Davis, Peter R. and Stevenson, D. (2004) Understanding and Applying Guaranteed Maximum Price Contracts in Western Australia, in *Proceedings of the Australian Institute of Project Management 2004 National Conference*, Perth, 10-12th October, 2004. Australian Institute of Project Management, Perth.

Understanding and Applying Guaranteed Maximum Price Contracts in Western Australia

P. R. Davis[1], **D. Stevenson**[2]

[1] *Curtin University of Technology Perth WA*

[2] *Project Director INCOLL - Project Management Consultants*

Corresponding Author: Faculty of the Built Environment Art and Design (BEAD), Curtin University of Technology, GPO Box U1987 Perth WA 6845. Telephone +61 08 9266 7350 Facsimile: +61 08 9266 2711. Email: p.davis@curtin.edu.au

Summary

The aim of this paper is to develop an understanding of Guaranteed Maximum Price and review awareness and its application to building procurement in Perth, Western Australia. The objectives were to determine the definition of Guaranteed Maximum Price (GMP), establish the relevance of GMP to the building industry in Perth and ascertain advantages and disadvantages of GMP. A qualitative research methodology was adopted where in depth semi structured qualitative interviews were carried out (n=10). Research questions asked if there was a generic understanding of GMP, it investigated the advantages and disadvantages of GMP. It was found that there was no common understanding of GMP although there was a common principal that the price could not increase unless the client changed the scope. Further findings showed that GMP offered advantages over other methods of procurement that included price certainty for the client, a team approach to project delivery and faster completion. There were also significant disadvantages to contend with and these are described in the findings.

Keywords: Procurement, Guaranteed Maximum Price, Project Delivery, Construction

Introduction

A project is considered successful if the building is delivered on time at the appropriate price and quality level, and the client is satisfied. One of the main influences on these outcomes are the method of procurement implemented (Love et al 1998). Over recent years a myriad of innovative and unconventional procurement strategies have proliferated and their concepts and characteristics have been subsequently researched (Dawson 1988; Masterman 1992; Hellard in Latham 1994; Griffith in Lam and Chan 1994). Guaranteed Maximum Price (GMP) is one strategy that is currently popular in the building industry in Perth, Western Australia (WA). The intention of a GMP contract is to provide a lump sum contract under which there will be no change to the contract price unless the client changes the scope (Gander and Hemsley 1997). Whilst this concept appears straightforward in practice differences in opinion arise as to "what extent the price is guaranteed" and how much control the contractor has over design.

Although GMP is currently a popular concept there does not appear to be a common understanding of exactly what it is. Whilst the perception of GMP is that it is a type of lump

sum contract in reality it is considered as a method of procurement. GMP involves the combination of responsibilities of and relationships between the parties. The type of contract used in association with the relationships creates what is known as the procurement strategy (Davis 1998 and Chandler 1998). The literature revealed the following areas of focus relevant to GMP:

- Methods of Procurement
- Contracts
- Methods of Tendering
- Risk

The focus of this paper is on the method of the first point i.e., procurement.

Guaranteed Maximum Price

The review of literature found no concise definition of Guaranteed Maximum Price (GMP) but rather conceptual descriptions were discovered such as the following proposed by Gander and Hemsley (1997:38):

"The intention of the Guaranteed Maximum Price contract is to provide a lump sum contract under which there will be no adjustment of the tender price unless the scope required by the client changes."

GMP contracts are usually negotiated on conceptual documents rather than more definitive plans and specifications used for traditional competitive bidding. Reducing scope definition can make them more susceptible to differences of opinion concerning inclusions. The term "guaranteed maximum" is often believed to mean that the maximum price to be paid for the construction of the facility, regardless of scope revisions. This is a misconception that can lead to serious disputes and a false sense of meaning to clients (McNally 1997; Lucas 1998). Lucas (1998) suggests that client's and contractor agree to the circumstances that will increase the price. The best a client can expect is a fixed price subject to increase due to:

- The cost of any variations;
- The cost of any delay or acceleration due to acts of prevention; including those by the client or any certifier; and variations.

Advantages of GMP

Advantages of GMP contracts include (Gander and Hemsley 1997 and Hunt 1997):

- Greater price certainty for clients as the contractor normally includes a sum for future design development and for risks involved in any unforseen occurrence. Extras should therefore be restricted to scope changes requested by the client.
- GMP promotes pre-agreement of changes as its philosophy links neatly with a contractual requirement to pre-agree the cost and time implications of any potential changes.
- GMP provides greater control over spending as the contractor is bound to a maximum price. This alerts the team to any potentially expensive items of design development.
- GMP aligns the contractor with client and consultants encouraging team work with mutual trust and common goals.
- Less administration is required as changes are limited; there is quick settlement of the final account.
- GMP can deliver substantial benefits to the client that may lead to a partnering of alliance arrangement with a valued client.

Disadvantages of GMP

The following disadvantages of a GMP approach are proposed by Gander and Hemsley (1997) and Hunt (1997):

- The client might pay too much as the contractor takes on greater risk and thus includes in the price an allowance for design development and risk. Often a competitive price is sacrificed in lieu of appointing a contractor early.
- Contractor's with design and build experience may have useful knowledge. But it may not prove particularly appropriate as in those situations the contractor has clear control of the design consultants and the scope of information produced.
- There is no standard form of contract for GMP so there is a greater possibility of errors and misunderstandings of liabilities between the parties that may result in conflict.
- Scope changes tend to cost more, it is accepted that scope changes to design and build are more likely to be more expensive than with a traditional contract, the same can also be said for GMP contracts.

Project success related to GMP

In terms of success, Gander and Hemsley (1997), present the following recommendations for GMP contracts:

- Clarity of scope is critical. The client should sign off the brief at appropriate stages. The design team must clearly know what is required. Scope changes should be avoided as much as possible.
- The tender documentation must define exact requirements. Design should be progressed as far as possible and a minimal number of provisional sums included.
- The risk allowance included by the contractor for design development and construction risks should be shown as a separate sum with the contract defining how the extra cost is adjusted in the event of changes.

Research Method

The population comprised those (individuals and organisations) that had experience in GMP. A purposive approach was taken in limiting the population to those people with experience from working with GMP contracts. Those without such experience were excluded from the population as first hand experience was of paramount importance (Fowler 1995, Sarantakos 1996). An indication of the population was obtained by telephoning over 50 organisations including clients, project managers, architects, building contractors and lawyers. This initial phone call determined if they had any experience with GMP and if so they were requested to fill out the questionnaire that sought demographic information and the scope of projects undertaken together with the responsibilities of the potential respondent. A semi structured interview program was then devised with 10 respondents who were found to meet with the needs of the research question. The final sample of 10 comprised; 2 clients, 3 project managers, 2 architects and 3 builders (contractors).

Analysis of Field Study

The first question explored the definition of GMP. All of the respondents confirmed that there was not an appropriate definition of GMP. The common theme was that the contract price was

fixed to a maximum that would not be exceeded except if the client varied the scope. One respondent provided the following typical definition taken from a contract to hand.
"Guaranteed Maximum Price is the contract figure not subject to cost fluctuations nor variations other than those of a major change of scope requested by the principal or contemplated by the contract. The fixed price provision shall be deemed to include the work of all direct subcontractors and shall apply from the date of closure of tenders throughout the full contract period."
The respondents also held that as the definition of GMP was different for each project it needed to be clearly spelt out at the beginning. Accordingly, there would be an advantage in having a standard definition. The majority of responses were that GMP was a separate method of procurement and not simply an extension of a lump sum contract. The contractor is responsible for design and construction though the clients has input into design, unlike traditional design and construct arrangement. Further probing revealed this view was not so strongly held. GMP could be used with the traditional method or design and construct and was really a hybrid between the two with varying levels of design input/control by the contractor with the significant factor being whether the contractor had control over design.

Advantages of Guaranteed Maximum Price

A series of advantages gleaned from the literature were discussed in semi structured interviews. Table 1 indicates an analysis of responses from consultants (C), project managers (P), architects (A) and contractors (B). In all cases content analysis portrayed significant depth in the respondents' replies.

Table 1 Advantages of Guaranteed Maximum Price

	C1	C2	P1	P2	P3	A1	A2	B1	B2	B3
Greater cost certainty for the client	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Contractor control spending, introduce buildability		✓	?	✓	✓	✓	✓	✓	✓	✓
Less administration, quick settlement of final account		✓			✓	✓	?	×	×	×
Encourages scope definition		✓			?	✓	✓	✓	✓	✓
Encourages team relationship		✓	✓	✓	?	✓	✓	✓	?	✓
Time saving, guaranteed completion		?	✓	✓	✓	✓	✓	✓	✓	✓
Overlap of design and construction	×	✓	✓	✓	✓	✓	✓	✓	✓	✓

Legend ✓ agreed
× disagreed
? unsure
blank not mentioned

Greater Cost Certainty

Greater cost certainty for the client was the dominant advantage of GMP cited by respondents. Many said that this was the driving force behind the introduction and increasing use of GMP. The following reasons that price certainty was required by clients and influenced their decision making included:

- It allowed the respondents to fix their finance costs and secure finance.
- Price certainty for development projects was paramount enabling the building to be sold or leased before construction was completed.

Some of the respondents said that the client often required price certainty over and above lowest price. With GMP the client also knows the price earlier in the process often before documentation is completed. His aspect assists the client in financial management. Another advantage of the GMP was the potential for the final price to be less than the GMP which results in a saving for the client. It was considered savings were dependent on the contract allowing and encouraging the contractor to introduce savings. Savings were equitably shared in some instances.

Contractors used the guarantee of design and construction cost as a marketing tool. This reduced client risk, particularly where the contractor could directly negotiate with the client and avoid tendering.

Contractor's Control of Spending and Buildability

One of the greatest advantages was that GMP encourages the contractor to take an interest in the overall cost of the project. The amount that the contractor will be paid is fixed initially engendering control and good pro-active management to provide greater profit. If the contractor did not control cost its profit was at risk.

Some of the respondents believed that in practice the contractor did not significantly control cost or introduce buildability as they:

- rely on the architect;
- are not proactive;
- make simplistic decisions on alternatives and select the cheapest;
- have staff with limited design expertise and experience.

One respondent said that an advantage was where minor problems were resolved by the contractor and the designers at no cost to the client. Some of the respondents held that the success of the contractor introducing buildability was largely dependent on relationships between parties.

Reduced Administration

No clear consensus was reached, some of the respondents generally felt there was less administration whilst an equal number disagreed. An example was presented should the client ask for a variation. It was considered that the contractor may endeavour to maximise on the situation creating a lot of administration in its attempts to attain agreement. This would be followed by administration in attempting to reach agreement of an appropriate consideration. One Architect respondents found that while there was less paperwork between the contractor and client there was usually much more work and communication between the contractor and consultants with an example given of a project with 300 – 400 changes but not one documented change in price.

Scope Definition

The general consensus of the respondents was that GMP does encourage earlier definition of the scope. Some said that the scope had to be concisely defined but was generally described in performance terms rather than technical terms. Several respondents advised that it was necessary to define the scope early to avoid future problems.

Team Relationship

The respondents believed that GMP encourages better team relationships. The contractor, client and consultants all have to get together and ensure that they build the project for less than the GMP. One of the contractors said that GMP is teamwork. The concept is based on a multi disciplinary team working together to meet the client's objectives. Another respondent answered "GMP can be great if there is a team relationship and it is well managed. We all make a profit and the client gets what he wants. Everyone is a winner."

Time Saving - Guaranteed Completion

The respondents felt that the contractor had more motivation to complete the project quickly as the price was fixed and there was less opportunity to claim for extensions of time.

GMP achieved earlier completion by allowing more overlap of design and construction together with faster construction as the contractor has more control and seems able to make changes and introduce faster methods of construction and the close relationship between parties' means that details are resolved quickly.

Disadvantages of Guaranteed Maximum Price

A series of disadvantages gleaned from the literature were discussed in semi structured interviews. Table 2 indicates an analysis of responses from consultants (C), project managers (P), architects (A) and contractors (B). In all cases content analysis portrayed significant depth in the respondents' replies.

Table 2 Disadvantages of Guaranteed Maximum Price

	C1	C2	P1	P2	P3	A1	A2	B1	B2	B3
Client pay too much contractor includes premium for risk	×	×	✓	?	?	✓	✓	×	✓	×
Difficult for client as no standard form of contract		✓	×	×	✓	×	✓	✓		✓
Not a common understanding		✓	×	✓	✓	✓	✓	✓		✓
Scope changes tend to cost more	×	×	?	×	?	✓	✓	?	?	×
Contractor needs to be appointed earlier	✓	×	×	?	?	✓	×		×	×
Quality may be compromised	×	×	✓	✓	?	✓	✓	✓	?	×
Consultants have two masters	?	×		✓	×	✓	✓	✓	?	✓
Capital costs minimised at expense of running costs	?	✓	✓	✓	?	✓	✓	✓	?	✓

Designs inferior performance or architecturally	?	?	✓	✓	?	✓	✓	✓	?	✓
Client's control over design is compromised	×	✓	✓	✓		✓	✓	?	?	✓
Client may have to employ independent consultants		?			✓		✓		✓	
Contractor often not skilled at managing consultants		?	✓	✓	✓	✓	✓		?	✓

Legend ✓ agreed
× disagreed
? unsure
blank not mentioned

Premium for Risk

The respondents indicated that in theory the client pays a premium for transferring risk to the contractor, however this is market dependent. It was acknowledged that if the price was negotiated with one contractor then there was potential for the client to pay a premium.

An interesting point was that clients do pay a premium for GMP though it may not be a cost premium. In a competitive market it is more likely to be a quality premium (i.e. quality will be compromised to maintain cost).

One of the project managers referred to a case where the client rejected his recommendation for a GMP (on the basis that the tenderers would add a premium). They called tenders on the basis of two prices one for a lump sum contract and one for a GMP contract and were surprised to find that most of the tenderers submitted the same price for each type of contract. This inferred that the client did not pay a premium for GMP. One of the clients advised that he is using GMP and transferring as much risk as possible to the contractor.

One contractor said that it is also very difficult to put a monetary value on "the GMP factor". It is dependent on the quality of documentation and the future relationship with the consultants and the client. The project managers emphasised the importance of a thorough evaluation of GMP tenders and the pitfalls of appointing a contractor for a price that was too low.

Requirement for Standard Contract

It was found to be unfortunate that there was not a standard contract for GMP. A standard contract would provide consistency, in contrast to the current situation with a myriad of hybrid and custom contracts in use. Some thought it would be difficult to have a standard contract as each project and client was unique. Another issue is that the contract was generally drafted and administered by the client's representative and "what they thought the contract said may not be what it actually said."

Lack of Understanding

The fact there was not a common understanding of GMP was seen by most of the respondents as a disadvantage, as the parties based their perceptions on their previous experiences which were all different. It was important to come to a common understanding early in the contract to avoid future conflict. The contractors believed it was a problem because they were competing with other contractors for the project and the more experienced contractors would allow in their price appropriate risk whereas their less or inexperienced competitors would not.

Scope Changes
In theory the client may pay a premium for scope changes particularly if the contractor (or subcontractor) was suffering financially and decided to "go for broke" when the opportunity for a variation arose. They believed however that it was dependent on how well the contract was managed rather than the type of contract.

Contractor's Appointment Date
Although it could be a disadvantage to appoint the contractor early forcing the client to commit to construction. Most respondents tended toward the contrary view that this situation provided greater opportunity for the contractor to provide input and introduce buildability. Earlier appointment of the contractor also allowed design decisions to be tested, by the contractor getting quotes from subcontractors.
Whilst the respondents admitted that the client may pay a slight premium they saw a greater benefit in that the contractor would have a greater understanding of the client's requirements and the design.
Some respondents also advised that the contractor did not have to be appointed earlier and can be appointed after design and documentation has been completed. GMP allows flexibility of appointment.

Consultants have Two Masters
This was an interesting point as it depended on how the designers were appointed with the following three options presented;
1. The designers are appointed by the client
2. The designers are appointed by the contractor
3. The client appointed the designers then novated them to the client.

For cases 1 and 2 it was found that clearly the consultants have only one master that is "the one who is paying them." The contractors felt that they could not really be responsible for and successfully manage the design unless they had control of the designers.
In the case of novation where the consultants were transferred from the client to the contractor there was potential for the two master's syndrome. The Architects cited cases where they had developed the concept with the client and later when they were contracted to the contractor it would changes things that the Architect believed client would not want. In this case the Architects had a dilemma.

Quality
The respondents felt that while there was the potential for quality to be compromised it could be managed and was not necessarily the case. One project manager said that designers could take a less professional approach and just document something the contractor accepted which was not always best for client. There was also potential for poor quality documentation.
The Architects believed that with a GMP quality was always compromised, particularly if the contractor employs the consultants. GMP gives guaranteed price but not guaranteed quality. If a contractor is appointed on concept design and given responsibility to complete design then the quality will suffer. The client doesn't always know if the contractor makes changes. The contractor can downgrade the quality of construction or materials where it is not obvious or not seen. One of the contractors agreed indicating that in some cases savings have to be found.

Minimum Capital Cost at the Expense of Running Cost

Generally the respondents believed that GMP encourages minimum capital cost at the expense of running cost, (however this was really attributable to design and construct rather than specifically GMP).

The respondents maintained that it was the responsibility of the client or project manager to manage to ensure the performance of the finished product. The detrimental effects of this could be minimised by careful selection of the team and requiring approval of all changes proposed by the contractor.

Poorer Design

The Architects believed that making design competitive and allowing the contractor to control it resulted in inferior design. One Architect even said that design and construct was the worst thing that happened to Architecture.

In order to avoid compromised design the Architects believed that the designers should be contracted to the client and not the contractor. They accept that the contractor should have influence over the design as long as it was not to the detriment of the project or client's expectations and that a team-based relationship could achieve this (rather than the consultants being contracted to the contractor).

Client Control Compromised

It was acknowledged that where the contractor had control of the consultants and responsibility for the design the client had obviously given up some control. Most felt that it could be minimised by the requirement that the client or project manager must approve all changes to the design.

Having the contractor take over the design and consultants was seen as an advantage where the client wanted input into the concept but was not concerned about the detail, which was why GMP was popular with developers.

Contractor Not Skilled at Managing Design

Most of the respondents felt that contractors tended not to be skilled at managing design as they do not have the staff with design management expertise. They are also focussed on construction and often don't have time to evaluate and improve the design.

Conclusion

Any research should include a comparison of the researcher's work with literature, (Riley 1990). The key areas covered in the literature review and field study are discussed below.

Definition of Guaranteed Maximum Price

The field study confirmed that there was no uniform discrete definition of GMP. The common opinion of the respondents that "the (guaranteed maximum) price for the design and construction would not increase unless the client requested a change in scope" was however aligned with the literature, (Gander and Hemsley 1997 and Australian Encyclopaedia of Forms and Precedents Building and Engineering Contracts).

Advantages of Guaranteed Maximum Price

The field study and the literature review both found that the primary advantage of GMP was price certainty for the client. Another key advantage of GMP identified in the literature review,

that the contractor takes a greater interest in controlling cost (as increased cost means reduced profit) was confirmed by the field study. The benefits of teamwork encouraged by GMP espoused by writers were confirmed by the respondents, some of whom emphasised that it was the very essence of GMP.
Other aspects of GMP that were identified as advantages by both the literature review and field study were:

- scope was fully defined earlier in the process,
- the overlap of design and construction saved time and
- construction time was shorter as the contractor had more control.

The field study did not concur with the literature that there was less administration with GMP contracts. The respondents held that though there might be fewer variations each usually required more work. The contractors also maintained that they had to administer the costs of the project even though they did not affect the (head), contract, which coincided with the view of McNally (1997).

Disadvantages of Guaranteed Maximum Price
The potential for the client to pay a premium was identified by the literature; however this was not supported by the respondents. This was evidenced by the case where a project received identical tender figures for options of lump sum and GMP. Obviously it was dependent on the method of letting the contract and in the case of direct negotiation with one contractor there was the potential to pay a premium for transferring the risk.
The field study and literature review both found the following disadvantages of GMP;

- No common understanding - perceptions based on previous experience and differences resulted in conflict.
- No standard form of contract - with the myriad of custom contracts causing confusion and conflict.
- Quality may be compromised - as the contractor has more control over design.
- Capital costs are minimised at the expense of running costs, to produce minimum design and construction cost.
- The client's control over design was compromised - as the contractor had more control.
- The contractor was often not skilled in managing design as it did not have the design staff or orientation (focus on construction).

In contrast to the literature the respondents believed that:

- scope changes did not necessarily cost more and could be managed and
- earlier appointment of the contractor was an advantage rather than a disadvantage.

Recommendation

It is recommended that a standard definition be developed. It is accepted there would be difficulty in reaching consensus the basic concept of price being capped unless the client changes the scope is consistent.

A draft definition;
"The Guaranteed Maximum Price is the contract sum that shall only increase if the client instructs a change in the scope or in the case of the following circumstances agreed by the parties"
The parties would then list the circumstances that could increase the contract sum. A standard list of items could be developed to ensure that the parties considered them, which may include:

- Errors and omissions in documentation
- Latent conditions
- Industrial action
- Delays (beyond control of the contractor)
- Changes to statutory regulations

There are certain situations best suited to GMP procurement – the respondents found that projects suited to GMP had the following characteristics,

- Cost certainty was a primary objective
- Time was a primary objective
- The scope was fully defined
- The project was simple
- It was a development project
- The parties had previous experience in GMP contracts
- There was a good team based relationship between the parties
- The personalities were appropriate (fair, reasonable and empathetic)

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