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**For immediate release**

## **Key findings from *Management of the Holyrood building project***

The Auditor General for Scotland, Robert Black, today published his report into the management of the Holyrood building project.

This paper contains the key findings section of the report.

### **Key findings**

1. The subject of my report is the management of the project to provide the new Scottish Parliament building (the Holyrood project):

- Part 1 briefly describes my previous reports on the Holyrood project.
- Part 2 outlines what has happened to the project since my report of September 2000.
- Part 3 examines why the project was not completed by the earlier target of December 2002 and why there was subsequent slippage in the programme.
- Part 4 concentrates on why forecast project costs more than doubled from £195 million<sup>1</sup> in September 2000 to £431 million in February 2004.
- Part 5 assesses the management and control of the Holyrood project in the four years since my 2000 report.

2. The Holyrood project was an extremely difficult and complex building project. The estimated cost increased by some £220 million and there has been 20 months slippage over the last four years. In examining why this happened, it is important to take account of the quality of the building, which seems likely to satisfy the high standards specified in 1998.

3. The difficulties of delivering the Holyrood building using the 'construction management' method of procurement lie at the heart of the problems that arose. In my 2000 report I commented on the strengths and weaknesses of the construction management method of procuring building projects. I drew attention to the fact that with this method most of the risks stay with the client rather than transferring to the contractors.

4. My report concerns the management and control processes applied to the Holyrood project. This includes the role of the Holyrood Progress Group but my report focuses on the performance of project management for which the Principal Accountable Officer of the Scottish Parliamentary Corporate Body is responsible. In undertaking this examination I did not seek to form an opinion on whether any individual contractor has been at fault. Project management is responsible for managing its consultants and contractors and assessing their performance.

- The client is the Scottish Parliament Corporate Body on behalf of the Parliament. The Holyrood Progress Group has assisted the Corporate Body in its functions as client.
- Project management in this case is the Chief Executive of the Parliament (who is the 'project owner') and the project team under the leadership of the project director. Project management is responsible for managing and delivering the project with advice and guidance from the Progress Group.
- The design team are the architects and the other consultants appointed by project management. The architects are EMBT/RMJM Limited, which is a partnership between architects based in Barcelona and Edinburgh. The other principal design team members are Ove Arup and Partners and RMJM Scotland Limited.
- The cost consultant and quantity surveyor is Davis Langdon and Everest.
- The construction manager is Bovis Lend Lease (Scotland) Limited. They are responsible for coordinating the design team and the organisation of the site. They also manage all construction works contracts, but the client remains the employer for all contracts.

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5. Lord Fraser was appointed in June 2003 by the First Minister and the Presiding Officer to conduct an inquiry into the Holyrood project. My report will be available to Lord Fraser as he prepares his report which is due for completion in September 2004.

### **Slippage**

6. The main cause of the 20 months delay to the project since September 2000 was the production of detailed design variations and the late supply of information during the construction process.

7. There were difficulties associated with the construction of a very complex, densely developed, unusual building against very tight deadlines. In some cases trade contractors were responsible for some elements of design. Both the architects and some trade contractors did not deliver on time some critical elements of the design work.

8. Project management required a very demanding timetable for completion. The construction manager consistently sought to achieve the required early target completion dates, although with the benefit of hindsight the programme set in December 2000 for completion by December 2002 was probably unachievable. By September 2002 or April 2003 the construction manager and project management should also have recognised its targets were unlikely to be achieved.

9. Project management should have done more to address the root causes of problems, which were adversely affecting the cost and programme. The construction manager repeatedly prepared construction programmes, which included assumptions and commitments by the design team and contractors that were subsequently not achieved. Under construction management the client ultimately bears most construction risk. As slippage became evident project management did test each new revision of the programme and sought to ensure that the design team, the construction manager and the trade package contractors had the resources and commitment to deliver on time. But it was unable to find the means to manage these risks effectively.

### **Cost increases**

10. The client did not significantly alter its requirements after the middle of 2000. The size and layout of the building were not materially altered. But the cost of realising this design escalated enormously.

11. The main reasons for construction cost increases after 2000 were design development and delay in the construction process. The design development was entirely related to realising the detail of the building and aspects such as the quality of finish and the palette of materials that were used, in accordance with the client's requirements. Construction costs (including irrecoverable VAT) account for 72% of the £431 million total project costs. Between 2000 and 2004 construction cost estimates (including VAT) rose from £140 million to £311 million, an increase of more than 220%.

12. Detailed development of the approved design added £80 million (including VAT)<sup>2</sup> to construction costs. Design development is the process when the design of a building evolves in parallel with the tendering and appointment of contractors and subsequent building work on site. Design development carries a risk of cost increases. There should be adequate allowance for this risk when the design and its costs are approved at 'Stage D' of the architectural design. The risks should then be managed. In the Holyrood project, however, design development has driven up the costs. For this project, design development became a process of costing a developing design rather than developing the design within a cost limit.

13. Because many of the works packages were let when there was uncertainty about the work involved, it was difficult to achieve good competition and deliver value for money. My examination included a review of 20 of the main construction contracts for the Holyrood project, representing 56% of the estimated construction cost. Thirteen of these 20 major contracts had three or fewer tenders. This was an unusually low number for contracts of this size. For 11 of the 20 major Holyrood contracts examined there was significant uncertainty about the detailed design at the tender stage. In normal contracts most of the costs are fixed at the point when the contract is awarded, but this was not possible in these contracts because significant parts of the design and/or the full extent of the works had not been determined at that point. This restricted price competition and led to much more negotiation with the contractors than was desirable.

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<sup>1</sup> Equivalent to £209 million including £14 million estimated landscaping costs in 2000.

<sup>2</sup> Estimate by Audit Scotland based on the audit examination.

14. The decisions to award contracts with a large degree of uncertainty were the result of the client's programme requirements. By awarding contracts for work with uncertain scope and design the client was in a weak position to resist subsequent claims from contractors for extra time-related costs. And in cases where the performance of trade contractors might not have been satisfactory there was little opportunity to attribute delays to these individual contractors because of delays occurring elsewhere in the overall programme.

15. The uncompetitive procurement of works packages has allowed contractors' claims for prolongation (ie, the extra costs of doing work over a longer period), disruption and delay, which have added £86 million (including VAT)<sup>2</sup> to the construction costs. It is not possible to say how much more it has cost to procure work priced mainly by negotiation with single contractors rather than work obtained through competitive pricing of work. The costs for disruption and delay are not for improvements in the design specified by the client or extra features that added value to the project. These extra costs are the consequence of not fully preplanning the construction works.

### **Project management and control**

16. Although it is likely that a high quality building is being delivered, the time and cost objectives have not been met. The same quality could have been achieved for less if the whole design and construction process had been better executed. In any construction project it is necessary to balance quality with time and cost. In 1998 the client required that the building should be completed by summer 2001. Time was a priority. Quality has been equally important throughout the project. The client also set cost limits that applied in the early stages although it was unclear about how important cost was compared with time and quality.

17. The organisation of the Holyrood project should have had a single point of leadership and control where decisions could be taken about how to balance time, cost and quality as part of the client decision-making process. Leadership and control of the project was not clearly established. Normally leadership and control should reside with the project director (sometimes called the project sponsor) who is a key member of project management. The client gives the project director the responsibility for making the project happen. In the Holyrood project there was no single point of leadership and control. Responsibility and accountability for managing the individual aspects of time, cost and quality was not clearly allocated between the various different parties.

18. The parties leading the project did not fully agree a cost plan. In April 2000 the Parliament had set a £195 million budget for completing the project. In my 2000 report I recommended that project management, the design team and the construction manager should agree a cost plan to provide a sound basis for managing the remaining stages of the project within this budget. Although a draft plan was prepared in Autumn 2000 most of the information in it was an indicator of the costs rather than a reliable estimate of the costs.

19. Project management and the client did not use normal budgetary control procedures to allow a balanced consideration of affordability, quality and time in the decision-making process. In June 2001 the Parliament approved a motion that can be interpreted as removing the previous overall budget constraint of £195 million. After this decision by the Parliament, project management did not establish an alternative overall budget or approved cost ceiling that would allow the costs of the project to be properly managed. Because there was not a budget based on sound cost estimates after June 2001, there was a risk that project management would concentrate on achieving high quality and tight deadlines without taking full account of the cost implications.

20. There should have been better cost reporting and financial control. In my 2000 report I recommended that project management should review and report project costs regularly (monthly) to the client on a comprehensive and systematic basis. The Accountable Officer advised the Audit Committee in October 2000 that he had implemented this recommendation. But subsequent financial reporting of the project was not always comprehensive or systematic. For example, regular reporting to the Parliament's Finance Committee of the total estimated costs of the project (including, for example, the landscaping costs) did not start until July 2003.

21. Risk management for the Holyrood project was not good practice. In my 2000 report I concluded that accounting for risk was insufficient. I showed that contrary to good practice there was no quantified allowance for the major risks facing the project. I recommended that this should be established and the results used as a basis for an action plan to manage the risks. Project management introduced a process for quantifying risks from October 2000 and then conducted a number of risk reviews. However, in the Holyrood project the general approach was to accept cost increases and include them in the forecasts as the risks materialised. Because there was no agreed budget limit after June 2001, there is little evidence that forceful action was taken to prevent or reduce the increases in cost.

22. In my opinion project management could have taken more action at an earlier stage to control expenditure on consultants. In my 2000 report I suggested that before they appointed consultants, project management could have explored more carefully alternative fee arrangements including financial incentives linked to delivering value for money. Percentage fees do not align the objectives of the client with the commercial objectives of the consulting firms because the more a project costs the more consultants are paid. In 2000 the estimated fee cost was £23 million<sup>3</sup>, approximately 19% of the approved £119 million construction cost including contingency at that time. The client secured fee capping for one of its consultants in 2000 and for the other consultants in 2003. Fee costs are now forecast at £50 million<sup>4</sup>, 19% of the approved construction cost.

23. The Corporate Body limited its exposure to increases in consultants' fees in 2003, but this was very late in the programme, after the fees had increased significantly. The agreement to the fee capping at this late stage in the project did not provide a timely incentive to consultants to control costs and programme. Prior to fee capping in July and August 2003, there was no regular reporting of the significant expenditure on the consultants' fees for the Holyrood project. Project management did not seek to convert its construction manager's fee to a fixed lump sum before July 2003 although a clear opportunity to pursue this was available from 2000.

24. Although project management raised some significant questions about some aspects of some of its consultants' work, it should have systematically assessed their performance. An assessment was needed to safeguard public funds and to ensure fee costs provided value for money. If project management was able to show there had been significant underperformance by any of its consultants there may be options for recovering some of its additional costs.

25. Construction management is an unusual method of procuring construction projects in the public sector and it has not been used before for a major public building project in Scotland. The experience and expertise in construction management was not present in the early stages of the Holyrood project and therefore the risks and challenges were not fully appreciated by the client and project management.

### **Lessons from the Holyrood project for public sector procurement**

26. In the recent history of Scotland there has not been a public building project as complex or as difficult to deliver as the Holyrood project. The main lesson is, however, one that could be applied to all significant building projects, namely that the form of contracting must always be chosen with care, with a sound appreciation of the risks and benefits of each of the procurement options.

27. The different forms of contracting are intended to transfer risk to those best able to manage it. Under construction management, where design is incomplete and uncertain when construction starts, the risks stay with the client. It is essential therefore that the client manages design development and has a project team that gives a key role to professionals who are experienced in this construction method.

28. In general, however, construction management is unsuited for most building projects in the public sector. There is sound advice available from several sources in government and the construction industry on different forms of contracting.

29. In recent years the Office of Government Commerce has introduced 'gateway reviews' for major public sector procurement projects. These reviews allow for a qualified team to scrutinise the business need for a project at key stages in its lifecycle, before key contracts are awarded, to provide assurance that it can progress successfully to the next stage. This process is now applied across government<sup>5</sup>.

30. In all projects, care should be taken to put in place a payment regime that provides incentives to contractors to perform against clear targets for quality, time and cost.

31. In complex public sector projects, the client should ensure that there is a single point of control and leadership for the project, with explicit authority and responsibility given to the person in charge.

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<sup>3</sup> Excluding site organisation costs of £5 million in 2000.

<sup>4</sup> Excluding site organisation costs of £18 million currently.

32. In all major projects there should be an agreed project budget and a set of key performance indicators that should be used to measure performance during the life of the project. For example the performance that is being delivered in relation to cost, time and quality can be compared with the performance that has been delivered in similar projects elsewhere.

33. Whatever construction method is chosen, sufficient time should be available for the planning stage, before construction starts. Good planning will involve (a) getting the construction sequence right to avoid delays and extra costs, (b) assessing and managing project risks and (c) using value management to assess the contribution of each part of the construction process to remove waste and inefficiency. There must always be sufficient time for procurement to allow the client's requirements to be adequately defined so that it may obtain fixed and firm prices for the work in a competition.

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Note: copies of the full report are available on the Audit Scotland website ([www.audit-scotland.gov.uk](http://www.audit-scotland.gov.uk)).

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<sup>5</sup> The decision to proceed with Holyrood was made before the requirement to follow the gateway process was introduced.