

# **INTERIM REPORT**

**SURVEY OF COST PERFORMANCE**

**of**

**BUILDING WORK**

**under the**

**GDLA AGREEMENT AND CONDITIONS OF CONTRACT**

*for*

***THE SOCIETY OF CHARTERED SURVEYORS***

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## **Background and Brief**

In May 2004, the Minister for Finance, Mr. McCreevy, announced his intention to make amendments to the terms of the standard public sector contracts to allocate risk to those best able to manage and control it. This will involve shifting responsibility for managing and controlling identified risks from the public sector to contractors.

The Society of Chartered Surveyors gave a qualified welcome to the Minister's proposals.

It became apparent to the Society from discussions between the Forum for the Construction Industry and the Department that he views the current contracting arrangements as failing to achieve cost certainty, which prompted the Society's officers to query as to whether this view is correct in relation to building construction contracts using the standard GDLA 82 form. The Society felt the Minister was looking at cost certainty from the perspective of budget forecasts as well as tenders.

In order to give a more valuable response to the debate, the Society decided to commission this survey of applicable State Bodies on the cost performance of State-funded building contracts over €1m in value at 2004 First Half prices let under the GDLA Conditions and practically completed in the four years to the end of July 2004.

## **Summary**

Following enquiry to State bodies and private quantity surveying practices, data on 130 projects covering a wide range of building types and with a combined value of €¾ billion was received. After adjustment to bring all projects to a common basis, the final cost was found to exceed Accepted Tenders by average 2½% and to exceed Budget Estimates by average 4%.

There are many reasons why the cost of a building can vary as it progresses from budget estimate to completion. Examples of those that occurred are given. They were often unpredictable, but in a small proportion of cases might have been foreseen or minimised. It is notable that the swings and roundabouts that make up these averages more or less cancelled out overall.

## **Enquiries and Processing**

### Enquiries

Government Departments and the like and private quantity surveying practices were requested to provide information on individual projects by completing a questionnaire. An undertaking was given that, insofar as practicable, neither the project, the State body nor the practice could be identified in the Report. Semi-State bodies were not approached. The information asked for was:

Building type;

Amounts of Budget Estimate, Accepted Tender and Final Account;

Whether a contingency sum was included in the Budget and in the Tender;

Whether the Accepted Tender included buy-out of the Price Variation Clause;

Dates of Budget Estimate, Tender and Practical Completion of the contract work;

Noting of anything else significant.

The response was quite good and overall satisfactory in that information on 130 projects was received covering all the principal building Departments, a wide range of building types, e.g. second level schools, university buildings, hospital buildings, garda stations, offices, warehouses, residential, library, fire station, courthouse, and a mix of new and refurbishment.

The total value of the 130 projects was €792m at 2004 First Half prices, made up of 36 of €1m to €2m, 52 of €2m to €5m, 33 of €5m to €10m and 9 of over €10m.

The initial enquiry proved to be too superficial to complete the research, so further information on all projects was sought and received up to late April. The additional information received included more about inflation and contingency provisions, whether the project was new-build or refurbishment, reasons for significant variations in cost and some particulars of mechanical and electrical services.

The help and co-operation of the respondents, which sometimes included open book access, is much appreciated.

## Adjustments to the Data Provided

The information in the responses was not comparable in that:

Future cost/price inflation was allowed for in some Budget Estimates and Accepted Tenders but not in others,

Provision for contingencies was made in some Budget Estimates and Accepted Tenders but not in others and in some cases where provided for it was excluded from the figures but allowed for below the line.

Mechanical and electrical services amounts within some main Accepted Tenders were based on tenders, usually fixed price, while in some cases they were only provisional (based on prime cost sums). The net effect of this factor was considerably less significant than those of inflation and contingencies.

So adjustments were made to Budget Estimates and Accepted Tenders as necessary to put amounts for Budgets, Tenders and Final Accounts on the same basis, i.e. brought to the price level of the appropriate date, provision for contingencies made or brought above the line and, insofar as the information was available, tenders for services received after acceptance of (main) Tenders incorporated in the Accepted Tender amounts. Adjustments for cost and price movement were by the historical SCS Construction Cost Index and SCS Tender Price Index respectively. Rates for contingencies were as used by the relevant State body or, where none is customarily applied by it, rates in line with the other bodies.

## Main Conclusions

### Money Comparisons

In the following two Tables, (i) *average by project* means the results of individual project comparisons (e.g. Final Account versus Tender) totalled and divided by the number of projects and (ii) *overall weighted average* (given to account for each project being of different value from any other) means the total of all of one type of valuation (e.g. Final Account) divided by the total of all of another type (e.g. Tender).

In 14 cases, there was no Budget Estimate or its amount and/or date were not readily available or the Budget was for a programme of refurbishment of which the project was only a part.

**Overall Averages**

<b>All 130 Projects</b>	<b>Average by Project</b>	<b>Overall Weighted Average</b>
Accepted Tenders exceeded Budget Estimates by (116 Projects)	+ 1.72%	+ 3.06%
Final Accounts exceeded Accepted Tenders by (130 Projects)	+ 2.55%	+ 1.68%
Final Accounts exceeded Budget Estimates by (116 Projects)	+ 4.02%	+ 4.33%

One of the projects was much larger than any of the others, representing 18% of the total value of all projects at 2004 First Half prices. As it produced a better than average cost performance, the following table is given to show that its inclusion has not significantly distorted the averages.

**Overall Averages – The Very Large Project Excluded**

<b>129 Projects (The Very Large Project Excluded)</b>	<b>Average by Project</b>	<b>Overall Weighted Average</b>
Accepted Tenders exceeded Budget Estimates by (115 Projects)	+ 1.70%	+ 3.05%
Final Accounts exceeded Accepted Tenders by (129 Projects)	+ 2.59%	+ 2.55%
Final Accounts exceeded Budget Estimates by (115 Projects)	+ 4.04%	+ 5.22%

**Reasons for Variation in Cost**

Some notable reasons for variations in cost were:

**Increases in Final Account:**

Additional requirements, e.g. additional residential units, building fit-out;

Net increase in sundry variations in details of construction (including adjustment of provisional sums);

*Increases in Final Account (Continued):*

Problems found when existing buildings opened up; underpinning wall to street;

Trial holes or information on underground services missed the full picture;

Poor ground conditions; archaeology; contaminated soil;

Where Contractor defaulted - vandalism between contracts and making good defective work of first Contractor;

Wall and fencing to prevent dumping; additional security due to stone-throwing;

Some Bill of Reductions omissions reinstated;

Default of Nominated Sub-Contractors;

Tenders for windows or restoration of stonework higher than prime cost provisions (in one window case there was no market);

Only weeks of notice to have a builder on site;

An arbitration case where the State body felt the award against them was very excessive.

*Reductions in Final Account:*

Tender documentation took worst case scenario;

Roof repairs in lieu of replacement;

Tender for windows lower than prime cost provision.

*Differences between Accepted Tender and Budget Estimate:*

Scope increases or reductions;

Increases enabled by additional funding becoming available;

Unique and unfamiliar form of construction seriously over-estimated;

(Also, reasons not available or not enquired as thoroughly as for Final Accounts.)

The differences due to pre-tender price fluctuation and/or post-tender cost fluctuation have been factored out of the averages so that the comparisons between Final Accounts, Accepted Tenders and Budget Estimates can be on a like for like basis.

## Time Comparisons

The average time between the 116 Budget Estimates and receipt of Tenders was 8 months and the average time from receipt of Tender to Practical Completion for the 130 projects analysed was 19 months. In several cases there were substantial delays in accepting the tender, e.g. awaiting approval to proceed, delay in availability of the site, so the average time contractors were in possession of the site was less than the 19 months.

## Observations

Discussion of the issue that has prompted this Survey (the Conditions of Contract) and on a related and topical matter of cost over-run of construction contracts, are outside the scope of this Report, but a few observations arise from the research and its outcome.

Overall, the money comparisons show good cost control between committing to contract (Accepted Tender) and Final Account, also between Budget Estimate and Accepted Tender. The Survey also indicates that, where there was significant excess or saving on individual projects, there were often good reasons.

The Full Report will show that deviation from the average is less for new-build and more for refurbishment/alteration.

Different State bodies have distinct requirements and/or were shown to be subject to different circumstances, so the differing performances of individual bodies cannot be compared, for example:

- Have greater or less variety in building type;

- Have more or less standardisation of requirements for their buildings;

- Tend to have more or less new-build compared with refurbishment/alterations;

- Have more or less need for fast-tracking with limitations on stage by stage approvals.

In a small proportion of cases, differences in the figures (not necessarily affecting the final cost in real terms) could have been minimised if:

- Estimates were prepared (where there were none) or updated nearer to the time of tendering than the average of 8 months beforehand, to take account of the evolving requirements associated with building projects, each one unique;

could have been minimised if (continued):

Some variations were anticipated pre-contract;

Approval to proceed after tenders were received was given promptly, obviating price variation and other possible revision to tenders;

Specialist sub-contracts were tendered before the main contract was placed.

There are many reasons why tenders or budgets should vary from predictions, not least forecasting the market, but it is noteworthy that outcomes are up and down and, on balance, roughly in line with forecasts, rather than the largely up that some may have expected.

Within individual State bodies swings and roundabouts were largely absorbed by the averages, no doubt helped by their building programmes containing a considerable number of projects. Insofar as those variations in outcome arose from transferable risk, individual contractors are unlikely to have as many projects over which to spread such risks should they be required to take them on.

The broad information requested in the Survey was usually not readily to hand (investigation was required). It is suggested that a simple overview of cost and time from conception to completion of a project would be a valuable management tool for the organisations concerned and easy to set up and maintain.

While value-for-money is not for consideration here, nothing emerged to indicate that proper procedures in placing and administering contracts from this aspect were not followed.

### Full Report

The Full Report will follow in June, when a schedule of the projects, further analyses and more detail will be given. But the findings given here will not change.

### The Author

John Brownlee is a Chartered Quantity Surveyor. He had a varied career in the private sector, working for professional practices and a system building contractor, before joining the Office of Public Works as Senior Quantity Surveyor in 1976. As well as the more usual duties of a quantity surveyor, his work there included cost research and being a representative on several inter-Departmental working groups, including those for the establishment of the GDLA Conditions of Contract and its review. Since retiring from the OPW in 2002, he has been engaged in part-time private practice from Dun Laoghaire, Co. Dublin.