Design and Construct contracts: who cops it in the neck when things go wrong

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This article is based upon insights developed after being involved in D and C litigation over the years. It seeks to draw out some of the "bugs" that frequently blight D and C contracts. When it comes to building disputes, D and C contract disputes are a conundrum. They are protracted, expensive and dangerous, as the D and C animal is a confusing beast. It also has a tendency to mutate and rarely is one D and C contracting model similar to another.

What is D and C?

In its purest form it is a contract where a contractor undertakes to design and construct a building. This type of contracting also embraces two separate disciplines or skills;

- design which is generally associated with the disciplines of engineering, architecture and drafting;
- building which concerns itself with the actual construction of a building.

This makes it different to other types of construction contracts. Builders contract to build, engineers contract to carry out engineering, but D and C contractors undertake to deliver an amalgam of design concept development, design approval, and construction of the "as built" product. This generates somewhat of a risk amalgam for reasons that will become evident in this article.

The importance of identifying the two distinct sub-sets of disciplines within D and C contracts is to prevent any misunderstanding as to the inherently different tasks and, more importantly, risks that fall within the curtilage of the skill subsets. Regrettably in practice confusion does occur as the discreet and separate disciplines become blurred and merged.

It is ironical that in places like Victoria, architects, engineers, draftspersons and builders have to be registered in distinct categories by the registration body, the Building Practitioners Board. Yet the hybrid discipline of D and C does not generate the discrete registrant profession of design and construct contractor.

It is also interesting that save for Victoria it is very difficult to obtain insurance for civil construction, yet D and C cover is more prevalent, even though it provides indemnification for a far more extensive risk amalgam.

When the D and C contracting entity is sued, one often finds that a separate design sub-contractor has carried out the design. The D and C contracting entity ordinarily comprises a head contractor that is solely the building arm of the contracting concern. The head contractor contracts out the design task to a design sub-contractor but in so far as the principal relationship is concerned it inherits the liabilities of the designer.

In building disputes where defects are due to design rather than construction, the contractor often becomes 'the fall guy'. The plight of the fall guy is worsened if the head contractor has not availed itself of appropriate insurance cover because it may lack the resources to defend a litigation. The appropriate insurance cover would be a D and C risk policy that, although available, may be difficult to secure. If the contractor cannot get hold of such cover a strictly commercial construction cover will prove to be an even more illusive quarry. Only Victoria has a government gazetteed commercial construction cover that is limited to structural defects.

This is in contradiction to the designer who would ordinarily carry professional indemnity insurance cover where the insurer under the indemnify ordinarily funds and assumes conduct of the insurer's defense.

Scope of works, risk - how long is a piece of string?

There are very few standard industry D and C contracts. They normally have to be adapted to suit the needs of the given project. The problem with some of the standard contracts is that although they are well written and comprehensive, more often than not they are incompatible with the contractual subject matter. When one tries to reconcile the standard contract with the project pathology of the particular project it can be a bit like putting a square peg in a round hole.

I once had to prepare a contract for an oil company for the construction of petrol stations. At first instance I had resort to a standard form contract but although the contract was well crafted it was unsuitable as it was too detailed. The over detailing emanated from the fact that the client had prepared very detailed in-house designs based on design prototypes. The design input of the contractor was thus limited, hence a plethora of contractual provisions were rendered superfluous.

The two types of D and C models

Conceptually and broadly speaking there are two models;

- D and C with major contractor design input;
- D and C with limited contractor design input.

Both of these creatures are profoundly different types of contracts in terms of assumption of risk.

It follows as a matter of logic that the limited contractor design input model is the low risk option for the contractor. This is because it is the owner who has generated the paramount design ideas and elements not the contractor. The contractor is quoting upon something that it essentially certain, so there are fewer variables. In other words the contractor has a clear idea of what it is being engaged to construct. Hence if there is any design litigation, unless the contractor has modified the design, the primary design liability should attach to the owner. Furthermore, the issues will ordinarily be pretty straightforward because the risk apportionment is clear.

Major contractor design input

Conversely where the contractor elects to carry out the majority of the design input, the risk that the contractor inherits is exponentially greater. Regrettably there is no rule of thumb as to how it can be measured. It depends upon many things including;

- the detail given to the contractor by the principal at first instance;
- has it rough conceptual documentation?
- does it comprise drawings that have been vetted by an architect, or is it documentation that was developed over a boozy lunch on table paper?
- does it comprise plans that have been approved by council?
- what is the documentation's status within the constructs of the design continuum: embryonic? Crude? Advanced?
- Does the briefing documentation have any inherent flaws, will it have to be modified or varied?
- Is the briefing documentation capable of generating council approval?
- Have professional designers prepared it?
- What are the finishing details like?

This type of contracting model is the Pandora's box model. It is full of unknown potentials, twist, and turns. As an aside, attention is drawn to the paradoxical nature of the D and C beast. D and C contracting can rarely be pure in that there is always some design input from the principal. The simplistic and pure definition of D and C contracts is that the contractor does all of the designing, as the term "D and C" would imply. This is rarely the case as the contractor normally carries out only some of the design, albeit "that some of the design" may happen to be the greater part of design.

If a contractor is intent on entering into a design and construct arrangement when given the barest of design details then it is axiomatic that the contractor should have the ability to vary the price depending upon the magnitude of the design input and potential changes. It could be commercially suicidal for a contractor to lock into a lump sum D and C contract when the design brief is embryonic.

Ideally the contract would be priced so that there are two pricing phases, a price for design development and building approval procurement, and then a price for construction. Obviously the construction price should be crystallized as late as possible mindful of the imponderables and variables that may be encountered during the design evolution phase. Alternatively the arrangement should be cost plus, which although increasingly an anathema to principals, is nevertheless from the contractor's point of view the safest D and C methodology.

If the contractor is not enamoured with this approach, wanting the price to be fixed at the front end, the contractor must be fully aware that the very act of contractual execution may be a defining moment in the ongoing solvency of the company. It may prove to be the precursor to the financial demise of the company on account of the massive assumption of risk. Furthermore it would be wise to disclose to the insurer that the contractor is embarking upon what amounts to a high-risk project, so that the insurer can adjust insurance premiums appropriately.

Typically a D and C contractor contracts directly with a principal under a fixed price arrangement for design and construct services.

Contractors perform D and C services in one of two ways, either by:-

- using the services of an in-house design team; or by

- sub-contracting out the design function.

The in-house approach to D and C

The in-house approach contemplates an in-house design team, whether they be architects, draftspersons, or engineers.

Prudence dictates with this approach that the contracting entity has taken out insurance for the risk amalgam of design and construct. Prudent principals will normally ask for insurance cover that provides comprehensive indemnity for design and construct damages.

If a building dispute arises the in-house approach will prove to be far less fickle than the outsourced approach. The reason is that the contracting entity has imported and embraced the design risk, and has internalized the risk. In addition, as it has carried out the design with internal resources, it will be better positioned to confront a liability and fix the problems, knowing that there is no ability to outsource the risk or the blame.

Outsourcing the design

This approach raises profoundly different issues with regards to insurance and risk. It normally entails a builder incorporating a company that contracts directly with the principal to render D and C services. The design function is sub-contracted out to an independent designer and the builder ordinarily interfaces with the designer.

In the author's experience this method is often associated with a large dose of naivete on the part of the contractor. Rarely does the head contractor ensure that the insurance cover taken out by the design sub-contractor embraces either the magnitude or the pathology of the risk.

Take the case of a $5 million project: the question needs to be asked what amount of cover should the designer carry. In assessing the risk, consideration needs to be given to the potential consequences of design negligence and the project pathology.

The consequences can be forecast by analysing the nature of the project. For fear of stating the obvious, one of the designer's primary responsibilities is to ensure that the structural design is sound. In a worst case scenario, if the structural design is deficient it can lead to building collapse. More often it may lead to partial collapse. The consequences of any type of collapse or serious design malaise are multifaceted. They impact upon completion costs by way of:

- time blow outs;
- critical path interruption;
- renegotiations of critical sub-contracts;
- liquidated damages;
- union interference, particularly in Victoria in these uncertain times.

The net effect is that the very viability of the project and the contractor's ability to remain solvent are brought into question. Yet all too often the contractor may negotiate an indemnity limit with the design sub-contractor that is woefully inadequate. The criteria used are often calculated on the basis that the design task in dollar terms is nominal, hence the limit of indemnity should be nominal. Rarely is the negotiated level of design indemnity commensurate with the real risk.

I have observed that in many cases a builder under-insures for major building works and, moreover, abides an under insurance scenario with the designer. Using the current example it is not unusual for a builder to accept one million dollars worth of design indemnity from the designer. Yet the magnitude of the design negligence may exceed the design indemnity value by 300%.

As a result, the contractor having contracted under a D and C contract assumes the liability of the designer in so far as his obligations to the principal are concerned and it has to fund a sizeable shortfall. In this case the contractor again becomes the fall guy because it assumes liabilities on account of the workings of contract law and poorly negotiated risks that rightfully reside with the designer.

The only way that the contractor can protect its position is to ensure that the level of design indemnity can adequately cater for the raw costs of design rectification and the consequential costs emanating from that rectification.

Hence in the current scenario $5 million worth of indemnity may be conservative.

It also places the builder's insurer in an invidious position because the builder's insurer has only limited resort to the design insurer on account of a low level of indemnity.

One possible solution is available during principal-contractor contractual negotiations. The D and C contractor could negotiate a term the import of which provides that in the event of defective design then the principal can sue the designer directly and independently of the construct concern. Furthermore impunity would attach to the contractor for any design costs and consequential costs that emanate from that design loss. Even though this is unorthodox it achieves the dual outcomes of;

- responsibility attaching to the author of the malaise;
- the on-going viability of the project is increased because the construction team can remain largely intact. This can lead to massive cost savings because of the teams' unique knowledge of the intimate workings of the project.

An additional problem with this D and C contract scenario is deconstructing or separating the "amalgam". If there is a dispute over the adequacy of the design the traditional accord enjoyed by the contractor and the designer will generate into discord and adversarialism. Positions will be polarized and the opportunity for relationship resurrection and project resurrection will be minimal.

Where design negligence is the principal cause of a construction ailment inevitably the designer will blame bad workmanship or contributory negligence. A typical argument is that the contractor was remiss with its supervisory obligations. It is also common that memories regarding key representations will fade, recollections become blurred, and the distortion of facts assumes currency. This leads to protracted and costly litigation with commensurate risk that only generates one set of beneficiaries, the likes of the learned fraternity of lawyers.

The problem is made even more acute by the fact that the sub-contractual arrangements between the designer and the head contractor rarely address risk "divvy-up" in the event of D and C litigation. BA