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CHOOSING AN APPROPRIATE MAIN CONTRACT FOR BUILDING WORK IN THE REPUBLIC OF IRELAND - AN OVERVIEW

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‘The difficulty about a gentleman’s agreement is that it depends on the continued existence of the gentlemen’ - Architect Ronald Green quoted in Clamp, Cox and Lupton. (2007)

Introduction

Successful building projects are those which are delivered to the required quality standards, safely, on time, and within the approved budget. Effective project management seeks to ensure that these objectives are achieved: choosing an appropriate contract arrangement is a key element in this process.

Although contracts can be made by word of mouth or by conduct, it is difficult to prove what has been said or done unless some form of record has been kept. In order to succeed in an action in contract, the burden of proof rests on the claimant to show, that on the balance of probabilities, his or her case is valid. It is very important therefore, that a record of the bargain struck by the parties, the details of the work, and the rights and obligations of the parties are clearly expressed in writing. The importance of written records cannot be overemphasised as these are usually the only evidence of what exactly had been agreed. Once these terms are incorporated, they reduce the likelihood of disputes which can, in turn, lead to legal action. As Murdoch and Hughes (2008, p. 105) point out ‘*contracts are drawn up with the intention of relying upon them in a court of law at some point in the future*’.

Latham (1994) explains that the choice of contract conditions is a matter for the client, who arranges the funding for the project and/or pays for it. Where both main parties in the process - employer and contractor - are equally matched, the choice of contract conditions may be mutually agreed. In practice, however, market forces usually make one party dominant. Most contracts for substantial building projects are selected by clients, frequently on the advice of their design team and/or quantity surveyor, who is often viewed as the expert in this area. Ramus, Griffith and Birchall (2006, p.51) warn that ‘*using an inappropriate standard form of contract for a project is dangerous. It will often mean that objectives in terms of time cost and quality are not fully realized and that the likelihood of disputes will increase.*’ Quantity surveyors must, therefore, have a

working knowledge of the suitability of the various contract options. The various standard forms reflect the specific priorities of their authors and each allocates risk in an individual manner. In the context of the Republic of Ireland where there is a somewhat limited, but expanding, choice of 'indigenous' standard forms of building contract, it is very easy to develop a mindset to recommend a familiar form. Clients' interests, however, are better served by choosing an appropriate form rather than a convenient one. No single form of contract is always better than another – and the eventual choice will depend on the particular circumstances. It is important for surveyors to remain impartial, the recommended contract should be that which offers the greatest value to a client. For example, it may suit a particular private sector client to use a contract similar to the GCCC Public Works Contract.

The expanding range of contract options suggests that a more formal decision-making approach is prudent to ensure that appropriate choices are made, particularly where a client requires a rationale for the recommended contract strategy. Clamp, et al. (2007) for example, discuss the need to establish a contract profile such as a radar diagram which may suggest where the design responsibilities are to rest, their extent, the most suitable procurement methods and contract procedures. This in turn will affect tendering arrangements and the amount and form of information which tendering contractors will need. Park (1994) has developed a matrix which maps client priorities to likely suitable procurement options. This approach is examined under client risk attitude below.

The issue of construction contracts is topical. *The Construction Contracts Act 2013* has been enacted on the 29th July of this year. The Act aims to tackle the issue of non payment to construction contractors who have completed works. Minister of State Brian Hayes TD, remarked that many construction contracts are '*far too imprecise*' and not cost effective. He stated that '*the Government is committed to protecting small building subcontractors that have been denied payment from bigger companies*'. (Houses of the Oireachtas, 2012). The Act applies to non-residential construction contracts in excess of €10,000 and residential contracts over 200m² in area. It provides for specified payment amounts at specific intervals during the construction phase, prohibits pay-when-paid clauses, introduces a right to suspend work where payment is not made by the due date and provides for adjudication procedures to resolve payment disputes in a speedy manner.

The impact of procurement strategy on contract choice

The choice of a compatible form of contract is intimately linked to the overall procurement strategy developed for a project. A brief outline of the main procurement systems is included below to provide the context to contract selection; the reader is referred for further information to the numerous textbooks and publications which examine this topic in greater detail. The following are useful sources: Cartlidge, 2013, Chapter 4; Capital Works Management Framework Guidance Note GN-1.4, 2012; The Joint Contracts Tribunal (JCT), 2011; March, 2009, Chapter 8; Murdoch and Hughes, 2008, Chapters 3 to 7; Brook, 2008, Chapter 2; Hackett, Robinson and Statham, 2007, Chapters 3 and 7 to 14; Clamp, Cox and Lupton, 2007, Chapters 1 to 4; Ramus, Griffith and Birchall, 2006, Chapter 2; Ashworth and Hogg, 2007, Chapter 10; Potts, 2007, Part IV; Harris and McCaffer, 2006, Chapter 8.

Procurement methods

Procurement refers to ‘*the process of obtaining goods and services from another for some consideration*’ (Hackett et al. 2007 p. 21). They describe the process as being simple in theory – balancing quality, time and cost priorities, but complicated in practice by legislation, the need to achieve value for money, demonstrate accountability and coordinate consultant and contractual roles and obligations to achieve a satisfactory outcome. Murdoch and Hughes (2008) note that the choice of procurement strategy identifies how the project is structured in terms of where responsibility for design is to be placed, how the work is to be coordinated, and the price basis on which the contract is to be awarded. Design and coordination considerations have led to the development of three principle construction procurement strategies: traditional procurement, design and build, and management procurement.

Traditional procurement

This arrangement typically involves a client appointing consultants to produce a design, select a contractor and supervise the work through to completion. The contractor is usually selected on the basis of competition and is responsible for the management and delivery of the facility and for the quality of workmanship and materials used, including those of the subcontractors. The process has been extensively used in the past and continues to be widely used. Traditional procurement is suited to a wide range of projects including those where the scope of the works contain significant unknowns and risks, which contractors would be unable to establish in advance; they are often used on refurbishment, alteration, and heritage projects as a result. The approach, however, may not be suited to particularly complex projects requiring advanced management systems, structures and

skills. Developers and employers who can avail of in-house design and management services or who wish to repeat a pre-existing standard design may favour of this approach.

The traditional procurement approach is associated with projects where the employer prioritises the aesthetic and quality aspects of the project; it allows him/her to maintain control over the quality of the work during the design and construction phases of the project. The process is typically linear in approach and proceeds through a succession of design development stages which should allow sufficient time for design teams to explore options and to finalise the works requirements within budgetary and time constraints. The process allows comprehensive tender documentation to be developed which facilitates competitive tendering arrangements and enables lump sum contracts to be agreed with contractors. The outcome should therefore promote cost certainty. Nevertheless, costs may need to be subsequently adjusted, as the arrangement provides the flexibility for employers to appoint named or nominated contractors to carry out specialist aspects of the design and the ability to introduce variations and scope changes to cater for contingencies and the changing needs of the employer.

The main drawbacks of the traditional approach derive from the separation of the design from the construction function (Murdoch and Hughes, 2008; Cooke and Williams 2009). The technical and management personnel involved in the project are not part of a single integrated team with single point responsibility for design and construction. Contractors, who are *the* construction experts are largely excluded from the design development process with the result that more buildable, innovative, or sustainable solutions may have been overlooked. This separation also complicates communications and may foster an ‘us and them’ attitude which reduces the team spirit vital for successful projects. This difficulty is compounded by the competitive tendering process associated with traditional procurement; diverging objectives among construction participants may lead to fractious relationships during the delivery of a project. The separation also leads to difficulties in establishing liability for defects as it may be unclear whether these arise from design or construction shortcomings, or a combination of both. The process is viewed as slow as full designs are required before tenders can be obtained; thereby incurring additional financing costs for the employer. Where a full design is not provided at tender stage, additional information will be required during the construction phase; often resulting in variations, delays and disputes. Cooke and Williams (2009) conclude that traditional projects are, all too frequently, late, over budget, and prone to disputes.

Design and build procurement

Under this arrangement the Contractor undertakes both the design and construction of the work in return for a lump sum price. The arrangement may be for total design and construction, (turnkey projects) or for development of an initial scheme design, indeed completed designs with full bills of quantities are occasionally novated to contractors at the contract award stage. The contractor may be appointed either by competitive tender or as a result of a negotiated agreement. Although design and build arrangements can be employed on sophisticated buildings, they tend to be associated with projects where the employer is more concerned with the functional aspects of the building rather than its aesthetic qualities; warehousing and standard office buildings being typical exemplars of the approach. Design and build (D&B) is appropriate for new construction and extensions where the employer's requirements can be clearly defined. It is less successful in 'cut and carve' renovation projects or on sensitive projects where planning or scope risks may mean that the employer's requirements cannot be comprehensively defined in advance of appointing a contractor.

There are a number of benefits claimed for the design and build arrangement. The approach is characterised by an integrated design and construction structure, which eliminates many of the problems associated with traditional procurement arrangements outlined above. It seeks to establish single point responsibility for the design and delivery of the project within a single organisation. The Joint Contracts Tribunal (2011), however, comments that this is rarely fully achieved in practice. Relationships and communications are more straightforward, as is establishing liability if things go wrong. Design and build arrangements are 'fast track', allowing for the overlapping of design and construction activities. This characteristic allows construction work to start early while much of the downstream detail design work is developed in parallel with site operations, thereby enabling earlier completion dates to be achieved. One of the most attractive characteristics from an employer's point of view is the early involvement of, and the maximisation of competition amongst the tendering contractors in both the design and pricing aspects of the project. Producing competitive designs requires an engagement in value engineering processes, particularly where contractors have ongoing obligations during the operation of the facility. This may result in more buildable and sustainable solutions being developed. The arrangement is lump sum based on the contractor's proposals, promising greater cost and time certainty as all design proposals and information flow requirements are addressed within the contractor's organisation. This should result in fewer problems arising from variations and late information delay claims during the construction stage.

The success of the design and build arrangement largely hinges on the ability of the employer to produce a definitive project brief; a process which usually requires the appointment of consultants. This process takes time; incomplete briefing information will result in inadequate proposals being developed. Correcting these by introducing variations may cause significant disruption in the contractor's production process and it is often difficult to ascertain their cost implications. The contract sum analysis supporting the contractor's proposals is typically based on preliminary designs and is therefore not quantifiable to the level of detail associated with traditional approaches. The individual elements of the descriptions contained in the contract sum analysis, for example design, labour, overheads and profit are not usually identifiable. The valuation of variations is therefore the subject of negotiated 'fair' rates, and often cost significantly more than may be anticipated under traditional arrangements. The arrangement is regarded as less flexible as a result. D&B contracts awarded on the basis of a design competition incur significant abortive costs among unsuccessful bidders and it may be difficult to establish the most suitable submission objectively. It is therefore prudent to restrict the number of contractors being requested to submit full proposals, by using a two stage tendering approach for example. Finally, the imperative to deliver competitive designs focussed on functionality has resulted in many instances of bland and occasionally ugly buildings. Blots on the landscape diminish the environment, often for generations.

In Ireland private sector design and build contracts have tended to use specially drafted contract documents or the RIAI form of contract amended to suit the arrangement. The Society of Chartered Surveyors (n.d.) has issued guidance on the preparation of design and build contracts. Public sector design and build projects are now let under the GCCC design and build contracts.

Management Procurement

Management procurement is described as '*a method where the overall design is the responsibility of the client's consultants, and the contractor is responsible both for defining packages of work and then for managing the carrying out of the work through separate trade or works contracts*' (JCT, 2011). Management approaches are associated with prestigious, large scale, complex and fast moving projects where the employer seeks early completion. The main contractor or manager is usually highly experienced and reputable and is paid a management fee to contribute expert advice on buildability, programming and coordination issues and to manage the execution of the work. The appointment is made at an early stage in the design development process and he/she works alongside the other design team members. The work itself is constructed by specialist sub-contractors obtained by competitive tender.

There are a variety of management approaches the two most common of which are management contracting and construction management. In management contracting works contractors are employed by the management contractor who is typically a leading construction firm. In construction management the services may be provided by an individual or a firm who acts as an agent for the employer; the works contractors are directly employed by the employer. In effect there is no main contractor.

Management approaches capitalise on the contractor's early involvement which helps to produce practical, buildable designs. The approach is fast track, overlapping site operations and the detailed design work can proceed in parallel facilitating an early start on site. This benefit is compounded by the manager's expertise in coordination, programming and control which fosters greater operational speed and efficiency. The appointment of the contractor within the design team or as the employer's agent removes the tensions associated with the usual objectives of maximising profit through pursuing variations and generating claims during the construction stage. Instead, the contractor/manager is paid a fee and looks after the employer's interests. This should result in more harmonious relationships during the project.

The employer bears the bulk of the commercial risk under management procurement arrangements. The fast-tracking of the works means that there is no firm contract price before the work starts on site, and the decision to proceed usually has to be taken on the basis of a cost plan; cost certainty is not achievable until much of the construction operations have been completed. The employer must therefore have sufficient flexibility to accommodate the evolving design decisions and contingencies as the works progress. Management contracting arrangements are associated with high end projects. The combination of superior quality and speedy delivery requires a dependable supply chain. The approach increases design team consultancy fees and tends to use reliable 'blue chip' work package contractors with proven credentials. These are usually more expensive, despite the use of competitive tendering. Management approaches also suffer from unclear lines of liability in the event of a project failure, and there may be difficulties in establishing whether the manager or the package subcontractor is liable.

In Ireland, the GCCC have issued an early contractor involvement contract in 2011 which is aimed at public sector contracts in excess of €100 million. No comparable standard form is available for private sector contracts which usually use a specially drafted contract document or an arrangement based on the JCT Management Works Contract or Construction Management Agreement.

The impact of payment arrangements on contract choice

The payment arrangements chosen for a contract directly affects the level of risk borne by the employer and the contractor. Where the contractor agrees a lump sum for works in many instances he/she assumes the risk for both the quantity and pricing. In measured contracts the contractor assumes the risk for the pricing only. With reimbursement contracts the employer assumes the risk for the quantity and pricing. The payment arrangement, therefore, directly motivates the contractor's efforts to carry out the work in an efficient and economic manner. This in turn has a major impact on the final price paid by the employer.

Hackett *et al.* (2007) explain that there are *two* ways of paying for construction work: fixed price and reimbursement. They comment that it is rare for a contract to be paid exclusively by one method and that usually both methods of payment are employed. Both arrangement come in a range of varieties.

Fixed Price Contracts

Lump sum contracts: occur where the contract sum is determined before construction starts with the amount being entered in the agreement. Examples of lump sum contracts include those let under the GCCC and RIAI standard forms. These contracts are based on the contractor's commitment to complete the whole of the work for a specific sum. The arrangement requires full design/production information being incorporated in the contractor's offer at contract award stage. The arrangement therefore promises a high degree of cost certainty but demands considerable time to prepare and price the tender documentation. Lump sum contracts may be based either on drawings and specifications or bills of quantities. Contractor's proposals on design and build contracts are also lump sum contracts.

The drawings and specification arrangement is the classic 'lump sum' type of contract and is primarily used on small contracts and for subcontracts on larger contracts. The contract documents are generally the complete working drawings and details, *and* a full specification or schedule of works including preliminaries. The specification includes materials and workmanship clauses, schedules to provide positional information and prime cost and provisional sums if required. The contractor is responsible for the accuracy of the quantities, which are not corrected should they be discovered to be wrong. Although the quantities can usually be measured quickly as 'builders quantities', this requirement results in additional tendering costs and abortive work among unsuccessful bidders. This is a cost which is ultimately borne by construction clients. For this reason The *Liaison Committee Code of Practice for Tendering and Contractual Matters*, (2006)

recommends that the without quantities form should be limited to minor building works projects and while no precise definition as to what constitutes minor works is presented, it may be assumed that these projects would be in the order of €100,000 to €1,000,000 or for subcontracts. The Liaison Committee also recommends that without quantities forms should be limited to minimum of four, and a maximum of six tenders, and that all contract drawings and the specification should be issued. In addition they advise that a bill of quantities or schedule of items should be included in the tender enquiry.

Contracts incorporating bills of quantities (with quantities) are the traditional pattern for the larger type of contract. The contract is still a lump sum but the employer bears the quantities risk, which is corrected if errors are discovered. The use of a bill of quantities provides a common basis for obtaining tenders and eliminates abortive measurement by the tendering contractors. This should result in lower tenders being obtained. The process however adds to the overall time requirement.

Measured contracts: these are also referred to as measure and value contracts and remeasurement contracts. They are fixed price to the extent that the price is established following measurement of the completed works. The rate is agreed in advance but the quantity is measured in-situ. These contracts are used where the extent of the work is unclear at the time of tendering or where a speedy start on site is essential. These contracts are frequently used for excavation and earthworks, refurbishment/modernisation, civil engineering, term and maintenance contracts. The actual work done is measured and valued according to a schedule of rates. Bills of quantities, where used are often described as approximate or contain substantial work sections based on provisional quantities. Schedules of rates are usually employed on term and maintenance contracts. The use of approximate quantities permits the overlap of design and tendering or construction activities and enables a possible faster start up on site. The arrangement, however, does not achieve the level of cost certainty associated with firm bills, particularly where tenders are sought at an early stage in the design development process. The GCCC issued a term and maintenance contract PW-CF11 in 2011.

Reimbursement Contracts

Cost reimbursement contracts arise where the contract sum is arrived at on the basis of the actual costs of labour, plant and materials, plus a fee to cover overheads and profit. This type of arrangement is also known as ‘prime cost’ or ‘cost plus’ contracts. With these types of arrangement the contractor is paid what he/she spends, i.e. the prime cost, plus a fee to cover overheads and profit. There are three main varieties of prime cost contracts: cost plus percentage fee, cost plus

fixed fee and target cost with fluctuating fee. The total cost of the work is recorded and the contractor's fee is added in accordance with the chosen method. From the employer's perspective, cost reimbursement contracts contain the highest degree of financial risk, not only on what will eventually be built but also on what the contractor will spend on building it.

Cost reimbursement contracts tend to be confined to emergency situations, where the work is so urgent that there is no time to prepare tender documentation, for example in repairs to dangerous structures, flood or fire damage. They are also associated with contracts for specialist works where a high standard of work is required. Management procurement often uses cost reimbursement arrangements for the work packages, PC sums are examples of this approach. Dayworks, another form of cost reimbursement, are often sought where bill of quantities rates would be inappropriate to value the work, for example in certain types of alteration work, work in inaccessible locations, or work in existing premises where the employer intends to dictate the sequence, working hours and conditions from day to day.

Cost reimbursement contracts are highly flexible, enabling speedy contractor appointment and early commencement of site operations. The arrangement also fosters the delivery of high quality work as the client pays for the contractor's time on site. Cost reimbursement arrangements have been heavily criticised as they appear to provide little incentive to encourage contractor efficiency. In effect the more it costs, and the longer it takes the contractor to complete the job, the more he/she gets paid. There is little cost certainty and cost control may be problematic. The fixed fee and fluctuating fee varieties, however, provide some incentive for the contractor to control costs, in order to increase the profitability of the contract. Nevertheless, it is essential to appoint a trustworthy contractor under this arrangement.

The PW-CF10 is the first form of cost plus contract published in Ireland. Another example is the JCT Fixed Fee Form of Prime Cost Contract used in the UK. The contract types adopted for the more non-traditional procurement techniques basically adopt one or more of the above principles depending on the particular factors to be considered.

Figure 1 below illustrates the degree to which risk is allocated by various contractual arrangements, and shows that design and build arrangement impose the bulk of the risk on the contractor, traditional arrangements distribute the risks more evenly, while management approaches generate the greatest degree of risk for employers.

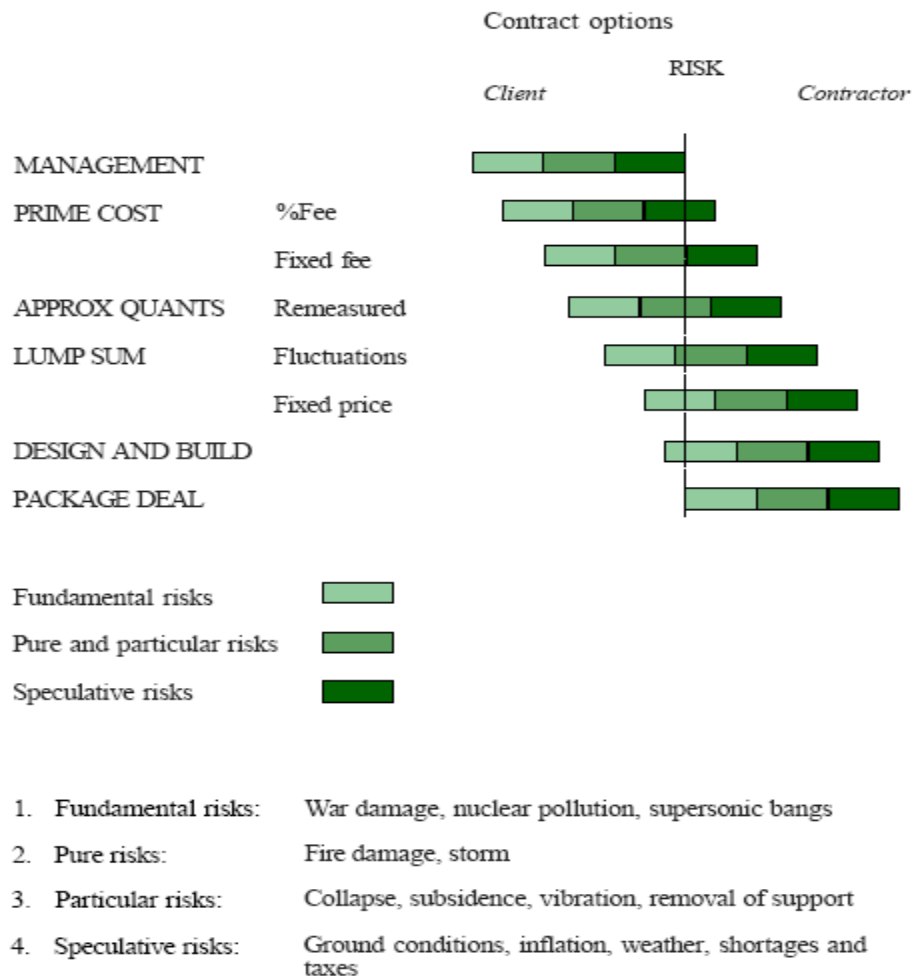


Figure 1 – Risk Allocation Under Various Contractual Arrangements – Source Latham (1994 p.15)

Contract Drafting

A key decision in selecting a form of contract is whether to draft one specifically for the project in hand or to use a standard form of contract. It is possible, but in the vast majority of cases, impractical and uneconomic to develop a separate contract to suit each individual project. However, there may be instances where no standard forms of building contract fits the client's requirements and a specially drafted agreement is needed. The drafting of non-standard forms demands great skill and knowledge and such drafting should be entrusted to a lawyer with specialist knowledge of the construction industry. Any such appointment should be concluded directly with the client. In most cases the more pragmatic approach is to use or adapt one of the standard forms of contract; the remainder of this study considers that approach.

The nature of standard forms

The contract fixes the agreement between the parties and sets out the obligations and liabilities of the contracting parties. According to Ramus et al. (2006, p.52) '*Standard forms of construction contract have been developed to provide formal, predetermined arrangements and mechanisms to cope with the situations that can arise during the course of a construction project*'. They are specifically designed to suit the construction process and provide a pragmatic approach to dealing with common construction issues. The forms lay down how risks are allocated between the parties and the principles by which the conflicting interests of the parties are settled. An important feature of standard forms is that many are agreed between expert bodies representing client interests, the construction industry and the professions thereby reflecting long experience of the construction process. This results in what is perceived to be a balanced allocation of risks between the parties to the building contract. The forms are, nevertheless, organic and are regularly updated to reflect changing practice within the industry and the law. A survey carried out in the UK for *The Latham Report* (1994) found that the main strengths of using standard contractual arrangements were that they were well known/established and that they are perceived to be fair. Using standard forms allows all parties to become familiar with the documents and become aware of their rights and obligations under the contract; this provides greater clarity in the event of disputes. Ramus, et al. (2006) add that they are tried and tested and are therefore 'known quantities' enjoying court and industry recognition – a case of '*the devil you know*'!

Construction is often complex and involves high levels of risk and many are tempted to undertake their own revisions and amendments to the standard forms to move risk to the other parties. Although it is possible to amend or delete individual clauses this practice should be kept to a minimum, as the form would no longer be standard and its benefits would be reduced. Such actions frequently make the situation worse by producing conflicting or contradictory clauses (Murdoch and Hughes, 2008). The *Latham Report* (1994) was forceful in its condemnation of this practice and recommended that standard forms should be used without alterations. It claimed that, in practice, the standard forms were often either heavily amended by consultants to remove areas of risk from their employers or were not used at all. In addition, courts may interpret ambiguous alterations as *contra proferentem* and construe the least favourable meaning against the person making the changes in the document.

Standard forms, however, are open to certain criticisms. The *Latham Report* (1994) identified that they were often perceived to encourage conflict/litigation, were insufficiently clear, and may create a high level of mistrust. Murdoch and Hughes (2008) comment that the sentiments of drafting

committees to ‘legislate for the industry’ have no remit and explain that the use of a single ‘standard’ form of contract is ‘unrealistic’ due to the diverse nature and unique characteristics of each building project. They argue that, rather than making risk explicit, the use of standard forms may create an environment in which particular risk allocation is not questioned and consequently becomes implicit. They add that the complexity of the various standard forms contracts often discourages practitioners from considering other, potentially more appropriate, forms to those they routinely use. They also comment that certain contracts appear to distort the purpose of contract documentation and appear to be more concerned with setting out administrative procedures and resembling practice manuals, rather than achieving the primary purpose of recording the terms of the business agreement. Finally, they note that use of standard forms may perpetuate inappropriate ‘*outdated methods of organisation and professional patterns of responsibility*’.

Contract Categories

Ramus et al (2006) observe that standard forms of contract are often grouped in a ‘*family hierarchy*’. Two principal ‘families’ of contracts exist in Ireland, the RIAI Standard Forms and the GCCC Public Works Contracts. The RIAI contracts are published by the Royal Institute of Architects in Ireland; the GCCC contracts are published by the Government Construction Contracts Committee. Both ‘families’ produce guidance notes and supporting documents to complement the main contract forms. A wider range of families are published in the UK. Effective contract selection is typically concerned with choosing an appropriate family of contracts and identifying the suitable main form and ancillary documents from within that family.

The Government Construction Contracts Committee (GCCC)

These forms are the Public Works Contract Forms (PW-CF) published by the Department of Finance are mandatory on public sector contracts or where the exchequer provides at least 50% of the funding. Five forms of contract, PW-CF1 to 5, now referred to as the ‘long’ forms of contract, were introduced in 2007 in response to perceived deficiencies in public sector procurement arrangements. These contracts are not a negotiated form of contract and their introduction was greeted by widespread concern, particularly from within the contracting sector. The suite of contracts has since expanded to cover a number of procurement arrangements and now comprises eleven forms.

The Royal Institute of Architects in Ireland (RIAI)

The RIAI contracts are the most widely used standard forms of contract used on private sector projects. The RIAI family of contracts cater for traditional procurement arrangements and are

supported by a number of ancillary documents published to support the main forms. The RIAI forms of contract have been issued in agreement with the Construction Industry Federation (CIF) and The Society of Chartered Surveyors in the Republic of Ireland (SCSI) As such, these contracts are considered by many to be fair in that they are not loaded in favour of either party to a contract. They are, however, sometimes described as compromise conditions that, in trying to satisfy the interests of all, they are unnecessarily long and complex.

UK Forms of Contract

In the UK a much wider range of alternatives is in common use. The main alternatives listed here are used in Northern Ireland and are occasionally proposed for Irish projects.

- *The Joint Contracts Tribunal Forms of Contract (JCT)* — these contracts would be regarded as the industry standard and they cater for the principal procurement options in both the private and public sector. Cartlidge (2013) reports RICS survey findings that 79% of construction contracts in use in the UK in 2007 were on the basis of one of the JCT Forms. The Royal Society of Ulster Architects publishes Adaptation Schedules for certain JCT contracts for use in Northern Ireland.
- *GC/Works Contracts* - The General Conditions of Government Contracts provide forms of contract often used for central government projects.
- *Institution of Civil Engineers Contracts (ICE)* — these contracts are recommended for use on major civil engineering contracts. It can be used for public or private contracts.
- *FIDIC Conditions of Contract* — The Conditions, produced by the International Federation of Consulting Engineers, are intended for use internationally.
- *The Engineering and Construction Contract (ECC)*— The ECC is a highly flexible arrangement with alternative conditions designed to cater for all types of project, forms of procurement, methods of tender, and for use in any country.

Less frequently used UK alternatives tend to be used to meet particular client requirements or special circumstances; these include:

- *Association of Consultant Architects Form of Building Agreement (ACA)*
- *The British Property Federation System (BPF)*

- *Chartered Institute Of Building (CIOB) contracts*

The GCCC Form of Contracts

In Ireland the selection of which contract to use depends initially on whether the project is publicly or privately funded. Publicly funded projects adopt the GCCC forms of contract.

Previously, the standard forms of contract used for public sector works was the GDLA 1988 form of contract which was largely based on the RIAI form with the agreement of the Department of Finance. A number of contracting authorities had also used the various FIDIC and JCT forms suitably amended for use in Ireland. Public sector authorities must now enter into fixed price lump sum contracts to the greatest extent possible, using competitive tendering in which a greater degree of risk will be borne by the contractor. The Department of Finance claims that this should deliver greater cost certainty, better value for money and more efficient delivery of public capital projects. A key objective is to rebalance risk so that there is optimal allocation of risk. The greater level of risk which is now borne by the contractor is possible by providing appropriate information in the tender documents to enable the tender to assess and price the risk. The information to be supplied will depend on the type of contract being used. It is intended that the forms will not be amended. (NPPU, 2007)

The GCCC contracts adopt a similar structure comprising; the *letter of acceptance, agreement, contract conditions, schedule and works requirements*. The pricing document may be a bill of quantities or a contract sum analysis. Ideally, the information provided to the contractors should be sufficient to avoid the need for the bill of quantities to be a contract document. The suite of contracts is supported by a range of model forms and letters which standardise administrative procedure. The current suite of contracts comprise:

- PW-CF1 - Building Works Designed by the Employer
- PW-CF2 - Building Works Designed by the Contractor
- PW-CF3 - Civil Engineering Works Designed by the Employer
- PW-CF4 - Civil Engineering Works Designed by the Contractor
- PW-CF5 - Minor Works for Building and Civil Engineering Works Designed by the Employer
- PW-CF6 – Short Form of Contract

- PW-CF7 – Investigation Contract
- PW-CF8 – Short Form of Investigation Contract
- PW-CF9 – Framework Agreement
- PW-CF10 – Early Collaboration
- PW-CF11 – Term Maintenance and Refurbishment Works

Guidance on which contract to use is provided in the Capital Works Management Framework Guidance Notes: *Procurement and Contract Strategy for Public Works Contracts, GN 1.4* (2012) and *Public Works Contracts GN 1.5* (2013). The latest editions of both Guidance Notes do not refer to the issue of PW-CF10 and PW-CF11.

Figure 2 presents a flow chart to aid the contract selection process. This diagram shows that the choice should reflect the value, procurement strategy, and type of project. Large building projects in excess of five million euro should be awarded on the basis of the PW-CF1 form where the design is provided by the employer; PW-CF2 should be used where the contractor is responsible for the design. Minor works, defined as projects not exceeding five million euro should use PW-CF5 and small contracts not exceeding €500,000 should be placed on the short form of contract PW-CF6. Civil engineering should use either PW-CF 3 or PW-CF 4 depending on who supplies the design. Investigation works should be let on either PW-CF 7 where these exceed €50,000 otherwise the short form of investigation works, PW-CF8, should be used. The investigation contracts may also be suitable for heritage projects when used in conjunction with one of the other building contracts from within the suite. Framework arrangements should use PW-CF9.

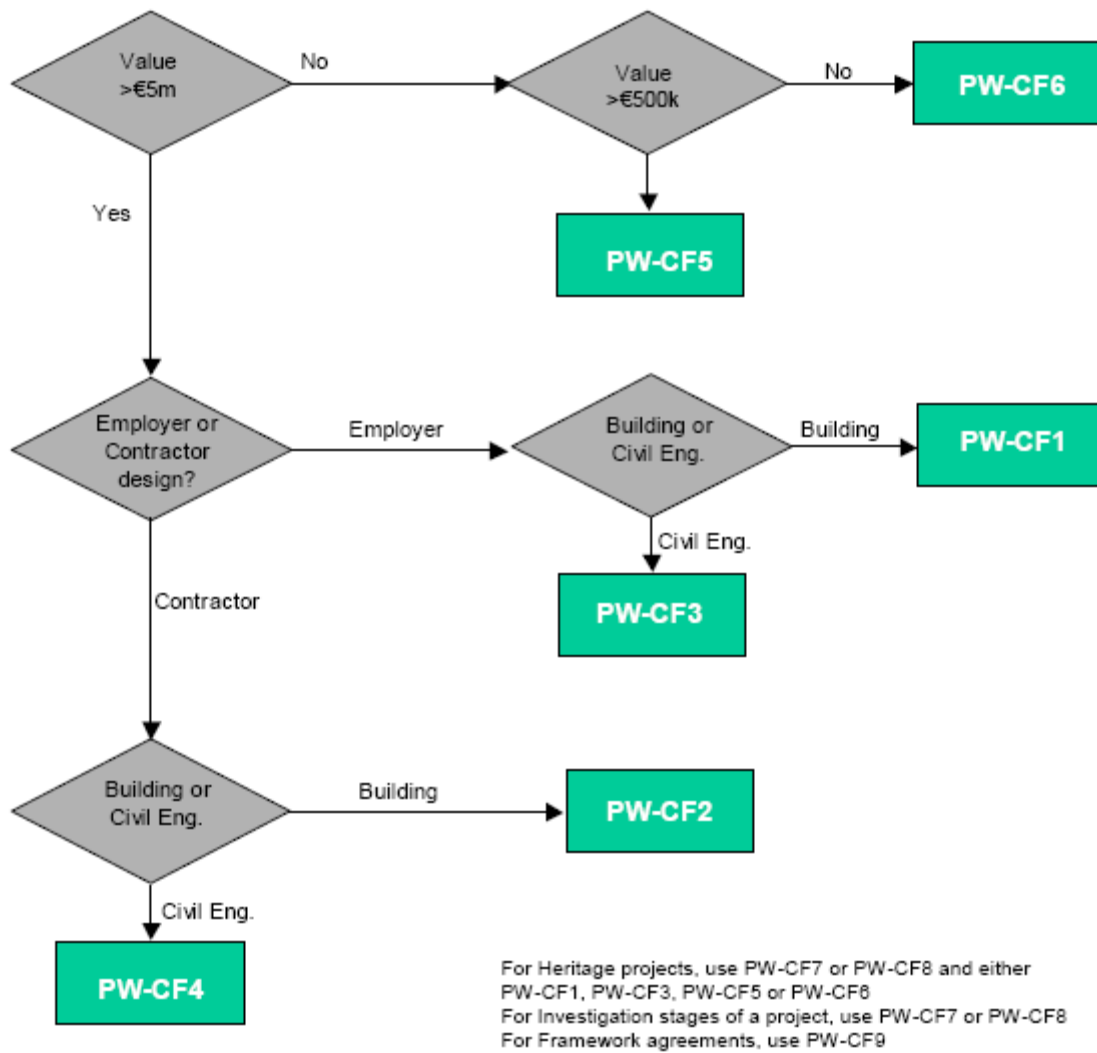


Figure 2 – Flow Chart for Selecting a Form of Public Works Contract source Department of Finance, 2011

PW-CF1, PW-CF5 and PW-CF6 are commonly referred to as the traditional building contracts. PW-CF2 is the design and build building contract, PW-CF 3 and PW-CF4 are the civil engineering contracts.

Investigation studies PW-CF 8 and 9 are works to identify and quantify potential hidden risks in order to comprehensively define the project before it is tendered. This enables many unknown risks to be identified and resolved in advance. Site investigation and/or geotechnical studies should be conducted to establish the expected ground conditions and condition surveys should be carried out in existing buildings in advance of refurbishment and renovation projects.

The Public Works Framework Agreement PW-CF9 is employed for strategic purchasing of public works. Its publication reflects the emerging trend towards partnering and collaborative working relationships. Partnering arrangements are characterised by mutual objectives, an agreed method of

dispute resolution and a focus on continuous and measurable improvements. The approaches are said to: reduce the incidence of, and cost of resolving, disputes; reduce costs and programme durations while improving quality and safety; provide a regular work flow; and improve working relations. On the other hand they have been criticised for: incurring substantial start-up costs; generating complacency with, and overdependence on a single work source or provider; competitive drift through lack of competition during the period of the agreement; failure to adhere to partnering principles at all levels of the supply chain and confidentiality issues. (Ashworth and Hogg, 2007)

The Department of Finance suggest that frameworks may be appropriate for:

- ‘the establishment of panels of specialists for public works contracts;
- multiple works projects for which there is a generic design;
- multiple low value works projects;
- strategic centralised purchasing; and
- purchasing by a central purchasing body’

Each party to a Framework must sign the Agreement (PW-CF9). The Department stipulates that the maximum term of the agreement should be four years and should not be open to new entrants during the course of the agreement. The individual projects are awarded following a mini competition and are subsequently executed on the basis of the appropriate Public Works Contract, most likely the short form, PW-CF6. There is no financial threshold set for the use of a Framework Agreement, (Department of Finance 2012)

The Public Works Contract for Early Collaboration (PW-CF10) is intended for use on large projects (e.g. over €100 million), or technically complex projects on which contractor input is required at an early stage. Prior approval must be obtained from the Government’s Construction Contracts Committee on a contract by contract basis. The contractor is appointed for a project’s ‘early services’ and may also be appointed for one or more ‘tasks’. In a simple case, the early services may be design development and obtaining planning consents, and the task is the physical works. If there is more than one task, they would normally be different phases of physical works

The Term Maintenance and Refurbishment Works Contract (PW-CF11) is a measurement rather than a lump sum contract. This form of contract is used where an employer requires a contractor to

perform regular maintenance and refurbishment as a number of separate jobs from time to time during a specified period.

The RIAI Contracts

There are four standard forms of contract which are published by the RIAI. They are suited to building rather than engineering projects.

The RIAI Standard Form of Building Contract.

The basic and original form is usually described as the RIAI form. It is suitable for the whole range of building contracts, but is primarily used for substantial contracts in the private sector. The current edition was published in 2012. The RIAI form is available in two slightly different varieties depending on whether or not a bill of quantities is one of the contract documents. This distinction is referred to as ‘with quantities’ (yellow Form), or ‘without quantities’ (blue Form). Both variants require employers to appoint designers to carry out the design function. The contracts are comprehensive in providing for many eventualities, but they suffer from being complex in wording in places. The contracts are reviewed from time to time to take into account developments in the law and practice.

The ‘with quantities’ (yellow form) edition is intended for use where the work is designed prior to contract and a bill of quantities has been prepared setting out the quality and quantity of the works. Contract documents comprise the form of contract, contract drawings, and contract bills. This is a lump sum form of contract; there is an agreed contract sum to be paid to the contractor by the employer. The contractor’s risk is limited to price only — the employer bears the risk of errors in the bill of quantities.

The ‘without quantities’ (blue form) is intended for use where the design is completed prior to contract but where there is no bill of quantities. The contract documents will normally include drawings, specification or schedule of works and a schedule of rates.. Under this approach the contractor’s risk includes both price and quantity. This is also a lump sum form of contract.

The Agreement and Schedule of Conditions of Building Contract - SF88

This form is commonly referred to as the shorter form (SF88) which is intended for small or simple contracts. The first edition was published on 1st November 1988 to fill a need for projects where the main RIAI forms are thought to be unduly complex. SF88 is designed for small, simple short duration contracts such as kitchen extensions and so on. The form is intended for projects where the Architect acts as the sole agent of the Employer, no nominated sub-contractors are used, quantities

do not form part of the contract and there is to be no adjustment for increases in the prices of labour and materials.

The RIAI Plain Language Contract.

This version, is intended to have exactly the same legal effect as the standard form, but is written in a simple style and has the clauses arranged in a more logical sequence.

The Government Departments and Local Authorities Form (GDLA).

This form is no longer in use, having been phased out following the introduction of the GCCC contracts in February 2007. This form was based on the RIAI form and is similar in most respects. It was used by Government Departments, Local Authorities and by other bodies ‘*the placing of whose contracts is subject to approval by a Government Department or Local Authority when the work is to be paid for wholly or partly from Exchequer Funds*’.

Factors affecting contract selection

The employer’s priorities and objectives are the principle considerations affecting contract choice. The chosen procurement route and payment arrangements will limit the contract options and typically, procurement and contract selection are considered simultaneously. Ramus et al. (2006) identify the following factors which influence the choice.

The Nature of the Client

All construction work is ultimately undertaken for the benefit of a client who may be a private individual, an organization or a public body. The distinction between public and private clients has been identified above. Public sector contracting authorities are typically experienced clients and are required to enter into fixed price lump sum contracts using the GCCC forms. Private clients, on the other hand, range from vastly experienced organisations to the totally inexperienced individual. The needs of an experienced developer are very different from those of one-off clients who may require considerable assistance in formulating their needs and understanding the nature of, and the responsibilities undertaken in, the construction process. Experienced and regular clients often have preferences for and expertise in specific procurement arrangements. Indeed, negative views about an approach based on a previous troublesome project may prejudice the use of a potentially successful procurement approach in the particular circumstances. Inexperienced clients, on the other hand, need sound professional advice in choosing between contract options.

The Client's Risk Attitude

This will depend to some extent on the nature of the client and the development. Public clients tend to be more risk averse than private clients, particularly those engaging in speculative developments who may be prepared to take greater financial risks in order to achieve earlier completion. The selected contract describes the agreement and allocates risks. Ramus et al. (2006) The choice of contract should be the one offering most value to a client, bearing in mind their objectives.

Park (1994) in Figure 3 sets out a matrix which maps client risk priorities against procurement options, allowing suitable procurement routes to be identified. He lists twelve common client requirements or risk positions: design flexibility, maximum price competition, fast contract start-up, design accountability, design warranties, contract cost control, detailed lump sum price, price certainty, fast track construction, design control and contractor insolvency protection. These are ranked in terms of importance to the client and the four top priorities are applied to a matrix which maps these priorities to the strengths of the various procurement approaches. The procurement approach with the highest number of matches is likely to point to the most appropriate procurement approach.

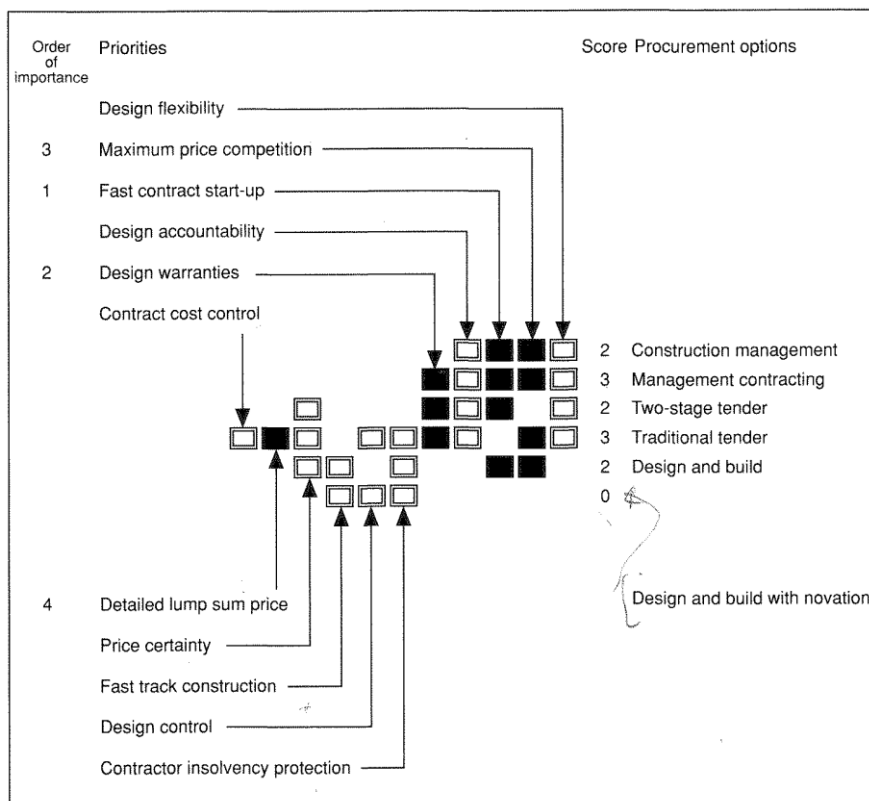


Figure 3 Procurement Choice Matrix Source Park 1994

The Procurement Method

Many of the standard forms are drafted for use with particular procurement approaches while others are flexible. Whether the design is the responsibility of the employer or contractor is also a key determinant of contract choice.

The Client's Priorities

There may be clients who . . . think it is now possible to construct a quality building at break neck speed and for a knock down price. Any such unfounded euphoria needs to be dispelled at the outset' . . .The reality is that although the three most important considerations for any client are usually cost, time and quality, the business of building procurement invariably calls for some compromise or a consensus balancing of these priorities. This requires adequate thinking time and careful thought.” (Clamp et al. 2008)

Priorities affect contract choice. Clients seeking cost certainty on a contract will favour a lump sum arrangement. This requires enough time to complete the design or employer's requirements, and increases the overall development time. Incomplete design or insufficient performance requirements, however, lead to costly post-contract variations on both traditional and design and build approaches. Where time is the main priority fast track management approaches using approximate quantities or cost reimbursement arrangements may be favoured. None of these options provide cost certainty. Where quality is the main priority, the use of a design and build contract will probably be inappropriate.

The Size and Type of the Project

Contract options are often based on the project's value, as is the case under the GCCC and RIAI contracts outlined above. A further distinction exists between building and engineering contracts. In general, larger, more complex projects employ the emerging procurement routes and their associated more detailed forms of contract. Traditional arrangements may not be suitable in these instances due to the need to resolve interface and clash issues among specialist contractors at site level.

The Type of Documentation Being Used

Contract selection will normally drive the requirement for contract documentation.

Summary

This study has briefly described the considerations which underlie the choice of contract forms in Ireland. It has discussed the influence and implications of procurement and payment arrangements on this decision and concludes that the basis for the choice generally flows from the client's priorities and that due consideration of these priorities, wants and needs is key to making effective choices. It has discussed the nature of bespoke and the different families of contracts and their main forms. This should help in directing the surveyor to an appropriate form for the client's situation. It has explained the purpose and application of the various GCCC and RIAI contract forms. Finally the study examines the governing principles underlining recommendations on contract choice.

Recommendations for Quantity Surveyors

Standard forms of contract rarely match the employer's requirements exactly. Quantity surveyors should therefore study the proposed contract before making a recommendation. Aspects which do not suit the employer's requirements should be identified. Where these are minor issues, then minor amendments to the contract may be considered, preferably following legal advice. Major issues indicate that an alternative contract strategy or a sensible compromise would be in order. Surveyors should be able to justify the reasons for, and the implications of their recommendations. Many projects suffer from contract objectives not being met. This creates unnecessary risk for employers, and may damage the quantity surveyor's reputation.

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