Early contractor involvement

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Phil Garlick on ECI and the associated legal, contractual and insurance considerations

EARLY contractor involvement (ECI) is part of the growing trend for early project collaboration across the industry, with the contractor joining the team at the start of a scheme bringing expertise in planning, buildability, cost estimating and value engineering.

Tradition

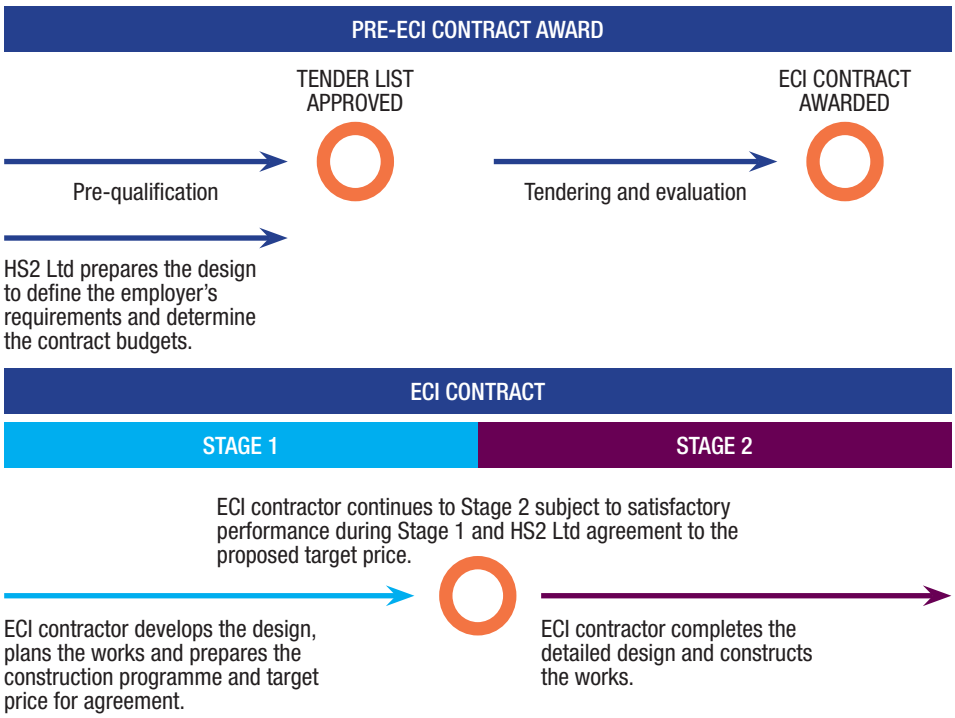
Single-stage procurement and contractual models in which the main contractor and its subcontractors are appointed only for the construction phase have been the traditional approach within the construction industry. However, such a model is unlikely to obtain the best contributions of all parties to a successful project, as it excludes the main contractor and subcontractors from the early design and project planning. This in turn inhibits opportunities for innovative solutions, constructability and health and safety planning into the design.

In particular, problems are often caused by awarding contracts primarily on the basis of lowest price. Experience has shown that value for money is not achieved in either the final cost of construction or the whole life and operational costs. The construction industry has embarked on a sustained campaign to overcome its perceived performance problems through a number of initiatives and radically different approaches to the procurement and management of construction projects. Subsequently, emerging project delivery methods increasingly rely on collaboration between the client, designer and contractor, and are aimed at developing longer term positive relationships for the benefit of all involved parties.

> ECI contracting is a process where designer and constructor work together from the beginning.

The ECI procurement system is one of these new delivery methods. The development of ECI was based on the premise that traditional methods involve the team much too late in the project development, providing limited scope for innovation and the consideration of constructability issues. ECI contracting is a process where the designer and constructor work together from the beginning in a contractual relationship with the client; firstly to scope and price a project (stage 1) and then to design and construct a project (stage 2).

ECI was first introduced by the Engineering and Construction Contract published by the Institution of Civil Engineers in 1998 and adopted by the Highways Agency for its infrastructure projects. In this two-stage procurement and contractual model, the client appoints design and construction professionals early in the project development process, through a non-price based selection, on the basis of the contractor's track record, understanding of the project and quality of new ideas. These professionals assist in planning, assessing constructability and developing an 'open book' target cost in conjunction with the client and project manager.



HS2'S incentivised two stage contract.

The target cost is agreed before construction, and detailed arrangements for the allocation of potential extra costs or savings are determined.

ECI and NEC

ECI has now been further recognised and encouraged by the New Engineering Contract, with the introduction of additional clauses for use with options C (target contract with activity schedule) and E (cost reimbursable contract). The addition of the ECI clauses, which apply to all contractors taking part in the design development and construction planning stage of a project, recognises the growing trend of early project collaboration.

Previously the design development and construction planning stage on NEC projects has generally been contracted separately from the main detailed design and construction stage. NEC has now published standard additional clauses[1] to enable a single contract to be used for both stages. The ECI concept has been given further credibility by the announcement that the HS2 project will use this approach to contracting in order to improve team working, innovation and planning to deliver value for money. HS2 will use an integrated contractor and design team appointed under an incentivised two stage contract. The new NEC3 clauses and the primary headings and features are:

- Definitions
- Forecasts
- Proposals for stage two
- Key people
- Notice to proceed to stage two
- Changes to the budget
- The parties use of material
- Incentive payment (option E only)
- Additional ECC contract data entries.

The NEC proposes two options with these clauses:

1. The employer appoints a consultant to carry out design, and the contractor assists the consultant in designing the project. The contractor may or may not be required to carry out specific elements of the design in addition to assisting the designer. The contractor is instructed to proceed with the works, including any outstanding design, under a standard main option C arrangement following agreement of the prices for stage 2. The employer can therefore engage the contractor to assist the employer's consultant in designing the project, as well as to design specific elements. Following agreement of prices for the construction stage, the employer then instructs the contractor to deliver the works, including any outstanding design, under standard option C terms.
2. The employer appoints a contractor to carry out the design, and the employer's consultant works with the contractor in completing the design. This can use main option C or E. If using main option E, the contractor is incentivised to provide a cost-effective solution by sharing in the savings on the employer's budget – including other costs incurred by the employer.

Considerations

It can be seen from the wording of option one of these new clauses that there could be misunderstandings between the parties if the scope of design and interface responsibility is not clearly defined to avoid unnecessary duplication or omission of elements of the design. Therefore, when the contractor is tasked with 'assisting the consultant in designing the project' it must be clearly defined and understood by the parties that this will be under the direction and responsibility of the consultant. A further consideration would be whether the contractor is covered by the consultant's professional indemnity insurance while assisting, or would the contractor be required to have its own insurance in place. If the contractor is subsequently engaged to carry out specific elements of the design in addition to assisting the designer, then these elements and the scope and interface responsibility must also be clearly defined by the client or project manager and understood by the involved parties. This will require:

- Appropriate information such as standards, design life, performance levels.
- Provided in an appropriate format at the appropriate time.
- Definition of boundaries and responsibility for interfaces.
- Requirement and level of professional indemnity insurance cover by the contractor.
- Timescale for delivery and approval process including rework for client or consultant comments or modifications to contractor's design.

Similarly, in the case of the second option where the contractor carries out the design

[1] The new clauses are available to download from www.neccontract.com

and the employer's consultant works with the contractor in completing the design. This would require clear definition of scope, boundaries and interface responsibility.

The contractor could also seek to limit risk exposure and liability for design by proposing the use of the option X15 (limitation of the contractor's liability for its design to reasonable skill and care) clause during the contract award negotiations:

> *"X15.1: The contractor is not liable for defects in the works due to his design so far as he proves that he used reasonable skill and care to ensure that his design complied with the works information. X15.2: If the contractor corrects a defect for which he is not liable under this contract it is a compensation event."*

The contractor design risk can be further defined and limited by use of the option X18 (limitation of liability) which makes specific reference to design in X18.3:

> *"X18.3: The contractor's liability to the employer for defects due to his design which are not listed on the defects certificate is limited to the amount stated in the contract data."*

On large projects contractors often seek to negotiate limits on their potential liability and so it is preferable that a standard clause is available. The clause and the blank spaces in the contract data pages (if filled in) provide limits of liability that can be set for different types of loss and damage. So, indirect and consequential loss, liability from single events and design liability can have separate limits. Space is provided for a further limit covering the contractor's total liability, but it should be noted that this sum excludes any liability for delay damages, or for performance damages or for loss or damage to the employer's property to the extent that the contractor is liable under the contract terms in any event.

The precise obligations and sanctions imposed for noncompliance are also often unclear. For example, NEC3 provides at core clause 27.1 that:

> *"The contractor obtains approval from others for his design where necessary."*

The following are not apparent, at least from this clause alone:

- The criteria to be applied to decide whether approval is necessary.
- The criteria to be applied in deciding whether to give approval; whether it is not to be unreasonably withheld or whether it is a matter entirely within the discretion of others.
- Any sanctions or consequences that follow from a failure to seek approval, or a refusal of it.

Contractors should be fully aware of their obligations in accepting design responsibility.

Another area of concern where NEC fails to set out clearly the extent of the contractor's liability for design is the core clause 21. This identifies the contractor's obligation to carry out the design as set out in the works information and the contractor's obligation to obtain approval of its design from the project manager. However, it does not state whether the standard of design liability is the usual professional 'skill and care' or the more onerous 'fitness for purpose' obligation.

Analysis of the risk and insurance provisions in core clause 8 indicate that it is the latter (unless option X15 is used) but it is unsatisfactory that such an important obligation is left to inference:

Core clauses 80.1 and 81.1 provide that any design prepared by the employer is at the employer's risk and any other risk (which would include design prepared by the contractor) is at the contractor's risk.

Therefore, it seems that unless optional clause X15.1 is incorporated, the contractor will bear the risk for design failings whatever care it has taken in preparing the design. Note the reverse burden of proof in option clause X15.1.

Ordinarily, the burden would be on the employer to prove that the contractor failed to use reasonable skill and care. However, under NEC3, it is for the contractor to prove that it did in fact use reasonable skill and care. Contractors should therefore be fully aware of their obligations in accepting design responsibility.

These uncertainties could be avoided by the clear allocation of risk for design and the use of optional clause X18 to limit or exclude liability. It should be noted that some of the issues with regard to ECI will also be addressed with the introduction of building information modelling.

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