

# Report on the Review of the Performance of the Public Works Contract

Interim recommendations for amendments to the Public Works Contracts and Medium Term Strategy for the development, procurement and administration of projects under the Exchequer Capital Programme

Government Contracts Committee for Construction

December 2014



Report on the Review of the Public Works Contracts

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## Executive Summary

Risk management was the key driver for the Construction Procurement Reform Initiative launched in 2006. Under the previous forms of building and engineering contracts approved for use in the Public Sector, risk was largely retained by the State with little incentive on the contractor or design team to manage that risk. As a result, substantial cost overruns occurred on certain projects. Fixed price, lump-sum contracts were introduced in 2007 as the solution to these cost overruns.

The clear message upon their introduction was that the State was willing to pay for cost certainty. However, shortly after their introduction, the economic crisis hit with the result that not only did the expected average cost increase of 10% not materialise, but tender prices dropped considerably<sup>1</sup>.

The Review commenced in December 2013 with a call for submissions from stakeholders. A number of industry groups, private individuals and public sector bodies have contributed to the review. In May 2014 an on-line questionnaire was launched with an invitation to all those involved in the delivery of public works to submit key performance data – feedback on this has been disappointing.

The initial stage of the Review has concluded that risk is not currently being priced in many tenders for a variety of reasons<sup>2</sup> and, where risk arises, it is leading to claims. The outcome, in circumstances where risk arises, is often the opposite of that intended since cost certainty, in a significant number of cases, is not being bought but deferred to the dispute resolution phase. Since the dispute resolution procedures are private to the parties concerned, there is no wider dispersal of the outcome leading to uncertainty in the interpretation of key clauses in the contract.

In recognition of the changed market and to encourage more realistic pricing of public works projects a range of interim measures is proposed which are set out in detail at **Part 2** of this report. These measures leave the core contract intact but rebalance the level of risk currently transferred whilst also providing greater visibility of the price make up of a construction project. These measures include:

- reducing the level of risk currently being transferred by making the bill of quantities the primary reference document for tender purposes on employer-designed contracts;
- direct tendering of specialist works packages where specialist works make up a significant proportion of the overall project value or where they have a significant impact on the long-term performance of the project<sup>3</sup>;
- in awarding works projects, a greater concentration on quality criteria that are directly linked to the project in order to deter unsustainable pricing, and;
- the inclusion of informal dispute resolution methods to reduce the volume of disputes that are currently being referred to the formal procedures prescribed in the contract.

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<sup>1</sup> Research by the Society of Chartered Surveyors Ireland shows that construction tender prices have dropped by 30% since the peak in 2006.

<sup>2</sup> More detail is provided under Section 1.4 of this submission.

<sup>3</sup> Guidance will be published to assist contracting authorities in this regard.

A bill of quantities is a vital element in a properly administered tender competition for works contracts above a certain value since it provides a comprehensive list of all the elements necessary to construct a particular project. In its preparation, all elements of the design are described so that the project can be accurately itemised. In many instances under the public works contracts this practice has become a much more cursory exercise since the risk posed by errors can be transferred to the contractor. The risk of errors or omissions in the bill is currently an optional risk transfer under the contract, it is proposed to remove this option, and retain the risk by making the bill of quantities the primary reference for pricing purposes on employer-designed contracts.

Directly tendering key specialist works packages reduces the extent of the contract for which the contractor has price responsibility and thus results in the contracting authority retaining greater risk. However in allowing specialists to directly price their element of works, contracting authorities also retain greater control over quality outcomes. Under the current arrangements it is not always possible to determine the true value of such specialist elements.

Whilst a price based award criterion is a valid way of awarding a works contract, it does not take account of other important aspects of a project's delivery. In adopting a Most Economically Advantageous Tender (MEAT) award, price will be retained as the dominant weighting for all but the most complex of projects. However greater insight into such aspects as delivery mechanisms, proposed construction solutions, materials and key building components will be provided to the tender evaluation team in reaching its conclusions. This will contribute to ensuring a more sustainable price is achieved. Guidance on objective qualitative criteria that are directly linked to the build quality and operational efficiency of the finished project as well as appropriate weightings for different types of projects will be provided.

It is proposed to review the triggers to the formal dispute resolution procedures to permit greater engagement between the parties through escalation up to senior management levels prior to engaging in formal proceedings. It is also proposed to introduce a standing dispute convener for contracts in excess of €10m to provide greater oversight of both parties engagement under the contract. In the absence of a properly priced and resourced contract (that the other interim measures are intended to address) such measures are unlikely to provide huge relief but may reduce the costs incurred by both parties when disputes arise.

**Part 3** of the report sets out a framework for engagement with industry on a medium term strategy aimed at providing structures and procedures that better manage the delivery of public works projects. The medium-term strategy will encompass not just the conditions of contract but all stages of a project's delivery including the procurement of the key players.

## Part 1 – Existing Situation

### 1.1 Summary

Summary of the Development and Implementation of the Public Works Contracts	
<b>Key Driver:</b>	Considerable cost overruns in works projects, Government Decision 2004
<b>Requirement:</b>	Greater cost certainty, better value for money and more efficient delivery of projects
<b>Solution adopted:</b>	Fixed price, lump-sum contracts
<b>Implemented by:</b>	Transferring risk to main contractor to achieve cost and time certainty
<b>Expected Outcome:</b>	Increased contract sum in return for price certainty
<b>Actual Outcome:</b>	<p>Reduced contract sum. Limited data would suggest that absolute cost certainty and more timely delivery of projects is still some way off. When the average cost overruns are considered they are still outside the target 1 – 2% figure set as part of the Initiative<sup>4</sup> although the available data does not suggest the causes of these overruns.</p> <p>The review cannot ascertain whether value for money has been obtained. This will ultimately be determined once the performance of projects constructed under the contracts can be evaluated.</p>

### 1.2 Background

#### 1.2.1 Rationale for the introduction of the Public Works Contracts

The Construction Procurement Reform Initiative was developed in response to a Government Decision in 2004 and marked a significant departure in the State's interaction with the construction industry. It came about in the context of considerable cost overruns on publicly funded capital projects. That decision sought greater cost certainty at award, better value for money and more efficient delivery of projects.

Prior to the introduction of the public works contracts in 2007, re-measurable forms of contract were used in the delivery of public works. These were typically amended versions of standard forms used widely in the industry and published by professional bodies such as Engineers Ireland for civil engineering works and the Royal Institute of the Architects of Ireland for building works. The necessary amendments for public works were typically agreed between industry representatives and the Department of Finance's Government Contracts Committee<sup>5</sup>.

<sup>4</sup> The Construction Procurement Reform Initiative set maximum cost increase targets of between 1 – 2% of the contract sum and time overrun as a single digit %. The Interim Review of the Public Works Contracts provided at Appendix III indicates an average cost overrun of 7.31% and an average time overrun of 27.06%

<sup>5</sup> The Government Contracts Committee is a forum for the discussion and development of procurement policy. In 2002 the Committee was split in two, one for goods and services and the other dealing with all aspects of

The nature of these forms meant that the Employer under the contract retained a great deal more risk, particularly in respect of unforeseen ground conditions but also in respect of specialist design works such as mechanical and electrical installations. The result being that where risks arose, the contract sum increased. Inadequate consideration of risk through the project development stages was the main factor in the excessively high cost overruns on some projects delivered using these re-measurement forms of contract.

### *1.2.2 The Solution*

The Capital Works Management Framework (CWMF) is the matrix of documents that has been developed to deliver the Government's objectives in relation to public sector construction procurement reform. It consists of a suite of best practice guidance, standard contracts (both works and works-related service contracts) and generic template documents.

Fixed price, lump sum contracts are a key component of the CWMF and were chosen as the optimum means of delivering cost certainty, they were introduced in 2007 and must be used by all government departments, bodies under their aegis, local authorities and non-commercial semi-states. Commercial semi-states such as the ESB must use the contracts where more than 50% of the funding for the project is provided from public funds.

There are currently 10 forms of public works contract, 6 of which are the fixed price, lump-sum type. Within this typology there are two basic forms of which the Employer designed form is the one most commonly used;

- A. The traditional Employer designed form and;
- B. Design and build forms (Contractor designed).

### *1.2.3 Industry reaction to the introduction of the Public Works Contracts*

The industry reaction, both from the contracting and the consultancy point of view, was negative up to and after the introduction of the contracts. Whilst all acknowledged that there was a problem with the re-measurement forms widely in use, few agreed that the imposition of a fixed price, lump-sum contract across the board was the optimum solution.

Many of the submissions from stakeholder groups on the review have called for the withdrawal of the public works contracts in favour of forms of contract that are widely used internationally and published by organisations such as the Institution of Civil Engineers in the UK or the International Federation of Consulting Engineers (FIDIC). Many of these forms have a different approach to risk than currently applies under the public works contracts which reflect the large scale projects for which they were developed to manage.

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construction procurement. The Government Contracts Committee for Construction (or GCCC) includes representatives of all the main capital spending public bodies and is a repository of considerable expertise across the different sectors of activity in the construction industry. The Office of Government Procurement currently provides the Chair and Secretariat to the GCCC.



## *1.3 Fixed Price, Lump-Sum Contracts*

### *1.3.1 Risk Transfer*

The extent to which the public works contracts can be considered fixed price is directly proportionate to the level of risk transfer. A range of risks is divided under the contract between those parties in the best position to manage them and then there are a range of risks that the contracting authority can opt to retain or to transfer where appropriate. Associated guidance suggests that a risk should only be transferred where a contractor is in a position to evaluate that risk and price it accordingly. A detailed analysis of the risk transfer is provided at Appendix II.

Where risk is retained by the contracting authority and those risks materialise, the contractor is entitled to an increase in the contract sum. Where the risk is transferred and that risk materialises, the contractor is not entitled to an increase in the contract sum.

It was expected, upon their introduction in 2007, that an average price increase of up to 10% would arise as contractors priced the risks transferred under the contracts<sup>6</sup>. In reality, the collapse in the economy saw a fall in tender prices by as much as 30% from 2006 levels. Primary input costs such as construction materials and fuel increased in the period in question and official labour rates for the Industry only decreased by 7.5% under the last round of changes to the Registered Employment Agreements<sup>7</sup>.

With regard to the optional risk transfers, in order for a contractor to price the risk, a comprehensively designed project must be provided along with reasonable levels of information on those risks.

Where a project is poorly defined, which can arise for a variety of reasons, a fixed price, lump-sum contract will not deliver the desired outcome because it is not designed to cater for such circumstances. Where a project is well defined and the contractor adopts a strategy of pricing low, ignoring the risk and attempting to increase the return by claiming back during the course of the contract, contracting authorities are reliant on the dispute resolution mechanisms in the contract. A lack of case law on the court's interpretation of key conditions of the contract is leading to significant uncertainty for contractors and contracting authorities alike when engaging in dispute resolution under the contract.

### *1.3.2 Notification Requirements under the Contract*

The conditions of contract require early warnings to be given for delays and, where a contractor believes that they have a claim under the contract, notice must be given within a fixed period of time from when they became aware or should have become aware of that claim otherwise their entitlement is lost. These are prudent budgetary measures so that a contracting authority is aware

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<sup>6</sup> Announcing the introduction of fundamental changes to the procurement of public works in a press release dated 12 May 2004, the Minister for Finance, Charlie McCreevy, T.D. made reference to this expected price increase. <http://oldwww.finance.gov.ie/viewdoc.asp?DocID=2107&CatID=1&StartDate=01+January+2004>

<sup>7</sup> This decrease was registered on 4 February 2011 with the Labour Court. The mechanism for registering wage agreements under Part III of the Industrial Relations Act 1946 was deemed unconstitutional by the Supreme Court in May 2013. As a result only the parties to particular pay agreements may enforce their agreement.

of progress and cost exposure on a project and are included to ensure that the exchequer does not receive an unpleasant surprise upon completion of the contract.

If a project goes to tender with incomplete documentation or where risks and constraints are not properly identified the likelihood of claims increases. Where there are significant claims arising under the contract these notification requirements can result in the contracting authority, their design team and the contractor spending a disproportionate amount of time dealing with administrative issues around claims rather than concentrating on the delivery of the project.

## *1.4 Issues that are impacting on the potential for a successful outcome*

### *1.4.1 Impact of the Competitive Tendering Environment*

The impact of the economic crisis and subsequent recession makes any review of the performance of the contracts extremely challenging. As has already been noted, the expected uplift in prices to cater for the additional risk being undertaken did not materialise.

Following five years of declining output (2009 – 2013)<sup>8</sup> and the resulting extremely competitive tendering environment, the balance sheets of many contractors have been severely weakened. It must therefore be questioned whether the State is achieving the optimum result in transferring a risk to a contractor who may not be in a financial position to bear it<sup>9</sup>.

It has been pointed out by industry representatives that the most straightforward solution to this problem lies in rejecting below cost or abnormally low tenders (ALT). However in many cases it will not be a single tender that is identifiably lower than the rest of the field but a spread of prices from the highest to the lowest such that it is very difficult to apply a formulaic approach to identifying an ALT<sup>10</sup>. It should be noted that contracting authorities are not obliged to reject an ALT.

In a very competitive tendering environment, the commercial strategy of pricing low and claiming additional amounts becomes more commonplace and any attempt to reject a tender on the basis that it is an ALT may be strongly resisted, possibly to the extent that a tenderer rejected for submitting an ALT may challenge the subsequent award of the contract and delay the project.

The Government Contracts Committee for Construction (GCCC) is concerned that many contracting authorities opt to award works contracts where the sole criterion for the award of the contract is price. The argument against adopting a Most Economically Advantageous Tender (MEAT) award is that the more commonly used quality criteria result in very similar scores being achieved by tenderers for quality thereby ultimately leaving the competition to be decided on price. Award

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<sup>8</sup> The output of the Irish construction industry was €39bn in 2006 whereas it was estimated that the output would be approximately €8.1bn in 2012

<sup>9</sup> It should be pointed out that where the suite of public works contracts is concerned, the level of risk transfer decreases in proportion to the value of the contract. On lower value contracts, the Contractor is not required to carry the same level of risk as those managing the higher value projects.

<sup>10</sup> This method has recently been introduced by the Central Procurement Directorate in Northern Ireland and is in use in other EU Member States.

criteria must be appropriate, proportionate and linked to the subject matter of the contract. Where those criteria are not objective, contracting authorities leave themselves open to challenge.

#### *1.4.2 Consultant's Fees*

The extremely competitive tendering environment is not limited to building contractors. Indeed it may be argued that construction consultants have been the hardest hit group in the construction sector. Contractors could engage in repair and maintenance works which have, of necessity, continued during the recession but opportunities for consultants in this area are relatively small. As a result of the downturn, construction consultants such as architects, engineers and quantity surveyors have seen their fees drop dramatically.

The low level of fee has had an adverse impact on the delivery of projects when one considers the quality of information being provided to works tenderers. This was raised in a number of submissions, primarily in that of the Construction Industry Federation. It is a view that is shared by many of the public sector officials charged with delivering public works.

The GCCC believes that many consultants have been bidding fees so low as to be unable to deliver a satisfactory level of service. To address this issue the assessment methodology for consultancy tenders was amended in July 2013 to rebalance the evaluation formulae used in arriving at the MEAT scores for tenderers which had favoured price as the determining feature in evaluations. It remains to be seen whether this has the impact desired since it will take time for the change to work its way through to the production of tender documentation. Initial feedback is encouraging.

Whilst penalties may be applied for non-performance, contracting authorities must satisfy themselves that the consultants they engage are adequately resourced in the first place<sup>11</sup>. Information gaps or insufficient consideration given to complex design details can give rise to cost increases in the construction stage if amendments to the design are necessary to correct problems. If not picked up in the construction stage, poorly considered construction details can lead to very costly remedial works and, potentially to the disruption of a public service.

#### *1.4.3 Dispute resolution mechanisms in the Public Works Contracts*

There are two formal dispute resolution mechanisms provided under the contract; conciliation and arbitration. The contract also requires both parties to engage in a co-operative fashion to resolve differences between them.

The timescales set out for notification of claims are cited as an obstacle to this kind of co-operative working in that they force parties into formal dispute measures before they may be necessary – this may be exacerbated in the circumstances where a contract is awarded at an unsustainably low price and the contractor submits a series of claims in order to make good their losses. Where a contract is awarded in these circumstances, the notification requirements promote an adversarial, rather than a co-operative relationship.

Once a claim is received, the contracting authority has a fixed period in which to respond with a determination. Should the determination reject the claim, both parties are essentially in

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<sup>11</sup> This is a legal duty imposed by Regulations 6 & 7 of the Safety, Health and Welfare at Work (Construction) Regulations 2013.

dispute. The formal dispute resolution mechanisms provided for in the contract then take over until the matter is resolved by agreement through conciliation<sup>12</sup> or the dispute is finally settled in arbitration.

When incomplete information on the project is combined with an unsustainably low tender sum from the works contractor, the worst possible outcome is largely inevitable – a poor quality building coupled with substantial claims.

Apart from the adversarial relationship that ensues, claims absorb disproportionately high resources both in responding to the individual claim and subsequently in putting together the submissions required for the dispute resolution methods provided for in the contract. It should also be noted that considerable costs are incurred by both parties on professional fees advising on disputed claims; these costs are not reported in the context of the outturn cost for the project.

When parties do engage in the formal mechanisms provided under the contract, any decisions that may come out of the engagement are private between the parties and there is no wider benefit to the industry from having undertaken the process. The Arbitration Act 2010 closed off the option to appeal an arbitrator's award to the courts. Only points of law may now be referred to the courts and this does not provide any published insight into the outcome of a dispute. In many cases the same dispute is being played out in front of conciliators, with different outcomes leading to considerable uncertainty for all those involved in delivering public buildings and infrastructure.

Since all of the public works contracts dealing with larger projects contain an arbitration clause, it is no longer possible to develop the jurisprudence which is vital for industry in interpreting elements of these contracts. This constraint is not limited to the public works contracts, indeed any new form of contract that contains an arbitration clause will suffer the same fate.

The dispute resolution mechanisms currently provided, whilst resulting in recommendations and awards to the parties in dispute, are not contributing to the wider interpretation of the conditions of contract. It remains to be seen whether adjudication, once the Construction Contracts Act is commenced, will deliver the certainty required for the interpretation of some of the more contentious conditions of contract.

### *1.5 Review of the Public Works Contracts*

The review of the public works contracts has been ongoing since December 2013 and is being conducted by the Government Contracts Committee for Construction (GCCC). A deadline of 17 January 2014 was set for submissions, although any submission received after that date was also taken into consideration. Those received are predominantly from the main industry representative bodies but submissions were also received from some from private individuals and public bodies. A list of those who made a submission and a summary of their submissions are provided at Appendix I. A workshop was conducted in November 2012 which was attended by public sector officials

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<sup>12</sup> A conciliator's recommendation is non-binding whereas an arbitrator's award is binding and may be enforced in the Courts.

involved in the delivery of public works. The views of both private and public sector groups using the contracts have informed the recommendations outlined in this report.

A data gathering exercise was launched in May with a suggested closing date of the end of June. All those involved in the delivery of public works contracts were invited to complete a detailed questionnaire designed to provide sufficient data to establish the performance of the contracts. At the date of this report, performance data on a total of 31 projects has been submitted. As this does not constitute a representative sample it may not be relied upon to provide any indication as to the performance of the contract and so it has not been considered as part of the review.

An interim review of the contracts was conducted by the construction procurement policy section in 2011 and is included at Appendix III for information purposes. A much broader sample is provided in the Interim Review but it must be pointed out that it includes a number of contracts which had not yet reached agreed final account stage and so the outturn cost may, in fact, not be properly reflected.

## **1.6 Conclusion**

### *The performance of the public works contracts*

The primary difference between the public works contract and its immediate predecessor is its inflexibility. This inflexibility is a feature of fixed price, lump-sum contracts that set out clearly defined circumstances where the contract sum or the date for completion may be adjusted.

Under a public works contract, if the circumstance doesn't satisfy one of those criteria, or has not been notified to the contracting authority within prescribed time limits, then no entitlement arises. Claims can only be determined as set out in the contract and if either party is not satisfied with the outcome, the recourse is to refer the dispute to formal resolution procedures. This inflexibility delivers results where projects and their attendant risks can be defined with reasonable accuracy, but this inflexibility is not suited to projects where the timeframe for delivery, or indeed the nature of the project itself, means that detailed definition of the project is not possible. This must be recognised and addressed as part of the medium term strategy.

Having concluded the review, it is the view of the GCCC that lump sum contracts still have a significant role to play and can be used effectively to deliver the vast majority of publicly funded projects providing;

- 1) that the project is well defined; and
- 2) that adequate information on the risks associated with the project is supplied in the tender competition; and
- 3) regular training and information sessions are provided for all those using and working with the contracts.

Part 2 of this report sets out the GCCC interim recommendations arising out of the review. These include some straightforward amendments to the public works contracts aimed at rebalancing the

level of risk being transferred to the contractor in recognition of the changed economic environment and the fact that, in many cases, the competitive tendering environment is preventing tenderers from pricing risk.

The medium-term strategy will consider aspects wider than the conditions of contract and will include the development of a risk assessment and management procedure that will determine the tendering and contracting strategy, effectively identify the risks inherent in a public works project and will provide tools to evaluate the market's response to those risks as part of the contract award process.

However consideration should be given to developing forms of contract or adopting standard forms published by the bodies mentioned at 1.2.3 that are more suited to delivering projects where proper definition is not possible. These would include projects such as works to heritage properties, refurbishment works to existing buildings, civil engineering projects where risks cannot be accurately quantified and projects which have extremely ambitious delivery periods.

The challenges associated with developing particularly complex, high-value projects have already been recognised by the GCCC and a form of contract, the Public Works Contract for Early Collaboration (PW-CF10), has already been developed for this category. So too have the issues that arise with small scale maintenance and refurbishment projects and the Term Maintenance and Refurbishment Contract (PW-CF11) was developed by the Department of Environment, Community and Local Government and the local government sector in conjunction with the GCCC.

## Part 2 – Interim Recommendations

The following recommendations are proposed as an interim measure and recognise the changed economic environment to the one which the contracts were introduced in 2007. They seek to re-balance the risk allocation under the contract until the risk management mechanism proposed in the medium-term strategy has been developed and implemented and the ‘sustainability’ of prices bid on public works projects can be objectively evaluated.

These measures are considered prudent as the sector climbs out of a prolonged recession, since inflationary pressures associated with increased activity give rise to an increased risk of insolvency.

It is proposed to engage with industry in greater detail on these issues but it is intended to implement the majority of these changes within 3 months of beginning the engagement.

The medium-term strategy outlined in Part 3 is intended to take greater account of risk management right through the project delivery which would include the broader issues of public procurement, better commissioning and management of public buildings and infrastructure. It is proposed that engagement on the medium-term strategy will commence once the interim recommendations are implemented. A six month period of engagement with industry is envisaged to consider and develop proposals for a medium term strategy. At its conclusion the Office of Government Procurement, with the GCCC, will prepare a report to Government setting out further recommendations. Implementation will follow subject to Government approval.

### **Interim Recommendations:**

#### **1. Make the bill of quantities the primary reference document for the pricing of public works tenders for projects designed by the contracting authority.**

Since the State engages the consultants who prepare the bill of quantities under an Employer-designed public works contract, it is appropriate that the risk associated with it be retained by the State. It is important to note that the performance evaluation measures outlined in Part 3 will go some way to manage this risk.

#### **2. Introduce a separate tender and subcontract for specialist works contractors.**

Depending on the nature of the project, specialist works contractors such as mechanical and electrical subcontractors can account for a considerable proportion of a project's value. Currently the main contractor is taking the risk for these elements of work and, where a low price is bid, quality can be disproportionately affected. By directly tendering these important elements, the contracting authority has greater control over the quality of the outcome and also reduces the value of the contract for which the contractor has overall price responsibility.

#### **3. Require all projects with a value in excess of €2m to be awarded on the basis of Most Economically Advantageous Tender with a significant weighting for quality.**

It is proposed that MEAT should be adopted in a strategic fashion using quality award criteria that are directly linked to the long-term performance of the project. Comprehensive and clear guidance

will be required in this regard and may take slightly longer than the 3 months for the implementation of the other elements.

#### **4. Overhaul the dispute resolution procedures for all public works contracts.**

The disputes resolution procedures in the contract should be supplemented to include provisions around dispute avoidance, early warning obligations and dispute escalation procedures.

##### ***2.1.1 Change the status of the bill of quantities.***

###### **Recommendation:**

###### **Make the bill of quantities the primary reference document for the pricing of public works tenders for projects designed by the contracting authority**

Best practice project management should see the inclusion of a detailed bill of quantities prepared by the design team engaged by the contracting authority in the tender documents describing a project. Both the contracting authority and the contractor should be able to rely upon the bill to establish a price for completing the project. A well-resourced design team should include a competent quantity surveyor who is responsible for preparing the bill of quantities in line with industry agreed standards from the completed design drawings and specifications.

A bill of quantities provides a detailed, itemised list of the building elements against which a contractor prices a rate for each element, that rate is then applied to a quantity provided by the quantity surveyor to provide a total price for that building element. These element prices are totalled up to provide a price for the project in question. In preparing the bill, the quantity surveyor would typically 'interrogate' the designers to ensure all the information is available to prepare the bill and this process acts as a natural review of the tender documents.

If a bill of quantities contains errors, vital information is missing, the contents contradict information on the drawings or in the specification, or there is an over or under measurement of quantities it can give rise to a cost adjustment. Under the public works contract it has become the norm to neutralise the risk that the bill of quantities can present by reducing it to secondary importance with respect to the drawings and specifications. It therefore serves no contractual purpose other than to provide a schedule of rates for evaluating progress payments or the value of claims, rather than providing a comprehensive, priceable list of the building's elements.

By putting the bill of quantities at a higher status than the drawings and specifications in arriving at the contract sum, the State retains greater risk. However it is the GCCC's view that tenderers should be able to rely on the bill of quantities as being representative of the project in question. Taking this step will also ensure greater scrutiny of the design information provided to the market and should raise the overall quality of the tender documentation issued.

The use of the bill of quantities as the primary reference document for tender purposes also generates efficiencies in the industry since fewer resources have to be deployed in pricing a project. Under the current arrangements, tenderers have to check the accuracy of all the



descriptions and quantities in the bill against the drawings and specifications or risk a significant loss if they assume their accuracy in arriving at their tender price.

### **2.1.2 Revise the current tendering and appointment arrangements for specialist subcontractors.**

#### **Recommendation:**

#### **Introduce a separate tender and contract for specialist works contractors**

Specialist subcontractors such as mechanical and electrical specialists deliver key elements of projects. Currently there are a number of options available to contracting authorities to engage specialists under the public works contracts with varying degrees of input by the contracting authority. This ranges from no input in the case where all specialists are engaged by the contractor without oversight from the contracting authority to a full tender process for specialists where a contract is awarded by the contracting authority and that contract subsequently transferred ('novated') to the main contractor. Typically though, the main contractor is asked to bid on 100% of the project even though execution of a significant portion can be the responsibility of a variety of specialist contractors.

On projects with a significant element<sup>13</sup> of specialists' works it is proposed to individually tender each specialist works package either at the same time as, or preferably in advance<sup>14</sup> of, the main contract tender. It should not add to the time taken to deliver the project since, where the specialist works are tendered before the main contract, it should provide greater detail in the main contract tender documents and allow greater certainty of price. In circumstances where the specialist package is tendered prior to or at the same time as the main contract the appointment of the specialists and the main contractor can be made simultaneously.

The tendered price for the specialist works package will be included into the main works contractor's tender sum in advance of setting the contract sum and the specialist will either be novated to the main contractor or the main contractor will, under the terms of their contract, be required to enter into a subcontract with that named specialist at the specialist's tendered price. This will ensure that the principle of price certainty is met. The main contractor will be required to include in their tender for the management of all specialists named in the contract. Only in very limited circumstances where there are overriding commercial or technical reasons will it be permitted to tender for specialist works after the award of the main contract.

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<sup>13</sup> Where the specialist elements exceed 15% of the value of the project then the contracting authority should adopt the direct tendering approach unless these specialist elements are of a reasonably straightforward nature. Contracting authorities may opt to directly tender such works even where the value does not exceed 15%.

<sup>14</sup> In certain circumstances there is an advantage to the early appointment of a specialist contractor since they can provide a valuable input into the detailed design of the project thereby providing greater certainty to the main contractor.

### **2.1.3 MEAT award for works contracts**

#### **Recommendation:**

**Require all projects with a value in excess of €2m to be awarded on the basis of MEAT with a significant weighting for quality.**

It has been noted at 1.4.1 that commonly used award criteria such as methodology and approach tend not to separate the tendering field and contracting authorities have had particularly bad experiences with award criteria that were overly subjective.

It is proposed to develop detailed guidance that will assist contracting authorities in developing robust award criteria that are both objective and linked to the subject matter of the contract. The elements of the building whose quality and long term performance are inextricably linked to that of the building itself should form the basis of objective award criteria.

Elements such as windows, lifts, roofing systems, etc. could be included as award criteria with marks allocated under certain key performance-related headings. Tenderers will be asked to name a product that meets that particular element's technical specification and that product will be assessed under predetermined criteria with tenderers benefitting from extra marks should those products exceed the minimum standards. By way of example, a lift system would be assessed under energy consumption (both in use and standby), frequency of maintenance, cost of replacement parts, etc. The contractor awarded the contract would be obliged to then use that product or one that meets or exceeds the score obtained in the tender evaluation.

The weighting that is allocated to quality should be decided on a project by project basis (within parameters set by the OGP) with price always retaining the majority weighting except in the case of complex or innovative projects. However the quality of the finished building assessed as part of the tender evaluation will impact on the award of the contract.

It is acknowledged that this system would not necessarily provide a solution for civil engineering contracts but increased scrutiny of the contractor's methodology to deal with particular, identified risks and the cost included in the tender to deal with such risks should prove successful in this regard.

### **2.1.4 Dispute resolution procedures**

#### **Recommendation:**

**Overhaul the dispute resolution procedures on all public works contracts**

As discussed at 1.4.3 the notification requirements and the very competitive tendering environment are conspiring to force parties into an adversarial position. Simply amending the dispute resolution mechanisms without addressing the very competitive tendering environment will not generate significant improvements. The steps outlined at 2.1.1, 2.1.2 and 2.1.3 will go a considerable distance in addressing the tendering environment by delivering greater certainty to the market in the pricing of public works.

The dispute resolution mechanisms in the contract must be reviewed, both in the light of the introduction of statutory adjudication under the Construction Contracts Act and because the lack of broader dissemination of the outcome has proved to be unsatisfactory. Conciliation is the more widely used dispute resolution process and offers the advantage, when used as intended, of being a flexible process where both parties can retain greater control.

Adjudication is a procedure-driven process and, because of the tight timeframes involved, it is unlikely to give rise to an in-depth analysis of some of the more complex contractual issues underlying payment disputes that arise under a main contract. It is intended to provide quick determinations on straightforward payment disputes primarily between the main contractor and subcontractor. Experience in the UK on the more complex, higher value disputes has shown that the process has become driven by the legal profession with similar standards of evidence and testimony as required in the courts.

Under the Construction Contracts Act, either party may refer a payment dispute to adjudication at any time. It is proposed to enhance the management procedures provided for under the contract to encourage greater engagement between parties by adopting dispute avoidance techniques.

It is also proposed to introduce a dispute escalation procedure after the point where a determination has been reached by the Employer's Representative where both parties are to engage within a specific timeframe to establish whether the matter can be resolved before referral to conciliation.

On higher value contracts – in excess of €10m – it is proposed to include a single-person dispute adjudication board (DAB) who will be jointly appointed by both parties at the outset of the contract. The DAB will meet with both parties on a regular basis during the contract to encourage proper engagement between them and, where possible, to establish agreement upon issues before they crystallise into a dispute. If a dispute arises, the DAB will act as a conciliator and, failing agreement on a particular dispute will issue a non-binding recommendation to the parties.

The advantage of such a system is that the DAB will have a knowledge of the parties' behaviour under the contract, will be in a position to advise on appropriate means of engagement and, where it is possible to achieve agreement, should be able to bring it about in a reasonably short time.

The private nature of the dispute resolution procedures is not satisfactory and not in the interest of the wider industry because there is no learning outcome from what can be a very expensive and time consuming process. The Arbitration Rules for use with the public works contracts were recently amended to bring them into line with the Arbitration Act 2010 but also to permit the publication of an arbitrator's award. It remains to be seen whether adjudication under the Construction Contracts Act [once the legislation is commenced] will provide an avenue to obtain the Court's interpretation of key conditions of contract.



## Part 3 – Medium Term Strategy

### 3.1 Introduction

The construction sector is reactionary; expanding and contracting to meet investment levels. It is, of necessity, dynamic and flexible.

- Construction systems, technology and standards are constantly evolving and recent years have seen significant developments in safety and health and building standards legislation;
- The revised suite of procurement directives, which must be transposed by Spring 2016, offer significant opportunities to take life cycle costs, environmental and social considerations and performance evaluation into account when awarding works contracts;
- New ways of resolving the disputes that arise from time to time on construction projects are being introduced such as adjudication (under the Construction Contracts Act). More measured steps to prevent disputes arising in the first place must also be considered;
- Technological developments such as Building Information Modelling whilst being a powerful risk management tool also offer opportunities to move the construction of buildings from the building site to off-site fabrication, providing more efficient and safer ways of working that generate less waste. It also offers significant potential for savings on the operational costs of a building.

These developments alone suggest that a more comprehensive review of the way that the public sector engages the construction industry through public procurement is required. Once the interim recommendations are implemented we propose to engage with stakeholders in developing a strategy to guide the procurement of public works projects from 2016 onwards.

The following section sets out a list of those areas that will provide a framework within which we will engage with industry.

### 3.2 Further Issues to be reviewed in developing a medium term strategy.

#### 3.2.1 Risk management

Proper risk management is the key to successful delivery of building projects. It is proposed to develop a comprehensive suite of guidance for contracting authorities to refer to when commissioning construction projects. Alongside the guidance it is proposed to develop a risk template that may be used throughout the development process, from site appraisal through to engagement of consultants and onward, to inform the tender process for works contractors and thereafter for the building managers to inform the operation and maintenance of the facility. The risk template will become the core management tool for decision making on a project's development at all stages up to tender.

From the point of view of the works tender it is proposed to develop a risk rating for the project which will inform the tendering and contracting strategy to be adopted.

The process proposed will require the contracting authority and, where applicable, their design team to consider risk and, where it is proposed to transfer a risk, to provide adequate information to permit tenderers to price that risk. Where appropriate, tenderers' prices and methodologies for dealing with a particular risk may be taken into account in evaluating the tenders and only where it meets a pre-determined value will they be included in the eventual contract awarded.

Life cycle costing should be an integral part of the risk evaluation of the project and should inform the quality award criteria that are set out at 2.1.3.

The risk template will inform not only the procurement procedure but also which form of contract should ideally be used to deliver the project, depending on such factors as project definition and risk profile.

Building Information Modelling (BIM) should be considered a powerful risk management tool. It has the capacity to reduce the risk exposure of the contracting authority, design team and contractor because of the level of information that is required to generate the model and the level of information it provides to the building management team. Consideration must be given to making its use mandatory for projects of a certain scale and complexity. BIM protocols will be developed for inclusion in public works contracts.

### *3.2.2 Encouraging co-operative behaviour*

Whilst co-operation is a requirement of the public works contract, it is acknowledged that in the circumstances of an unsustainable price that the opposite can often arise – an adversarial position may be adopted which can compromise the successful outcome of the project. The period of engagement between industry and the GCCC will be used to explore how co-operation measures can be better integrated into contracts and parties incentivised to ensure a better outcome for the project.

### *3.2.3 Introduction of performance evaluation*

Performance evaluation has been raised in a number of submissions received as part of the review. It was also seen as a significant issue for contracting authorities who are concerned over the constraints upon them currently in excluding contractors who have performed poorly under previous contracts. In order to successfully exclude a tenderer it is important to demonstrate sufficient grounds under objective criteria. For example, if a contracting authority was aware that a contract was recently terminated for poor performance of a particular contractor it may be an acceptable reason for excluding that contractor from a subsequent tender competition. However, termination is rare even though poor performance, unfortunately, is not.

Performance evaluation will not be limited to building contractors but all those involved in the delivery of the project will be subject to evaluation including the client/Employer. The substance and content of the project brief (prepared by the client) is of paramount importance in determining the performance of the design team just as the standard of the drawings, specification and pricing document is key in benchmarking the performance of the contractor.

It is proposed to put in place milestone evaluations under the contract where an evaluation of the performance of the contractor and the contracting authority (which in the cases of Employer-designed contracts will be the design team) will be carried out. The evaluation should be objective, clear and simple to administer. It is likely that such a process may generate disputes between the parties that should be dealt with under the normal dispute procedures under the contract.

By providing milestone evaluations under the contract, both the contractor and the contracting authority are given the opportunity to improve their performance in advance of the next evaluation and, in the event of a poor rating, to 'redeem' themselves prior to the completion of the project.

Upon the successful delivery of the project, both parties will receive a final evaluation which will be included in a reference which will be sought on any future prequalification.

It will be important to consider how overseas contractors and newly established firms can be evaluated who, purely because they have not worked on public works in this State, cannot be evaluated under the same criteria.

#### *3.2.4 Alternative forms of contract*

It has been acknowledged in this report that the currently published forms of contract are not suited to all construction projects and section 1.6 singles out heritage, refurbishment and certain high risk engineering works where new forms should be developed.

The advantage in retaining the publication of a suite of bespoke public works contracts is that the public sector retains control of the rules by which it engages with the construction industry. The disadvantage usually arises in the context of disputes where, in the absence of an 'industry consensus' form of contract, conciliators, arbitrators and adjudicators may take the view that this is an 'Employer's' contract and temper their recommendation/award accordingly.

Therefore as part of the medium-term strategy we propose to consider alternative forms of construction contract that may meet our requirements. There are forms of contract published by independent bodies that are in widespread use on construction projects both public and private across the globe. Experience of such forms is limited in Ireland and it is likely they will require some minor modifications to suit Irish law, however the advantage to such forms is that:

- they are developed by industry, professional and legal experts engaged in the delivery of construction projects;
- there is assistance and guidance available to those using the contracts;
- there is a certain degree of case law in other, common law jurisdictions available on many of the forms to inform both parties to the contract as to the intent of particular clauses

There are a large number of organisations operating in the construction industry in the UK and internationally who publish contracts ranging from professional institutions to committees of various groups in the construction industry.

The difficulties in relation to generating case law that have been created with the introduction of the Arbitration Act 2010 are outlined in section 1.4.3. Without a route to the courts to air disputes that are contractual in nature, it is very difficult to obtain persuasive interpretations that may be relied upon by industry and public sector alike on certain aspects of the public works contracts. Whilst we have acknowledged there is a significant amount of case law and guidance material available on those forms currently in use internationally, inevitably disputes will arise that would benefit from an interpretation from Irish Courts which is currently not possible if a contract contains an arbitration clause.

### *3.3 Stakeholder Engagement on Medium Term Strategy.*

It is proposed to engage with stakeholders on the basis of the initiatives outlined in 3.2 with the intention of concluding such engagement within 6 months of commencement. Recommendations will be set out in the form of a submission to Minister of Public Expenditure and Reform with a Memorandum to Government thereafter incorporating recommendations from the Minister. The revised arrangements would be introduced on a phased basis after Government approval is obtained.

David O'Brien  
Chair of the Government Contracts Committee for Construction

10 December 2014



## Appendix I

Index and Summary of Submissions received as part of the Review of the Public Works Contracts

### 1.1 Association of Consulting Engineers of Ireland – ACEI:

- Standard forms cannot accommodate the diversity of construction activities;
- Forms do not lend themselves to international contracting interest and correspondingly Irish consultants are not getting experience of the forms of contract typically used internationally;
- Irish utility sector would not choose to use the PWCs;
- Collaborative methods of working such as required for BIM is not taken into account in the PWCs;
- Contractors arguing that rates provided in the pricing document do not apply to variations as they were based upon a fixed scope of work;
- Specialist sub-contractors afforded no payment protection under the PWCs;
- Not suitable for investigation or civil engineering works;
- Employers not always willing to engage, recognise and input into proper risk allocation;
- When issues arise during the contract, often the risk allocation is overlooked by the Employer and/or conciliator;
- Revisions to the contract are poorly notified and are undertaken too frequently;
- Yearly report on contract outcomes to be published;
- ALTs must be tackled.

### 1.2 Association of Electrical Contractors (Ireland) – AECl:

- Prequalification of specialist works contractors is not delivering a satisfactory outcome for the taxpayer. Too many subcontractors are involved in the complex tendering process with little guarantee that a quality candidate will emerge as the successful electrical specialist;
- Poor quality is the net result of the tendering and contractual arrangements;
- Substandard and inefficient products are being used as against those specified;
- Better standard of tender documents is essential;
- Adequate tender periods;
- Introduce a procedure to eliminate abnormally low tenders;
- Responsibility for the M&E budget to be returned to the M&E Engineers;
- Nominated subcontractors to be reinstated;
- Direct payment to Mechanical and Electrical subcontractors.

### 1.3 Chambers Ireland – CI:

- Current forms of contract encourage unrealistically low bids;
- Risk transfer to contractors is excessive;
- Collaborative working to be introduced;
- Greater transparency in the procurement process;
- MEAT awards for contracts;
- ALTs to be discouraged or eliminated;
- International forms of contract to be considered.

### 1.4 Construction Industry Federation – CIF:

- Procurement processes should also be reviewed with consideration given to adopting best practice principles and awarding contracts on the basis of best value rather than lowest price;
- Consideration to be given to adopting internationally used forms of contract;
- Current conditions include inappropriate risk allocation;
- Works to heritage properties and refurbishment generally are not well catered for in the PWCs;
- Greater consideration to be given to collaborative working;
- Contract administered inappropriately and inconsistently;
- A poor standard of tender documents is frequently encountered;
- Greater level of, and more frequent training to be provided in the use of the PWCs;
- Introduce performance monitoring ;
- Selection of specialists should be changed to permit the Employer to hold a separate competition for a specialist – a standard form to be developed and nomination process restored;
- Award of contracts on a MEAT basis and whole life cycle costs to be included in the mix;
- Suggested method for evaluation of compensation events is provided;
- Dispute resolution methods to be reviewed.

### 1.5 Department of Arts, Heritage and the Gaeltacht – DAHG:

- Works to heritage properties are more costly because the worst case scenario is anticipated at tender stage yet savings to the Employer are difficult to obtain if the worst case scenario does not materialise;
- More flexible form of refurbishment contract required that allows for the cost-effective use of PC and provisional sums and the design team greater control over the appointment of specialist works contractors;
- Greater use of MEAT award;
- Reduce the scope for contractors to offer product substitution that is to the benefit of the contractor and not the Employer or the historic building;
- Concern that older buildings may be overlooked for redevelopment.

### 1.6 Engineers Ireland – EI:

- Quality should be part of the award procedures;
- Constraints on finances have led to a reduction in monies available to be spent on site investigations leading to a disproportionate risk transfer to Contractor because the Employer will not 'stand over' the information provided;
- The extremely competitive tendering environment means that there is often no price placed on risk – particularly delay costs leading to disputes which cannot be satisfactorily determined;
- Incomplete tender documents due to budgetary constraints because of low bidding by consultants;
- The contract is administration heavy;
- The timeframes for correspondence between parties in relation to claims is fuelling hastily and ill-conceived claims;
- Timeframes are particularly acute in preparation of the final account where time constraints may cause the Contractor to lose an entitlement;
- Suggestion to merge the 5 main forms of contract into 2, one for Employer-designed and the other for Contractor-designed;
- Provision made for BIM;
- Better balance in relation to risk allocation;
- Price Quality evaluation for ground investigation contracts, adoption of the EI Ground Investigation Specification;

- Marine environment and risks thereof to be taken into consideration for some contracts;
- MEAT award with quality criteria to be the norm for works contracts. Quality to be assessed in advance of price in any tender submission – only those that reach a minimum quality standard to be allowed forward to the price evaluation.

1.7 Mr Mark Kane, Esq., B.Sc.(Hons), LL.B.(Hons), LL.M., FCIQB, FCI Arb, MIEI, C.BuildE FCABE – Conciliator and Arbitrator:

- Supportive of the public works contracts;
- The PWCs promote the employment of construction contracts experts who are Irish;
- Suggestion to publish a standard form of subcontract;
- Introduction of a mediation clause.

1.8 National Development Finance Agency – NDFA:

- Risk transfer is not always either appropriately or successfully achieved as a result of a poor understanding by both parties of what is being sought to be achieved, an insufficient understanding of what is required to inform successful risk transfer as well as an insufficient assessment of the value-for-money consequences of transferring a particular risk. Recommend preparing a comprehensive schedule of risks to be tabled for discussion with stakeholders;
- Encourage steps to allow parties to identify and resolve disputes in a collaborative manner before resorting to formal methods;
- Consideration be given to the appointment of an adjudication panel of experts appropriate to the scope of the project, if conciliation to be retained the conciliator be appointed from the outset with a watching brief;
- Review of the position adopted in the July 2011 version of the form of tender on pre-agreement that each party bear their own costs in arbitration;
- New training programme and updated guidance to improve competencies within design teams and Employer bodies;
- Existing guidance documents to be overhauled to reduce repetition and contradictory elements – this also applies to SAQs;
- Greater clarity in design responsibility, particularly in Employer designed contracts;
- ALTs to be addressed – suggested algorithm approach or a MEAT assessment which might include the tenderers' approach to risk management;
- Electronic document management systems offer the potential to manage the flow of information in a more efficient manner;

- Anecdotal evidence that many specialists in the M&E sector are choosing not to tender for public works. This will become more acute as availability of work in the private sector increases;
- Level playing field for indigenous and overseas contractors – pay and conditions of employment requires more intensive enforcement:
- In the interim, where BIM is identified as an appropriate means of delivering a project, Employers be allowed to use international forms of contract which have inbuilt BIM protocols. The review should also consider the integration of BIM and in particular a collaborative approach to working;
- Project Bank Accounts, Performance Bonds – in particular strengthening the step-in rights in the event of insolvency, a certification regime to complement the BC(A)R and optional social clauses in respect of employment and SME participation might also be considered as part of the review.

#### 1.9 Office of Public Works – OPW:

- The management of time and claims has proven effective.
- More complete design information is being provided at the tender stage.
- Elimination of lowest tender required to address aggressive tendering and subsequent claims.
- Allocation of risk of ‘unforeseeable’ events onto contractor is counter-productive because the interpretation relies on a third party – conciliator/arbitrator.
- The risk allocation is not being priced in tenders and when it arises contractors are unable to manage it. Weather, ground conditions and other risks provided under the contract are not reasonable.
- The extent of project definition will always be subject to certain constraints and the contract conditions must make provision for this.
- Dispute avoidance techniques to be encouraged.
- There is an inordinate amount of contracts going to conciliation.
- Dispute resolution procedures to be reviewed suggestion to introduce a facilitator to distil the dispute down to its key elements and also to publish recommendations/awards to allow better scrutiny of decisions. Expert determination should also be considered. Arbitration to be dropped in favour of referring disputes to the courts that are not resolved by the ADR mechanisms in the contract.
- Rather than relying on a comprehensively detailed project for the basis of awarding a contract, in certain circumstances it may be better to tender on the basis of price constraints

which work within a prescribed engagement procedure. This reduces the potential for dispute.

- Interim payments to be linked to milestones rather than monthly payments.
- Performance evaluation to be introduced with the intention of developing a register of consultants and contractors who are eligible for public contracts.
- The PWCs require a considerable amount of resources to be expended on contract administration at the expense of project delivery.
- There are too many forms of contract (10 to date). Guidance must be revised to ensure it is more accessible and up-to-date. Standard tender documentation is complex and unwieldy.
- Bill of quantities to be reinstated as the primary document for tender purposes.
- Provisional and PC sums to be reintroduced to provide better cost control.
- Isolation of individual disputes is not delivering cost certainty – provision to be made to hold disputes over until the final outcome of the project to establish balancing costs and allow parties to consider their position rather than arguing over each dispute as it arises.
- Nominated subcontractors to be reintroduced to ensure better project outcomes.
- The fixed price, lump-sum contract is not suitable for refurbishment and conservation projects because of the difficulty in defining the works in their entirety.
- Procedure for dealing with delay claims to be reviewed and PV2 (price variation clause) to be omitted.
- Fundamental revision of the contract is required – revert to the GDLA amended as necessary. Consideration should be given to alternative forms of contract NEC, FIDIC, etc. which foster a partnership or collaborative approach rather than the adversarial approach engendered in the current forms.

#### 1.10 Royal Institute of the Architects of Ireland – RIAI:

- Suggestion that comprehensive guidance be prepared for public bodies who only procure construction projects occasionally;
- Consultants be engaged to carry out feasibilities and briefing documentation for subsequent tenders for design service providers;
- Improved standards for design team members through engagement with public sector bodies and training from college through to CPD on public procurement;
- Suggestion to adopt latent defects insurance for public buildings;
- Employer should accept a certain level of risk and build in a time and monetary contingency to deal with it;

- Reinstate the contra proferentem rule;
- Remove the mandatory arbitration clause as it is an impediment to airing disputes in Court – asymmetric dispute resolution;
- Avoid overly complex contractual terms – formulaic conditions has led to avoidable discord in contract administration;
- Greater adherence to the UNIDROIT Principles of International Commercial Contracts 2010;
- Nominated subcontractors and suppliers to be reinstated;
- BoQ to be the primary consideration reference document in appropriate projects;
- RIAI forms better suited to conservation works;
- Changes in the industry from a craft based to a technology driven one is not reflected in most main contract forms;
- Endorse the commentary on specific conditions of contract in the CIF submission.

#### 1.11 Society of Chartered Surveyors Ireland – SCSi:

- Process is dominating project delivery;
- CWMF guidance documentation is repetitive, confusing and contradictory;
- Forms of contract are too frequently updated;
- The PWCs promote and facilitates an adversarial approach;
- Unfair risk transfer;
- Longer period of time required for tender where BoQ not part of the tender documents;
- Project budgets and briefs poorly prepared by some Employer organisations;
- In some instances the ER is postponing decision making in the approval process with little regard for the consequences of such delays;
- Delay, time and associated cost management is confusing and poorly understood. Reasonable compensation for delay outside the Contractor’s control is required;
- The main forms of contract are not suitable for refurbishment work;
- Consideration should be given to making the role of the ER independent of the design team;
- Most disputes arise from the lack of complete design – particularly in the M&E area. Nomination should be reconsidered;
- Lack of precedence from the resolution of disputes means that it is not possible to build up a knowledge base on the interpretation of the contracts;



- The PWC can often pursue final cost certainty at the expense of value for money.

1.12 Mr Tom Wren, BCL, LL.M, FSCSI, MCI Arb – Registered Quantity Surveyor, Accredited Mediator, Conciliator & Arbitrator:

- Very detailed analysis of clauses 9.3 & 9.4 provided;
- The provisions of these clauses are ‘cumbersome if not unworkable in practice.’ Noting that few contractors could implement the requirements of the clauses and the average ER would be unable to undertake the obligations contained therein;
- Dispute prone aspects of clause 9.3.1 and 10.3.1;
- If the ER fails to notify the Contractor at relevant points of the expenditure of the programme contingency the Contractor is deprived of their ability to maintain the programme in accordance with clause 4.9. This will result in the Contractor being relieved of their obligation to maintain the programme with the result that time will be at large;
- The adversarial approach engendered by the forms of contract is not in the public interest.

1.13 Table indicating the most numerous referrals in the submissions received on a clause-by-clause basis.

The table below does not take account where only a single comment is made on a specific clause.

Clause referenced by 5 Stakeholders	Clause referenced by 4 of 5 Stakeholders	Clause referenced by 3 of 5 Stakeholders	Clause referenced by 2 of 5 Stakeholders
9.4	10.5 – ACEI, CIF, EI & SCSI	1.3 – CIF, NDFA & SCSI	2.3 – ACEI & EI
10.7		1.10 – ACEI, CIF & EI	3.2 – ACEI & NDFA
		4.1 – ACEI, CIF & SCSI	4.5 – ACEI & CIF
		10.3 – ACEI, EI & SCSI	5.3 – ACEI & CIF
		10.4 – ACEI, CIF & NDFA	5.4 – CIF & SCSI
		10.5 – ACEI, EI & SCSI	8.1 – CIF & SCSI
		10.6 – ACEI, CIF & EI	11.3 – ACEI & CIF
		10.9 – ACEI, CIF & SCSI	
		11.1 – ACEI, CIF & EI	
		13.1 – ACEI, EI & SCSI	
		13.2 – CIF, EI & SCSI	

## Appendix II

Summary of the Risk Allocation under the Public Works Contracts

Shaded cells indicate the elements most referred to in submissions.

No.	Risk/Responsibility	Contractor	Contracting Authority	Optional	3 <sup>rd</sup> Party
1	K(1) Change Order		✓		
2	K(2) Uncover work and no defect found		✓		
3	K(3) Suspend work under clause 9.3		✓		
4	K(4) Suspend work under clause 12.3		✓		
5	K(5) Error in setting out the works.		✓		
6	K(6) Employer takes over part of the Works prior to substantial completion		✓		
7	K(7) Employer does not give an instruction in accordance with the Contract		✓		
8	K(8) Employer does not allow the Contractor access to the site in accordance with the Contract		✓		
9	K(9) Works Item not given by the Employer when required under the Contract		✓		
10	K(10) Interference by Employer's Personnel		✓		
11	K(11) Contractor instructed to rectify damage to Risk Items for which the Contractor is not responsible.		✓		
12	K(12) Loss or damage to the Works that is at the Contractor's risk	✓	✓ (time only)	✓ insurance	
13	K(13) Disruption within specified weather measurement	✓	✓ (time only)		
14	K(14) A strike affecting the industry generally	✓	✓ (time only)		
15	K(15) Order of the Court or a public authority acting under the Law that did not arise as a result of any omission on the part of the Contractor	✓	✓ (time only)		
16	K(16) A breach of Contract by the Employer that is not listed elsewhere.		✓		

No.	Risk/Responsibility	Contractor	Contracting Authority	Optional	3 <sup>rd</sup> Party
17	K(17) An error in bill of quantities – see detailed description.			✓	
18	K(18) Unforeseeable archaeological or human remains.		✓ (time only)	✓	
19	K(19) Unforeseeable ground conditions		✓ (time only)	✓	
20	K(20) Unforeseeable utilities		✓ (time only)	✓	
21	K(21) Relocation of utilities delayed as a result of the owner of the utilities in question		✓ (time only)	✓	
22	1.3 document precedence	✓	✓		
23	1.4 Risk of omission in Pricing Document	✓			
24	1.5 Non-performance – performance bond	✓ security paid by Contractor	✓ premium paid by Employer		✓
25	1.6 Non-performance - parent company guarantee	✓ if applicable			
26	1.10 risk inherent in information provided as background information (BI)	✓			
27	2.2 compliance with legal requirements	✓			
28	2.3 consents	✓	✓		
29	2.4.5 requirement for documents required for the Safety File	✓			
30	2.6.3 no elected representative or public official will benefit from the contract	✓			
31	2.6.4 constraint on employment of Employer's or consultant's staff involved in the Works by the Contractor	✓			
32	3.1 risks listed (war, invasion etc.)		✓		
33	3.2 care of the works	✓			
34	3.3 insurance of the works	✓			✓

No.	Risk/Responsibility	Contractor	Contracting Authority	Optional	3 <sup>rd</sup> Party
35	3.4 Contractor to indemnify Employer as specified	✓			
36	3.5 Employer to indemnify the Contractor as specified		✓		
37	3.6 public and employer's liability	✓			✓
38	3.7 professional indemnity insurance	✓ if required			✓
39	3.8 existing facilities			✓	✓
40	4.1 co-operation	✓	✓		
41	4.3 ER decisions stated in the Contract to be conclusive	✓			
42	4.5 instructions	✓	✓		
43	4.6 Works Proposals	✓			
44	4.7 Contractor submissions	✓			
45	4.8 Design risk associated with a value engineering proposal that is accepted			✓	
46	4.9 programme	✓			
47	4.11 Contractor to give 10 w/day's notice for any instructions	✓			
48	4.12 ensuring up to date information is available on site	✓			
49	4.13 competent construction project management	✓			
50	5.1 acts or omissions of Contractor's Personnel	✓			
51	5.2 Contractor's Personnel competent and experienced	✓			
52	5.3 Those working for the Contractor or Contractor's Personnel to be paid in accordance with the relevant statute	✓			
53	5.4 Specialists and subcontractors	✓			

No.	Risk/Responsibility	Contractor	Contracting Authority	Optional	3 <sup>rd</sup> Party
54	5.5 collateral warranties for specialist works area	✓			
55	5.7 maintenance of weekly labour records	✓			
56	6.1 ownership of Works Items	✓			
57	7.2 responsibility for activities of trespassers, protesters and others	✓			
58	7.3 Site operations	✓			
59	7.4 operate and maintain parts of the Site and facilities of the Employer			✓	
60	7.5 security and safety of the site	✓			
61	7.6 co-ordinating activities of other contractors	✓		✓	
62	7.7 setting out the works in accordance with the reference points in the Works Requirements	✓			
63	7.8 preservation and notification of archaeological or human remains	✓			
64	7.9 access to and through the site and facilities required to deliver the Works	✓			
65	7.10 removal of Contractor's Things upon completion	✓			
66	7.11 compliance with working times set out in the Works Requirements	✓			
67	8.1 standards of workmanship and Works Items	✓			
68	8.2 quality assurance procedures	✓			
69	8.3 inspection of the works		✓		
70	8.3 access and notification of inspections	✓			
71	8.3 access and notification of inspections	✓			

No.	Risk/Responsibility	Contractor	Contracting Authority	Optional	3 <sup>rd</sup> Party
72	8.4 notification of testing requirements		✓		
73	8.5 & 8.6 rectifying defects	✓			
74	8.7 provision of a defects certificate		✓		
75	9.1 commence work within the period defined in the Works Requirements or the default period of 20 days after the Contract Date	✓	✓		
76	9.2 suspension directed by the ER		✓		
77	9.3 delay that is not an act or omission of the contractor and notified to ER in accordance with the clause		✓		
78	9.3 delay that is not an act or omission of the contractor that is <u>not</u> notified to ER in accordance with the clause	✓			
79	9.4 delays associated with Compensation Events within the programme contingency	✓			
80	9.6 completion of the Works with the Date for Substantial Completion (as adjusted under the Contract)	✓			
81	9.7 taking over part of the Works by the Employer (not a Section)		✓		
82	9.8 liquidated damages deducted from the Contract Sum for failure to reach the Date for Substantial Completion (as adjusted)	✓			
83	10.1 adjustments to the Contract Sum for a Compensation Event		✓		



No.	Risk/Responsibility	Contractor	Contracting Authority	Optional	3 <sup>rd</sup> Party
84	10.2 payment of cost of checking the BoQ where Contractor claims an adjustment to the Contract Sum and following the check there is no adjustment to the Contract sum - where Part 1K(17) is listed as a Compensation Event	✓			
85	10.3 adjustment to the Contract Sum for a Compensation Event where claim is made in accordance with the clause		✓		
86	10.3 adjustment to the Contract Sum for a Compensation Event where claim is <u>not</u> made in accordance with the clause	✓			
87	10.4 cost of preparing proposals for a proposed instruction	✓			
88	10.5 determination of a Contractor's claim or a proposed instruction by the ER	✓	✓		
89	10.6 adjustments to the Contract Sum	✓			
90	10.7 adjustments to the Contract Sum for a delay due to a Compensation Event (after expiry of the Programme Contingency)			✓	
91	10.8 price variation <u>prior</u> to Base Date - 31 months of the Contract Date (PV1) or 37 months of the Designated Date (PV2). Certain exclusions apply	✓			
92	10.8 price variation <u>after</u> Base Date - 31 months of the Contract Date (PV1) or 37 months of the Designated Date (PV2). Certain exclusions apply		✓		

No.	Risk/Responsibility	Contractor	Contracting Authority	Optional	3 <sup>rd</sup> Party
93	10.9 determination of an Employer's claim by the ER	✓	✓		
94	11.1 payment within time specified by the Contract	✓	✓		
95	11.2 payment for unfixed Works Items			✓	
96	11.3 release of retention upon Substantial Completion		✓		
97	11.4 full payment of Contractor's invoice subject to certain conditions	✓	✓		
98	11.5 preparation of final statement	✓			
99	11.5 issue of any payment due within 15 days of receipt of invoice subject to ER's penultimate payment certificate		✓		
100	11.5 issue of any payment due within 10 days of receipt of Employer's demand issued subject to ER's penultimate payment certificate	✓			
101	11.6 interest for late payment	✓	✓		
102	11.7 payment of VAT	✓	✓		
103	12.1 termination on Contractor default		✓		✓
104	12.3 suspension by the Contractor		✓		
105	12.5 termination at Employer's election	✓	✓		
106	12.9 reference to terminate under 12.1 to conciliation	✓	✓		
107	13.1 conciliation	✓	✓		✓
108	13.2 arbitration	✓	✓		✓

## Appendix III

Internal Interim Review of the Public Works Contracts – November 2011

**INTERIM REVIEW  
ON THE EFFECTIVENESS  
AND PERFORMANCE OF THE  
PUBLIC WORKS CONTRACTS  
(2007 – 2010)**

**4 November 2011**

Department of Public Expenditure and Reform

## Executive Summary

The interim review of the public works contracts arises out of the recommendations of the *Value for Money and Policy Review of the Construction Procurement Reform Initiative* published by the Department of Finance in January 2011, however the Government Contracts Committee for Construction (GCCC) has had a monitoring process in place since 2008 shortly after the introduction of the public works contracts. The report's findings rely upon a sample of public works contracts which included the pilot projects monitored by the GCCC and returns supplied by contracting authorities contacted on foot of public works contract notices that they published in 2008, 2009 and 2010 on the [www.etenders.ie](http://www.etenders.ie).

The construction sector has seen output fall dramatically since its peak in 2006/07 and it should be noted that the decline in the cost of procuring construction work is not covered in this report. It may be argued that the downturn in the economy has delivered significant value for money independent of the Construction Procurement Reform Initiative, however the purpose of this review is to consider the performance of the public works contracts in delivering a key objective of the Initiative which is to ensure that outturn cost equals the contract sum. This report reviews the performance of each project in the sample in this respect, provides comment on the areas of cost and programme overruns.

The report presents a snapshot of the performance of the public works contracts at a point where early performance indicators can be evaluated. Cost overruns on public sector civil engineering projects represented in the sample are at 8.4% which is significantly down from the 25 – 30% (excluding inflation) reported in the Control and Auditor General's (C&AG) *Special Report: NRA Primary Route Improvement Programme (2004)*. Cost overruns on the public sector building projects are lower at 4.8% but are still above the target of a maximum of 1 – 2% increase on the contract sum for all public works contracts indicating that considerable room for improvement exists. Programme overruns for both building and civil engineering sectors were also considered and stand at an average of 27.06% over the original contract programme whereas the target is to deliver an average of below 10% of the original contract programme.

Given that we are almost mid-way through the Construction Procurement Reform Initiative 2007 – 2017 the signs are encouraging, further steps need to be taken to

ensure the key targets are met and this report will be considered by the GCCC who will decide on what steps to be taken to further improve the performance of the public works contracts.

## Introduction

As a result of significant cost over-runs on Public Works projects in the period 1994 – 2004 the Government decided in 2004 to embark on a major initiative to reform public sector construction procurement. This was prompted, in particular, by the extent of cost over-runs that arose on civil engineering works contracts completed in the period 2000 – 2003. The Comptroller and Auditor General (C&AG) reported an average increase of 42%<sup>15</sup> in this period on certain civil engineering contracts. The C&AG said in his report that *“typically the price increase on such contracts would amount to 25% - 30% (with inflation in recent years adding some 10% – 15% to a project) measured between contract award and completion.”* The C&AG also said in his report that *“the challenge is to ensure that each risk is borne by the party best positioned to manage it. For most risks, up to recently, the thinking was that it was better for the State to bear the risk and so pay only on the basis of measured outcome whether for price increases or variations to the contract. In light of this experience with re-measured contracts, where the increase between tender and final contract cost has, in recent times, been in the order of 40%, a fundamental rethink of their use is justified.”* The fundamental rethink was initiated by Government when it decided in 2004 to completely reform public sector construction procurement. This initiative included the introduction of measures that extend across the full spectrum of Public Works procurement, and include the conditions of construction contracts used, the procurement management of construction-related services and the procedures employed by Public Sector Clients in deciding whether a project is definitely needed and, if so, the particular requirements for it.

The primary objectives of the Government’s initiative are greater cost certainty at tender stage, better value for money and more efficient delivery of projects. These objectives form the cornerstones of Government policy for construction procurement. To implement these high level objectives the entire sequence of operations whereby construction work in the Public Sector is procured needed to be examined and adapted to bring it into line with the Government objectives. This included the manner in which construction consultants were traditionally procured and rewarded for their services, which tied the consultants’ fees to the Contractor’s contractual charges and provided no incentive for the consultants to be pro-active in controlling

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<sup>15</sup> NRA Primary Routes Improvement Programme, C&G’s Special Report (April 2004). It should be noted that there were reported even greater cost over-runs on other public sector construction contracts at the time (e.g. OPW River Nore Drainage Scheme).

the construction costs. Effectively, the consultants earned more fees as construction costs escalated during the construction stage. The traditional arrangement has been replaced with a system that requires fee amounts to be fixed price lump sums, tendered competitively and based on the consultants' own anticipated input.

To improve the next stage in the delivery process for construction projects, a range of new conditions of contracts were prepared for public works contracts to replace the versions used at the time. The documents that were replaced were published by the professional institutions and agreed with the construction industry, with little or no opportunity for the Public Sector, the party ultimately going to pay for the work, to have its requirements incorporated. The new public works contracts have been developed by public clients for public clients. They allow for optimal risk transfer as determined by the Client for a particular project, on the basis of the tenderers being provided with comprehensive design information. This system allows tenderers to commercially assess the risks that are intended to transfer to the Contractor and price them in competition so that the tender amount eventually chosen for acceptance is a fixed price lump sum for the execution of the work required and the Client is aware of what risks it retains and what risks the Contractor carries.

## **Target**

To achieve the Government's key objectives of *"cost certainty at tender stage and better value for money"* it was necessary for the public sector to develop its own standard, fixed price lump sum contracts for use on public sector construction projects tendered on a competitive basis so that there would be little or no cost over-runs between initial tender price and final outturn costs. GN 1.3 *Budget Development* of the Capital Works Management Framework identified the variance that is acceptable when managing Public Works contracts and assessing the cost over-run. This variance limits the contingency sum held by the contracting authority for each contract at construction stage (i.e. implementation stage). GN 1.3 states that *"by implementation stage it (i.e. the contingency sum) represents not more than 1 -2 per cent<sup>16</sup>"* of the overall capital cost of a project. This means that cost over-runs on projects are not to be more than the contingency sum of 1 – 2 per cent of the initial

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<sup>16</sup> Page 28 of GN 1.3 - Budget Development. There is a separate contingency amount of 10% exclusively for Heritage Contracts.



contract price of a project. The contingency sum is intended to cover cost increases that arise 'for legitimate and acceptable reasons'. Circumstances such as the realisation of a risk related to an optional compensation event where the contracting authority, on the basis of a proper analysis, has opted to retain the risk. It is not intended to cover significant changes to the scope of the works after the contract has been awarded and the Capital Works Management Framework on [www.constructionprocurement.gov.ie](http://www.constructionprocurement.gov.ie) contains the necessary guidance, templates and procedures to help public bodies develop comprehensive designs and specifications prior to tenders being sought.

## **Monitoring the Performance of the Public Works Contracts**

The Department commenced monitoring compliance with the use of the new public works contracts published by contracting authorities on eTenders from January 2008.

The GCCC also set up a monitoring sub-group in late 2008 to examine on an ongoing basis a number of pilot projects that GCCC members were invited to nominate.

In January 2011 the Department of Finance published a *Value for Money and Policy Review of the Construction Procurement Reform Initiative*. This Review emanated from a Department of Finance proposal in the 2005 – 2007 expenditure review cycle, which is a system introduced to secure improved value for money from public expenditure and to provide greater accountability to the Oireachtas and the taxpayer on what is being achieved. The key recommendation of the study is to *'keep the construction contracts under review to ensure that they are functioning properly'* and *'as significant contracts are complete, performance indicators such as those proposed in Chapter 6 should be used to assess the effectiveness and impact of the Construction Procurement Reform Initiative (CPRI). These performance indicators focus on comparing measures such as; contractual fixed price lump sum figures and final outturn costs, contractual delivery periods and actual time for delivery.'* As a significant number of contracts are now complete, or almost complete, it is felt that the time is right to carry out a review of the performance of the public works contracts based on a representative sample. It should be noted that approximately 4000 public works contract notices have been advertised by contracting authorities on eTenders and a similar number of awards made since the contracts were introduced in 2007. The review that is the subject of this report relates to the performance of the public works contracts only. A separate review will be conducted on the performance of the Conditions of Engagement for construction-related services and on the revised regime introduced for the procurement of those services. The outcome of these reviews will also reflect on the performance of public Clients in managing the construction procurement process and it is anticipated that the results may show the way for further improvements.

## Scale of Public Sector Construction Output

### (i) Size

The following public sector construction output figures have been extracted from DKM Economic Consultants Annual Construction Industry Review 2009 and Outlook 2010 – 2012 commissioned by the Department of Environment Heritage and Local Government and published in October 2010. The figures include for public sector new build and repair and maintenance work. The definition of construction output is given at Appendix A.

1	2	3	4	5
Public Sector Output (at current prices)	2008 €/m	2009 €/m	2010 €/m	Average €/m p.a.
<b>Total</b>	<b>7,536.37</b>	<b>5,826.80</b>	<b>4,745.89</b>	<b>6,036.35</b>

Table 1. Public Sector Construction Output – DKM Economic Consultants

### (ii) Parties

All major capital spending Departments, Offices and Agencies funding construction activities in the public sector are included in the market figures given above. The particular sectors included are listed in Appendix B. The foregoing investment figures in construction include capital and current spending, and expenditure on repair and maintenance works. They do not include expenditure on Public Private Partnerships, VAT (as the Review returns exclude VAT) or professional fees for construction-related services (which are the subject of a separate exercise).

### (iii) Division between Building and Civil Engineering

The division of *Market Share* between building work and civil engineering work is shown in the table below.

Public Sector Output (at current prices)	2008 €/m		2009 €/m		2010 €/m	
	Building	Civil Eng	Building	Civil Eng	Building	Civil Eng
Sectoral Division	2,486.97	5,049.40	1,236.10	4,590.70	1,281.99	3,463.90
<b>Total</b>	<b>7,536.37</b>		<b>5,826.80</b>		<b>4,745.89</b>	

Table 2. Public Sector Construction Output – Division between Building and Civil Engineering Work – DKM Economic Consultants

## **Approach to Review**

Chapter 6 of *Value for Money and Policy Review of the Construction Procurement Reform Initiative* proposed that members of the Government Contracts Committee for Construction (GCCC) be asked at the appropriate time to identify a number of projects<sup>17</sup> that will be banded within categories and values in the context of measuring key performance indicators for cost and time over-runs. Section 6.5 states “*Assessing the long term performance of the CPRI entails examining the extent to which the expected benefits have been achieved. It is a combination of qualitative and quantitative measures of performance and will be informed by the assessments regarding the effectiveness of the CPRI made by the GCCC and may also draw on information from other sources.*” As regards drawing on “*information from other sources*” the construction section of the NPPPU sought directly from contracting authorities details of the public works contracts awarded in 2008, 2009 and 2010 as a result of the publication of public works contract notices on eTenders during that period. This resulted in returns relating to 367 public works projects being provided for inclusion in the study based upon contracts that were awarded pursuant to notices published on the eTenders website from all areas of the public sector.

The number relating to 2008 was 97; for 2009 it was 124 and for 2010 it was 146. These two sources of information have been combined to give a realistic credible sample to use in the study.

When the 165 public works contracts from the GCCC’s monitoring group are included the overall size of the representative sample of public works contracts is 532 representing a combined value of €1,216m. This sample covers all aspects of construction activity in the public sector over the years 2007 – 2010 and represents over 16%<sup>18</sup> of the total number of public works contracts awarded over the last five years.

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<sup>17</sup> The GCCC identified 165 works contracts as pilot projects

<sup>18</sup> This is based upon the assumption that at least 800 public works contracts are awarded each year over the last 4 years.

## Spread of Public Works Contracts in the Review Sample

Data was collected in relation to the types of public works contracts used on works projects. The following table shows the frequency and type of contracts in the sample.

Building					Civil Engineering				
PW - CF1	PW – CF2	PW – CF5	PW – CF6	PW – CF7/8	PW – CF3	PW – CF4	PW – CF5	PW – CF6	PW – CF7/8
38	27	100	124	3	32	31	116	41	20

Table 3. Spread of Public Works Contracts across Building and Civil Engineering Sectors

## Number of Public Works Contracts awarded within Bands

Information has been collated into bands and is presented in Table 4. below.

Building					Civil Engineering				
Less than 250k	250k – 500k	500k – 1m	1m – 5m	Over 5m	Less than 250k	250k – 500k	500k – 1m	1m – 5m	Over 5m
142	38	35	56	20	113	51	35	30	12

Table 4. Number of Contracts Awarded within Bands across Building and Civil Engineering Sectors

## Percentage by Number

Using the figures in Table 4. *Number of Public Works Contracts awarded within Bands* and applying them to the total number of contracts in the sample gives the *Percentage by Number* within each band which is shown in the table below.

Building					Civil Engineering				
Less than 250k	250k – 500k	500k – 1m	1m – 5m	Over 5m	Less than 250k	250k – 500k	500k – 1m	1m – 5m	Over 5m
%	%	%	%	%	%	%	%	%	%
27	7	7	10	4	21	9	7	6	2

Table 5. Percentage of the Number of Contracts Awarded within Bands across Building and Civil Engineering Sectors

## Value of Public Works Contracts awarded within Bands

Value of Public Works Contract Awards	Building	Civil Engineering
€	€	€
Up to 250,000	14,738,088	14,286,367
250,001 – 500,000	13,519,880	18,795,915
500,001 – 1,000,000	26,156,735	23,623,152
1,000,001 – 5,000,000	118,454,590	61,236,396
Over 5,000,001	181,614,287	743,755,491
<b>Sub-Total:</b>	354,483,580	861,697,321
<b>Total:</b>	1,216,180,901	

Table 6. Value of Contracts Awarded within Bands across Building and Civil Engineering Sectors

### Percentage by Value

Using the figures in Table 6. *Value of Public Works Contracts awarded within Bands* and applying them to the total value of sample gives the *Percentage by Value* within each band which is shown in the tables below.

Building					Civil Engineering				
Less than 250k	250k – 500k	500k – 1m	1m – 5m	Over 5m	Less than 250k	250k – 500k	500k – 1m	1m – 5m	Over 5m
%	%	%	%	%	%	%	%	%	%
1.20	1.10	2.15	9.74	14.93	1.20	1.55	1.94	5.04	61.15

Table 7. Percentage of the Value of Contracts Awarded within Bands across Building and Civil Engineering Sectors

Building Work Only (based upon €354.5m total in Table 6.)				
Less than 250k	250k - 500k	500k – 1m	1m – 5m	Over 5m
%	%	%	%	%
4.16	3.81	7.38	33.42	51.23

Table 8. Percentage of the Value of Contracts Awarded within Bands in the Building Sector only

Civil Engineering Work Only (based upon €861.7m total in Table 6.)				
Less than 250k	250k - 500k	500k – 1m	1m – 5m	Over 5m
%	%	%	%	%
1.66	2.18	2.74	7.11	86.31

Table 9. Percentage of the Value of Contracts Awarded within Bands in the Civil Engineering Sector

## Comparison of Value with Number

The table below highlights the significant divergence between value and number of construction contracts in the sample. The relatively small number of very large civil engineering projects contained in the sample is influencing the data.

€	Building		Civil Engineering	
	Value %	Number %	Value %	Number %
Up to 250,000	1.20	27	1.20	21
250,001 – 500,000	1.10	7	1.55	9
500,001 – 1,000,000	2.15	7	1.94	7
1,000,001 – 5,000,000	9.74	10	5.04	6
Over 5,000,001	14.93	4	61.15	2

**Table 10. Comparison between the Value and Number of Contracts Awarded within Bands in the Building and Civil Engineering Sectors**

## Compliance

The GCCC has been monitoring compliance by contracting authorities in the use of the public works contracts since 2008. The monitoring has been on a monthly basis and uses reports compiled from eTenders on the number of public works contract notices that are published each month where the Public Works conditions are listed as being used and the number where it is proposed to use other Conditions. The non-compliant notices are discussed at each GCCC monthly meeting and a course of action is decided on. The level of compliance has now reached about 94% of published notices on eTenders, sometimes close to 100%, with most cases of apparent non-compliance traced to errors made in completing Section 14 of the public works contract notice template used to post notices on the eTenders website.

## Analysis

### *(i) General*

In measuring the effectiveness of the construction reform initiative the Value for Money and Policy Review of the Construction Procurement Reform Initiative states<sup>19</sup> *‘When a cost evaluation is being conducted in regard to the use of the new public works contracts, it will be made possible by measuring the difference between the tender price and the final outturn cost of a project. With regard to an evaluation of timelier delivery, the measurement will be the difference between the initial period stated in the contract and the actual period it took to complete the contract. Each department/agency represented on the GCCC will, at the appropriate time, be asked by the NPPPU to identify a number of projects that will be banded within categories and values.’* The document also states<sup>20</sup> that: *“The proposed performance indicators for measuring the effectiveness, impact and long term performance of the CPRI, may need to be reviewed and amended or supplemented with additional indicators. The GCCC should take a lead role in this review process.”* The GCCC set up a monitoring group in 2008 a year after the public works contracts were introduced in 2007.

Departments and agencies on the GCCC’s monitoring group were invited to nominate a number of works projects that could be used as pilot projects for the purpose of monitoring performance. The number of projects has grown to a total of 165 over the monitoring period. The group reported quarterly on these projects, details of which were submitted on templates specifically developed for the purpose. The data provided allowed for an in-depth analysis of the performance of the 165 public works contracts on an ongoing basis. These contracts covered all aspects of construction activity in the public sector and were discussed at length at the regular meetings of the GCCC monitoring sub-group.

As a parallel exercise (when it became evident during the monitoring process that additional data was needed to ensure the soundness of the sample), requests were initiated to contracting authorities for data to be provided with respect to public works contract notices published on eTenders in 2008, 2009 and 2010. This exercise generated an additional 367 projects, which when added to the projects in the pilot study, gives a total of 532 projects in the sample.

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<sup>19</sup> Chapter 6 of Value for Money and Policy Review of the Construction Procurement Reform Initiative

<sup>20</sup> Chapter 7 of Value for Money and Policy Review of the Construction Procurement Reform Initiative



(ii) On budget

The overall initial contract value for the 532 works contracts included in the study is set out in the table below. This is split between building works and civil engineering works. In addition, the overall outturn costs of the works contracts are shown in the table below separately illustrating the final outturn costs for both building and civil engineering works.

Total Building and Civil Engineering Initial Contract Price €		Total Building and Civil Engineering Final Outturn Cost €	
1,216,180,902		1,305,087,592	
7.31% Increase			
Building Contracts		Civil Engineering Contracts	
Initial Contract Price €	Final outturn cost €	Initial Contract Price €	Final outturn cost €
354,483,581	371,388,716	861,697,321	933,698,876
4.8% Increase		8.4% Increase	

Table 11. Contract Price Compared to Outturn Cost for 532 Sample Projects

The overall increase of 7.31% still needs to be reduced. While it is an improvement in the 25% - 30% over runs reported by the C&AG in 2004 there is still room for improvement. If the building and civil engineering sectors are looked at separately there is scope for more tightening up in the civil engineering side than the building side.

(iii) On Time

From data received in relation to the 532 works contracts in the sample<sup>21</sup>, only 312 have sufficient back up material to enable time over-runs to be assessed. An examination of the data received for the 312 contracts indicates that, although the sample is smaller it continues to be a reasonable representation of public sector projects. Table 12. overleaf illustrates the results.

Building Contracts Total time	Civil Engineering Contracts Total time
1167 months	763 months
Total time over-run	Total time over - run
198	324
Percentage increase	Percentage increase
16.97%	42.46%

<sup>21</sup> Reasons for time over-runs were not sought from contracting authorities as part of this review.

<b>Overall average percentage time increase for both Building and Civil Engineering Contracts</b>
<b>27.06%</b>

**Table 12. Programme Overrun across Building and Civil Engineering Sectors**

From the sample examined and the outcomes shown in the table it is evident that there is a need for contracting authorities to exercise greater control in the management of time on construction projects. The immediate target is to get time over-runs down to single digit figures in both the building and civil engineering areas

*(iv) Change Orders*

Again, from data received in relation to the 532 works contracts in the sample, only 312 have sufficient back up material to enable Change Orders<sup>22</sup> to be assessed. An examination of the data received for the 312 contracts indicates that, although the sample is smaller, it continues to be a reasonable representation of public sector projects. Table 13. below illustrates the results.

Building Contracts			Civil Engineering Contracts		
Change Orders			Change Orders		
Number	Value	Av Value	Number	Value	Av Value
1,451	7,901,888	5,445.82	909	19,545,691	21,502.41
Percentage of Contract Value			Percentage of Contract Value		
3.08% <sup>23</sup>			4.27% <sup>24</sup>		
Overall Percentage of Contract Value					
3.84%					

**Table 13. Change Order Values across Building and Civil Engineering Sectors**

Change Orders arise under three main headings, these are: (i) 'for legitimate and acceptable reasons'<sup>25</sup>; (ii) a result of inadequate planning and design before contract award, or (iii) scope changes after award. Whilst the extent and reasons for change orders were discussed as part of the monitoring sub-group, the reasons for issuing change orders was not sought from contracting authorities in the wider sample.

<sup>22</sup> Change Orders only relate to scope changes and the Government's view on scope changes is that "steps need to be taken to ensure that this practice is eliminated to the greatest extent possible. Guidance will be prepared to help client bodies develop comprehensive output specification before tenders are sought to avoid changes in scope of capital projects, post contract award"

<sup>23</sup> 7,901,888 ÷ 256,686,075 × 100% = 3.078% or 3.08%.

<sup>24</sup> 19,545,691 ÷ 457,996,213 × 100% = 4.267% or 4.27%.

<sup>25</sup> Chapter 6 of Value for Money and Policy Review of the Construction Procurement Reform Initiative.

### *(v) Contractual Claims*

It is also noted that the returns show contractual claims of a general nature, which are considered separately to compensation events under the contract since, at the time of publication, they were yet to be finalised. It should be noted that not all of these claims will necessarily give rise to an adjustment to the contract sum and for this reason they were not included. The outturn cost figures included in Table 11. are agreed final account figures, however in some limited cases projected final account figures were included where the projects had reached an advanced stage.

### **Conclusion**

Prior to the introduction of the range of Public Works Conditions of Contract, the use of Provisional Sums, Contingency Sums, Provisional Quantities and Prime Cost Sums served to disguise the lack of project definition by public bodies and the design work done at tender stage. The Client was left exposed to the risk of a significant cost increase when the design was finalised, as well as the possibility of contractual claims from the Contractor for delay and for recovery of other costs that might be chargeable to the Client due to the Client being obliged to retain risks that he was not in a position to properly manage.

The Public Works Conditions of Contract provide the framework for both Clients and their Design Teams to better manage the delivery of projects and to avoid the pitfalls of the superseded documentation which only led to bad practice by all key stakeholders.

The outcome at this point in time is reasonably satisfactory. However, additional measures will have to be implemented nationally to ensure that cost over-runs (of 4.8% for building works and 8.4% for civil engineering works) are reduced to the target of 1% - 2% of the capital cost of a project if the Government's objective of '*accepted tender costs equalling final outturn costs*' is to be achieved within the consolidation period<sup>26</sup> ending in 2017. Further Interim Reviews will need to be conducted on an annual basis until 2017 to ensure that there is continuous

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<sup>26</sup> A 10 year consolidation period was envisaged when the contracts were introduced in 2007. It was expected that at the end of the consolidation period there would be universal use of the public works contracts in the public sector and also that there would be a real culture change in regard to public bodies and design consultants towards comprehensive design at tender stage and that cost over-runs would be a thing of the past or at most 1% - 2% of the capital cost of a project.

improvement in the management of cost control and time on projects post award so that the Government's key objectives are delivered. The introduction of the Public Works 'Term Maintenance and Refurbishment Contract' and the 'Early Collaboration Contract' both of which are required to suit particular types of project but, of their nature, give rise to an increased possibility of cost over-runs where not properly managed, will make achievement of the target more onerous and will further heighten the need for Contracting Authorities and their Design Teams to be aware of, and adhere to, the procedures in the Capital Works Management Framework. These are, and will continue to be prerequisites for the successful use of the Public Works Contracts.

## Appendix A

**Note:** The following definitions are extracts from DKM Economic Consultants Annual Construction Industry Review 2001 and Outlook 2002 – 2004.

### 1. Definition of New Construction Output

The value of new construction output is defined as the value of work put in place on the construction of buildings and structures and on civil engineering and land improvement projects. *Output is valued inclusive of VAT at the building services rate where this is chargeable or, in the case of output of non VAT registered bodies including direct labour units and individuals, output is valued inclusive of VAT on material inputs.* Data which would allow the exclusion of deductible VAT is not readily available.

Professional fees and expenses and site supervisory costs are included in the value of output. In general, in the case of new buildings and structures, all expenditures are taken into account, including outlays on external and internal painting, on the installation of new permanent fittings and fixtures such as fixed stoves, central heating, air conditioning, lightning, plumbing and water supply facilities and all other fixed equipment customarily installed before buildings are occupied. The value of expenditure on all fixtures, facilities and equipment which are integral and unmovable parts of the structure are included in output.

New construction output includes the value of all site development work, but excludes land costs and repair and maintenance expenditure. Except in the case of housing, expenditure on major alterations, improvements and additions to existing buildings and structures (e.g. the installation of new central heating and air conditioning systems, the addition of floor area, rooms etc) is considered as new construction output. In the case of housing, investment expenditure of this type is assigned to repair and maintenance output. Expenditure on furniture and furnishings (e.g. carpets, curtains etc) is not included as new construction output.

## 2. Definition of Repair and Maintenance Output

The value of repair and maintenance output includes expenditure on external and internal painting, decorating, glazing, paper-hanging, tiling etc. whenever existing buildings and structures are involved. Outlays on worn-out or damaged fixed equipment and permanent fixtures such as gutters, gas fittings, plumbing, heating and ventilation plant, sound and heat insulation, electrical fixtures and fittings are included. Outlays on repairs to the structure e.g. rebuilding walls, replacing roofs should be included as repair and maintenance expenditure. Expenditure on furniture and furnishings (e.g. carpets, curtain etc) should not be included.

## Appendix B

*Note: The following list has been taken from DKM Economic Consultants Annual Construction Industry Review 2009 and Outlook 2010 - 2013*

	2008		2009		2010	
	Capital	R&M	Capital	R&M	Capital	R&M
<b>1. Residential Construction</b>						
Public housing	√	√	√	√	√	√
<b>2. New Non-Residential Construction</b>						
Tourism	√	√	√	√	√	√
<b>3. New Productive Infrastructure</b>						
Roads	√	√	√	√	√	√
Water and sanitary services	√	√	√	√	√	√
Airport development	√	√	√	√	√	√
Ports and harbours	√	√	√	√	√	√
Transport	√	√	√	√	√	√
<b>4. New Social Infrastructure</b>						
Education	√	√	√	√	√	√
Health	√	√	√	√	√	√
Public buildings	√	√	√	√	√	√
Local authority services	√	√	√	√	√	√
Sport	√	√	√	√	√	√
Gaeltacht	√		√		√	
<b>Sub-Total</b>	<b>9,791.00</b>		<b>8,058.70</b>		<b>6,339.90</b>	
Deduct professional fees, PPPs and VAT	<b>2,254.63</b>		<b>2,231.90</b>		<b>1,594.01</b>	
<b>Total</b>	<b>7,536.37</b>		<b>5,826.80</b>		<b>4,745.89</b>	