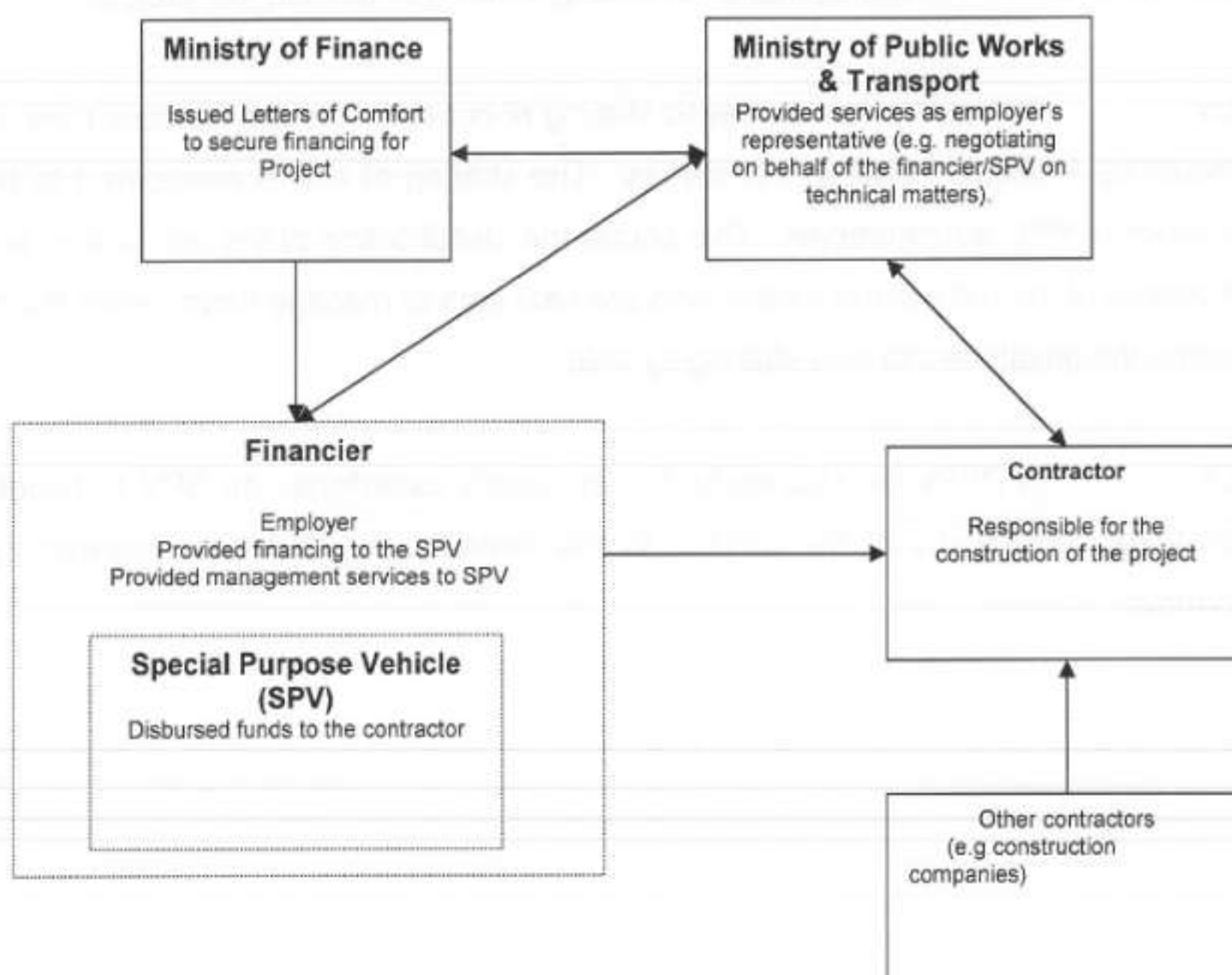
fact that long term contracts run the risk of introducing inflexibility, being expensive to change. In some jurisdictions it is recommended that the Ministry/Department prepare a public sector comparator, which is an estimate of the cost of the project (over its entire life) if procured by traditional methods. The public sector comparator is used to provide a benchmark against which to form a judgement on the value for money of the PPP bids. There was no evidence that such a comparator was used in this project.

2.5 PPPs allow for increased sharing of construction and financial risks, which should be allocated between the parties. The sharing of risk is considered to be the essence of PPP arrangements. This entails the identification of the risk factors and the allocation of the risks to the parties who are best able to manage them, either the public sector, the private sector or a sharing by both.

2.6 In PPPs the successful bidder usually establishes an SPV to handle the day-to-day operations of the project. In this instance the SPV was created by the financier.

Relationships between Parties in the Project

2.7 The following chart shows the Audit Office's understanding of the relationship that existed among the parties in the BRNIIP.



2.8 According to the MOU, the SPV would be created by the financier, to engage the contractor to construct the Project, and would own and lease the Project and all land associated therewith for a period of twenty-five years. Therefore the SPV would be the employer of the contractor. In this PPP arrangement there was an unusual relationship between the SPV and the Ministry where the Ministry was performing the role of employer's representative e.g. negotiating on behalf of the financier/SPV on technical matters. Usually the Ministry should not be a part of the delivery of the project,

but rather the Ministry should be monitoring the project to ensure that it is delivered to the required standards and scope.

Chapter 3

Tendering Stage

Tendering Process

The Financial Administration and Audit (Financial) Rules, 1971 require that tenders be invited for the procurement of goods or the undertaking of works or services in excess of \$100,000. These Rules stipulate that tenders should be invited from members of the public by the publication of notices in one or more newspapers in Barbados. The tender process is managed by a Tenders Committee that is chaired by the Chief Supply Officer. On receipt the tenders are evaluated by the Committee which then submits its recommendations to the head of the relevant ministry/department, who then submits them to the Minister. Under certain circumstances however, this process can be avoided on the authority of Cabinet, as stipulated under Rule 137A of the Financial Rules.

3.2 The tendering process for this Project commenced with the Ministry preparing a scope of works (project requirements) for submission to the prospective contractors. This scope of works was included in a letter sent to a selected number of firms inviting the submission of proposals by a particular deadline. After the closing date the proposals received were evaluated and a contractor selected. Discussions were held with the selected contractor to negotiate the principle areas of agreement and the associate costs to be included in a MOU.

Project Scope

3.3 The scope of a project represents what the project is supposed to accomplish. The bidders have to be informed of the scope in order that they can submit a bid that is relevant to the particular project. The project scope should therefore be clear and well thought through, because it is central to the delivery of the project, especially under a PPP arrangement. A scope that is flawed poses a major risk to the

successful completion of a project because this is what the private sector will deliver and require payment for over the life of the agreement.

3.4 A scope for this Project was outlined in the letter of invitation issued to the firms. This letter stated, "The Planning and Priorities Committee, a Sub-Committee of Cabinet, has approved a project for the Design and Construction of overpass bridges along with widening of the above-mentioned section of the Highway and the synchronization of traffic signals which should be used to assist in the relief of congestion".

3.5 The letter identified nine intersections that were to be considered for the Project. In addition, the Ministry's response to queries from one of the firms invited to tender, stated that "It is assumed that flyovers will be at all intersections". This suggests that the Ministry was contemplating the construction of flyovers at all nine intersections.

3.6 However:

- The report of the Evaluation Committee indicated that an overpass might not necessarily represent the solution for any particular junction, since critical traffic data (Origin-Destination surveys) was still being collected by MPW.
- During the Design Phase of the Project there were disagreements between the contractor and the Ministry on the scope of the Project which contributed to delays in the Design Phase. Subsequently, a scope was finally determined in May 2006, fourteen months after the contractor was selected.

3.7 The section of the Highway outlined for widening in the invitation to tender conflicted to that approved initially by Cabinet. Cabinet had approved widening to four lanes between the Everton Weekes and Norman Niles Roundabouts, but the invitation letter targeted the area between the D'Arcy Scott and Garfield Sobers Roundabouts. In

addition, no traffic study was approved initially by the Cabinet or included in the invitation letter. Mention of a traffic study was only seen subsequently when the Ministry sought approval to negotiate with the contractor.

Audit Comments

3.8 The evidence shows that the Ministry had not fully determined the scope for this Project by the time the firms were invited to submit proposals. Comparison of the details in the invitation letter, the response to one of the firms and the comments in the evaluation report highlighted above, reflect this. The Ministry at the point of inviting firms to bid for the Project did not possess relevant information such as the critical traffic data highlighted in the Evaluation Committee Report that would have allowed it to determine the optimum traffic solutions for the intersections. Not having a firm scope at the inception of the Project, especially for the number of overpasses, contributed to the disagreements between the Ministry and the contractor, and the delays during the Design Phase of the Project. A firm scope at the point of inviting bids was important, to avoid exceeding the budgeted costs and project delays.

Market Interest

3.9 Rule 127 of the Financial Rules 1971 stipulates that tenders shall be invited for expenditure in excess of \$100,000. However, Rule 137A states, "Notwithstanding anything contained in this Part where in the opinion of the Cabinet it is necessary to procure goods and services

- (a) that are of a specialised nature;
- (b) that are not normally available in Barbados; or
- (c) as a matter of extreme urgency.

The Cabinet may authorize goods and services to be procured otherwise than by invitation to tender, and may direct that procurement be through direct open negotiations to be conducted under such arrangements as the Cabinet may direct".

3.10 The Cabinet authorized the Project to proceed under Rule 137A(c) "in the interest of time". The Ministry stated that there was a need to have the Project substantially completed by 31st December 2006, and that the tendering process, which would generally take at least six months, would thereby extend the duration of the Project by six months beyond the proposed completion date.

3.11 The Ministry selected seven companies, mainly engineering firms, to which they sent letters in December 2004, inviting them to indicate their interest in submitting a BOLT proposal for the Project. These were the same firms that had responded to the Ministry's invitation, in 2002, to submit expressions of interest for the design and supervision of a project to widen the ABC Highway. Only one of the seven submitted a proposal in response to the December 2004 invitation.

3.12 It should be noted that the previous invitation in 2002 did not include the overpasses, the synchronization of traffic lights, the requirement to carry out construction activities or a BOLT proposal. The additional requirements of the 2004 invitation would therefore have been a significant change in terms of the work required.

3.13 The Ministry in reference to the contractor noted that "This is one of the few firms, of which the Ministry is aware, that offers this type of solution, employing both design and construction methodology not offered by any other known design-build company". However, the results of a due diligence conducted at the request of the Ministry suggest that the contractor commenced operations between 2003 and 2005, but there was no evidence that it was a construction firm.

Audit Comment

3.14 Based on the Ministry's statement it is unclear why it was decided to limit the potential bidders to those selected, as this prevented it from obtaining more competitive bids for the Project. The statement also creates uncertainty about the level of experience and capacity of some of these firms for executing a project of this nature.

3.15 The Ministry could have done more to ensure that those taking part in the competition were the strongest candidates. The use of Rule 137A is restricted inter alia to "Matters of extreme urgency". It would however have been reasonable for the Ministry to advertise the Project more extensively to ensure that interest was maximized. This is because the inclusion of overpass bridges and the utilization of the BOLT arrangement were novel to the Ministry and the local industry.



Time Scale for Responses

3.16 The letter of invitation issued to the selected firms was dated 23rd December 2004 and requested that proposals be submitted by 28th January 2005, a response time of five weeks. The Ministry's normal time scale for responses to proposals is two months. The response period was apparently shortened to produce an overall time table for contract negotiations and carrying out the work ahead of the Cricket World Cup, which was scheduled to take place in Barbados and other Caribbean countries in March and April, 2007. Most of those invited to submit bids did not do so. The restricted time scale was one of the reasons for the non submission of bids. The responses from the invitees were as follows:-

- One company stated that it was not in a position to make a BOLT proposal. It however indicated that it was willing to provide technical and managerial support for the Project.
- Another company stated that based on the restricted time scale of the prequalification submission and current commitments it was unable to submit a bid.
- A firm declined to submit a bid because the Project included overpasses.
- One invitee declined to submit a bid based on the short period to prepare a proposal.
- A firm expressed an interest in the Project and the BOLT arrangement, and requested terms of reference, but was unable to submit timely proposals.
- Another firm did not respond to the proposal.

-
- One firm submitted a proposal within the specified period. This proposal did not conform to the scope outlined in the invitation letter as is discussed in paragraphs 3.21 to 3.23.

Audit Comment

3.17 The time period allotted for response was too short given the nature of the requested proposal. The limited time factor eliminated some companies as indicated by their responses. The effect of the limitation was to reduce competition pressures and eliminate alternative technical approaches, both of which would have been powerful levers for achieving better VFM. The Ministry normally would have allowed two months to tender. However, it allowed only a few weeks for the BOLT tender, a procurement approach which required considerable financing, was complex and new to Barbados.

Fairness of Tender Process

3.18 The firm which eventually won the contract had initially presented a proposal to the Ministry and the PPC for, among other things, improving traffic flow on the ABC Highway. A proposal similar to that presented to the PPC was approved in principle by the Cabinet on the 2nd December 2004. The outputs for the Project that were included in the invitation letters were very similar to aspects of this proposal.

3.19 The Evaluation Committee reported that this firm was invited to submit a proposal for the approved project, but no documented evidence of this invitation was seen. The Committee further indicated that a proposal from this firm was submitted on 15th December 2004, which is eight days before the letters of invitation were issued to the seven firms.

Audit Comment

3.20 The sequence of events noted above brings into question the integrity of the tender process.

Non Conforming Bids

3.21 As mentioned earlier, the scope of the Project included the widening of the Highway from the D'Arcy Scott Roundabout to the Garfield Sobers Roundabout, and the construction of overpass bridges along this section of the Highway. The proposals submitted by the bidders were not made available to the Audit Office. However, subsequent documentation submitted by the contractor indicated that it had proposed the construction of seven overpasses, and the widening of a section of the Highway, between the Norman Niles and Clyde Walcott Roundabouts, and at the locations of the overpasses. Information in the Evaluation Committee's report indicates that this proposal was estimated to cost US \$59.88 million.

3.22 The Evaluation Committee's report indicated that the other bidder had submitted a proposal in respect of the section of the Highway between the D'Arcy Scott and Emancipation Roundabouts, inclusive of one flyover, at an estimated cost of Bds \$60 million.

Audit Comment

3.23 The information obtained on the proposals submitted reveal that both proposals did not conform to the scope outlined in the letter of invitation and therefore should have been rejected.

Evaluation of Tenders

3.24 The criteria used by the Evaluation Committee for evaluating the proposals did not include an assessment of the contractors' financial capabilities. They also did not include an assessment of the project costs provided in the proposals, or which financing plan was more beneficial to the Government. The only financing analysis included in the criteria was whether there was a "Financing plan to ensure that the project can be implemented on schedule". This criterion actually was an assessment of whether the firm could access the funding for the value of its proposal via a BOLT or not. At the second meeting the Committee discussed the two submissions and, after raising concerns, recommended that negotiations be held with the first ranked firm.

3.25 No evidence was seen that independent engineering and financial advice were used in evaluation of the bids. These factors should have been in place given the novelty of the Project.

Audit Comment

3.26 Steps were taken to score bids on a consistent quantitative basis. However, an important element of the Project was cost, and therefore the construction and financing costs should have been included in the evaluation.

3.27 Neither bidder submitted "true" engineering designs or drawings, but instead gave broad indications of what could be provided. The Evaluation Committee was judging what the Ministry describes as "expressions of interest" rather than proposals which were complete enough to appoint a preferred contractor.

3.28 Appointing a preferred contractor on the basis of an expression of interest was unacceptable. Having not rejected the bids, the Ministry could have pursued discussions with both bidders to determine what specific solution was being offered, and at what cost, before any award was made.

3.29 The Ministry was unfamiliar with the BOLT process and its capacity to make good decisions would have been improved through the use of some external expertise familiar with this type of arrangement.

Public Sector Comparator

3.30 As mentioned previously, the public sector comparator is used to assess the VFM of the PPP bids. No evidence was seen that such an estimate was prepared. However, the Ministry's Project Division prepared an estimate of construction costs for the Project in April 2005, which was Bds \$57.7 million dollars. This document is dated after the Cabinet had agreed to negotiate with the chosen contractor. This amount is approximately half of the US \$59.8 million originally proposed by the contractor.

Audit Comment

3.31 Comparison of the estimated construction costs prepared by the Ministry and those of the contractor show a wide disparity between the two. This underscores how important it was for there to have been complete costing of the Project after the design stage and before a decision was taken to commence construction. It is also important to determine whether PPP bids offer better VFM than traditional procurement.

Chapter 4

Project Implementation

Commencing Construction

After disagreements between the Ministry and the contractor over the scope, it was finalized in May 2006. However, construction could not commence in the absence of completed designs. The Ministry indicated that at a meeting held June 12, 2006 between the Consultants and the Ministry, it was informed by the Consultant that:

- (i) They wanted to commence on-site road widening works by 15th July 2006;
- (ii) "Detailed design drawings, suitable for commencement of construction will be issued on a rolling basis to suit the planned programme of works and will be made available to the MPT as early as possible prior to the commencement date;
- (iii) A detailed and priced Bill of Quantities will be issued for each section;
- (iv) An overall and fully detailed priced Bill of Quantities will be issued following the completion of the detailed design for all road widening;
- (v) Revised unit rates will be submitted as soon as possible and will be included within an approximate Bill of Quantities".

4.2 The Ministry raised its concern about the Project commencing without completion of the designs and calculation of the complete costs. The Ministry stated in a paper to Cabinet, "If physical construction begins prior to the removal of all encumbrances from the road corridor, the Government of Barbados can become susceptible to being charged for delays by the contractor. Furthermore, the rolling basis procedure significantly reduces the Ministry's control of the project and has the potential propensity to increase the length of the contract and can therefore create a larger project cost. The Ministry does not recommend this approach and does not have permission to accept a modification of the terms of the Memorandum of Understanding as proposed at [(iii)] and [(iv)] above".

4.3 Subsequently, the Ministry stated that the parties had agreed that a Supplemental MOU should be prepared to facilitate the commencement of the Project. It also stated that the Supplemental MOU was vetted and approved by the Solicitor General's Chambers. Cabinet approved the signing of the Supplemental MOU to facilitate commencement of construction works.

4.4 The Supplemental MOU states that, "To facilitate commencement of the construction phase of the project from the 24th July 2006, (the contractor) is to provide complete road widening design details on a rolling basis together with relevant detailed Bills of Quantities and Costing, which said design details shall be submitted to the Government no later than two (2) weeks prior to the commencement of the specific construction phase".

4.5 Project construction commenced on 24th July 2006, a mere five months away from the original completion date of 31st December 2006 mentioned by the Ministry in the early life of the Project. In addition, the Ministry stated that a preliminary road widening programme, submitted on 27th June 2006, envisaged that all road widening works would be completed by June 2008, some eighteen months after 31st December 2006.



Audit Comments

4.6 The Ministry's original recommendation was appropriate, and offered good advice on how to proceed with the Project. The specific concern about starting on the rolling basis, with its potential to increase the length of the contract, and create larger project costs, has been realized. The risk which the Ministry noted could have been avoided.

4.7 It is not clear why there was such a substantial change in the opinion of the Ministry with regard to commencing construction, bearing in mind that the completion of the designs and calculation of the complete costs were not going to be satisfied before commencement of construction. In addition, the original completion date could not be achieved, and as a result the Ministry should have re-evaluated the Project at this stage with a view to determining the best route forward - whether to abandon the current MOU with the contractor and send the Project back out to tender, or await final designs and a contract cost.

The Comments of the Ministry of Transport and Works are as follows:

"Whereas paragraph 4.6 speaks to the Ministry exhibiting sound administrative and professional judgment with respect to this project, it should be noted that the (paper submitted to Cabinet) did not reflect the terms and conditions which the Ministry felt were necessary.

Paragraph 4.7 speaks to a substantial change in the opinion of areas (of) concern with respect to the commencement of construction. It should be made clear that the technical opinions and advice of the professional staff remained unchanged. In respect of the continuation of paragraph 4.7, the Ministry was and continues to be guided by the Ministry of Finance and Cabinet on this matter.

On numerous occasions the Ministry of Transport and Works was advised to adopt a "can do approach" and requested to manage the project in such a way to ensure speedy and continuous progress of the work to meet the deadline that was set.

The Ministry of Transport and Works was unable to satisfy the conditions of the Memorandum of Understanding because:

- (1) Of the lack of co-operation from the Contractors and the inability to maintain control at all times.*
- (2) in order to achieve the conditions as set out in the Memorandum of Understanding a Supplementary Memorandum of Understanding was developed to clarify the terms of the then existing Memorandum of Understanding*

It was for the reasons mentioned above that a specific deadline date was inserted into the Supplementary Memorandum of Understanding and the Contractors gave the assurance that the deadline would have been met".

Audit Comment

4.8 The Ministry's response indicates that the paper to the Cabinet did not reflect the views of the Ministry's professional or technical staff. From its comments the Ministry also implies that it was not in full control of the Project, although it was responsible for it.

Financing

4.9 The financing for PPPs is usually provided by the bidder and the terms are included in the proposal submitted. Information provided indicates that the contractor initially had identified a potential financier. However, even before the letters of invitation were sent out, the Government was in discussions with another financier, who eventually provided the funding for the Project. It should be noted that a few days after the Project was proposed to the PPC, the financial institution indicated a willingness to provide funding to the eventual contractor to commence construction.

4.10 As a consequence of providing the financing, the bidder undertakes the risk associated with obtaining finance, e.g. changing interest rates. However, this Project was utilizing interim funding until the legal documents were signed, and this funding was secured by way of Letters of Comfort issued to the financier by the Government. As a result, the financing risks were placed on the Government.

The Comments of the Ministry of Finance are as follows:

This project was originally conceived and awarded as a BOLT, therefore, the developer provided the financing under whatever legal arrangement he decided on. The role of the Ministry of Finance as adviser to the Government of Barbados must be to ensure that any financing arrangement entered into by a supplier of services, is in the best interest of the Government, since such will impact on the cost. The Ministry of

Finance therefore, as is normally done in contracts of this nature, issued a Letter of Comfort to the Bank providing the financing for the project. (The financier) would have been chosen by the supplier of the service (the contractor).

Audit Comment

4.11 It seems unusual that discussions would be held with a financier prior to the letters of invitation being issued for the Project, since the proposed financing terms should have been included in the bidder's proposal, and therefore determined through the competitive process. In addition, some of the benefits associated with PPPs, such as the increased sharing of risks between the Government and the contractor, were eliminated as a result of the financing risks being borne by Government. As the Project progress it became unclear whether the bidder who was awarded the contract was still responsible for providing the financing.

Memorandum of Understanding

4.12 In the body of the MOU it is stated that, "This Memorandum of Understanding shall govern the arrangements between the parties until a formal Design/Build/Lease Contract (hereinafter called the "Implementation Agreement") is negotiated to the satisfaction of both parties and the requisite financing has been arranged". The MOU set out that design and construction were to be completed within eighteen months, but did not include a cost for the Project. No contract in accordance with the MOU has been signed by the parties, one of the reasons being non-agreement on the contract sum for the Project.

4.13 The finalizing of the contract sum was delayed in part because of disagreement over rates proposed by the contractor. The Ministry notified the contractor that payments were "on account", which meant that the payment was provisional. The

contractor was also informed that there would be full accounting when the matters outstanding, including rates, were resolved. These rates were integral to determining the contract sum. The Ministry also indicated that it was unable to verify quantities with respect to excavation carried out, because of the lack of staff. The quantity of material excavated was an important element in determining the costs of work carried out by the contractor.

Audit Comments

4.14 The MOU was a preliminary step to the signing of a formal contract. It was however signed without a clear understanding of what the Project would cost. In this regard, the disputes that have arisen over the rates could have been avoided if the contract details, especially the agreed price for the Project, had been finalized before the commencement of construction.

Need for Strong Competition amongst Potential Contractors

4.15 Under conventional procurement of goods and services the Government advertises the proposed project and then selects a contractor based on the bids submitted. Competition between the bidders in this type of procurement is limited to the period during which the project is advertised and it ends at the closing date for submission of tenders. However, in a PPP the competitive process is extended beyond the closing date for submitting bids. There is generally some negotiation with the competing firms before the contractor is selected.

4.16 Only two proposals were considered for this Project, and one was eliminated, leaving an agreement to be reached with the preferred company through a negotiated procedure. The Ministry appeared not to be familiar with BOLT procedures, and was not aware that a preferred bidder should not be selected until as late as possible in the procurement process. The difference between the Evaluation

Committee's scores of the two bids was very small (1326 and 1296) and it is usual under a BOLT type approach to continue negotiations in these circumstances with two bidders as a means of fine tuning the proposals.

Audit Comments

4.17 Competition was weak following receipt of bids and was reduced further by the early elimination of the second proposal. The basis for getting good value from a PPP is competition between bidders. Having not rejected the bids, the Ministry could have continued negotiations with both bidders in order to maintain competition between them beyond the submission-of-the-bid stage. The MOF advised the Ministry to use the BOLT arrangement but the Ministry did not have the knowledge and expertise to apply the approach successfully.

Maintenance

4.18 An important feature of PPPs is the inclusion of the cost of maintaining the asset in the contract sum, which can be beneficial to the Government. Under normal procurement, maintenance cost and its associated risk would be borne by the Government, but in a PPP arrangement this risk is usually transferred to the contractor or shared. Suggested benefits are as follows:

- It is thought that if maintenance is included that the contractor would design and construct a facility that is of high standard requiring less maintenance. Therefore Government would be provided with a high quality product.
- There is also the perception that the private sector does a better job at maintaining facilities than Government.

4.19 The MOU signed on the 5th September 2005 between the Ministry and the contractor included provision for maintenance as follows:

- Year 1 – the contractor responsible for full and total maintenance of all works;
- Years 2 -10 - the SPV and the contractor to share maintenance;
- Year 11 - 25 the SPV to be responsible for full and total maintenance.

4.20 Review of documentation revealed that in subsequent negotiations between representatives of the Government and the contractor, it was decided that it was more prudent from a financial point of view for the Ministry to carry out the maintenance on the Project from the end of the Defects Liability Period.

Audit Comments

4.21 The MOU had stipulated that there would be a maintenance period of twenty five years for the executed works under the Project, divided into three separate and distinct time periods. The maintenance in these time periods was to be executed solely by the contractor and SPV, and jointly by both contractor and SPV. The Ministry believed that taking maintenance in house would have minimized total costs, but it is impossible to say whether in fact this outcome would have actually been cheaper, over the 25 year period, than might have been obtained through better handling and negotiation of a BOLT contract which included maintenance.

Chapter 5

Conclusion and Recommendations

Conclusion

As in any PPP arrangement, this project required a strong competitive process, in order for Government to obtain the best results in terms of price, quality and transfer of risk.

5.2 There was also the need to ensure that all contractual arrangements were in place, in order to minimize any disputes.

5.3 These requirements were not met where this project was concerned.

5.4 To ensure a competitive process, it is important that enough independent private sector companies participate. There are examples of projects in other countries where it has been asserted that a competitive outcome was not achieved because there were only one or two private sector companies in the market. It is thus imperative that a public entity considering entering into a partnering arrangement has a sound basis for:

- (i) making the initial decision to choose this approach to procurement;
- (ii) managing its implementation and long-term operation; and
- (iii) effectively carrying out its obligations.

5.5 The competitive process was weakened by:

- (i) short-comings in the project-approval and tendering phases, including the discussions on technical solutions and the scope of the project with a potential bidder prior to the

issuing of the invitation to tender and the brevity of time given to the invited firms to tender;

- (ii) the low number of bids submitted; and
- (iii) the failure to engage in negotiations with the competing firms after the submission of proposals, in order to obtain the best possible offer.

5.6 By virtue of having submitted a proposal before the invitation letter was issued to other bidders, the firm which was awarded the contract had more time to prepare a proposal, and therefore the integrity of the tendering process is questionable.

5.7 Whereas the invitation letter addressed the widening of the Highway from the D'Arcy Scott Roundabout to the Garfield Sobers Roundabout, the two bids submitted addressed only segments of this section of the Highway. The proposals therefore did not conform to the full requirements of the Project and should have been rejected.

5.8 The assessment process was weakened by the absence from the evaluation criteria of a consideration of (a) the project costs provided in the proposals, and (b) the financing plan that would have been more beneficial to Government.

5.9 The commencement of works without full designs, and therefore a realistic construction cost, contributed to the disagreements between the contractor and the Ministry. Construction costs have soared and the parties could not agree to a final cost. If the Ministry had awaited the full designs and final construction costs it would have been able to evaluate the project costs, determine before the construction commenced whether the costs were reasonable, and avoid the issues that the project has encountered with respect to cost. It was not possible to sign a formal

Design/Build/Lease Contract, because there was no agreement on the cost of the Project.

5.10 It is therefore unclear why the Ministry thought it necessary to proceed with the Project under such uncertain conditions, when the original project completion date could not be achieved. The Ministry has however implied that it did not have full control of the Project.

5.11 Another short-coming with regard to the project was the unfamiliarity of the Ministry with the BOLT process. Its capacity to make good decisions would have been improved through the use of some external expertise familiar with the PPP arrangement.

5.12 The over-riding message for any Ministry that invests in a major project is to have sound and enforceable contractual arrangements - to enable the contractor to be held accountable. Ministries should also ensure that they obtain technical advice on areas in which they do not have expertise.

Recommendations

5.13 The scope of works for projects of this nature should be researched and finalized before tenders are invited.

5.14 Potential bidders should be granted adequate time to prepare bids.

5.15 With respect to direct invitations, the Ministry should ensure that the tender invitation is available to a wide market of firms with capacity to undertake such projects.

5.16 The Ministry should ensure that the tender process is fair and its integrity is maintained.

5.17 In any future PPP arrangements there should be more discussion with all bidders before a preferred bidder is selected.

5.18 Where only two viable bids for a project are received early on, or if bidders pull out of the competition, leaving the procuring authority with only two bids to choose from, there should be a review by the Ministry as to whether:

- There are any defects in the scoping or management of the project that may explain the low level of market interest, and that could be remedied in time for a re-run of the competition; and whether
- The bids on the table provide for good competition, and are likely to lead to a value for money solution.

5.19 A public sector comparator should be prepared to determine whether executing the project as a PPP offer better VFM than traditional procurement

5.20 All necessary contractual arrangements should be in place prior to the start of work.

5.21 There also needs to be greater emphasis on developing skills in conducting negotiations in PPP arrangements.

5.22 The Ministry or the Tenders Committee should seek to ensure that a bidder has the capacity to fund, execute and successfully complete a project of such magnitude before being selected as preferred bidder.

Appendix 1

Criteria used by the Evaluating Committee for evaluating the proposals

<u>Criteria</u>	<u>Points</u>	<u>Weighting Factor</u>
Understanding the Project to be undertaken	0-10	2
Proposed plan of design, implementation and execution schedule	0-10	3
Type of approach and proposed methodologies	0-10	3
Contribution/Services of local firms	0-10	2
Firm qualifications and experience of proposed staff	0-10	3
Financing plan to ensure that the project can be implemented on schedule	0 or 10	4
Language proficiency	0-10	1
Action plan to prevent, mitigate and compensate for any environmental impacts	0-10	2

GLOSSARY

TERMS	DEFINITIONS
Bill of Quantities	A document itemizing the materials, parts and labour (and their costs) required to construct, maintain or repair a structure or device.
Memorandum of Understanding (MOU)	This is a document describing an agreement between parties that indicates an intended common line of action.
Public Sector Comparator	An estimate of what a project would cost if traditional procurement methods were used. This is used to determine whether private finance offers better value for money than traditional procurement.
Special Purpose Vehicle (SPV)	This is a company that is incorporated to execute the project, by a contractor or financier.
Traditional Procurement	A construction contract in which the client pays the contractor as the work progresses. Such projects are fully paid for on completion. Maintenance is dealt with usually by the client.
Value for Money (VFM)	A term used to assess whether or not an organization has obtained the maximum benefits from the use of its resources.