

# MDA PRESENTS



## FIRST AID FOR CONTRACTS



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### **BIM and how to deal with it in your contract**

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**One positive that has come out of the Corona virus pandemic is that we have all been forced to brush up on our IT skills – some of us conducting meetings from our laptops for the first time or simply having to read and comment on documents electronically rather than printing and using the old school red pen approach. Therefore, we thought it topical to write about BIM.**

Building information modelling (“BIM”) is a computerised process that is used to design, understand and demonstrate the key physical and functional characteristics of a building on a virtual computerised model basis. Those reams of paper that are the size of a table (aka construction drawings) are to become a thing of the past. BIM provides the opportunity to concurrently design and visualise the building in 3D on your computer or digital notepad. The resulting model is a digital representation of the

building from which views and data can be extracted by various users and analysed to make decisions and improve the process of delivering the building.

BIM allows everyone involved to have a clear understanding of the design by providing them with the ability to visualise (by way of a virtual 3D model walkthrough) what is to be built. This assists with better designing and planning, prevents conflicts between designs, facilitates minimising errors, permits quantities and costs projections / variations and assists with the ability to demonstrate “what if” scenarios.

How great would it be if your client instructed a variation to the works, you plugged that variation into your BIM software and out comes the effect thereof – what it will look like visually, what materials are required, how much it will cost, how it will impact the programme etc.

## Your contract document and BIM

So, when you are eventually ready to delve into the world of BIM, how do you adequately address it contractually?

Barnes and Davies state that the BIM Protocol and the BIM Implementation Plan are the two key documents to have on a project using BIM.<sup>1</sup>

The Protocol effectively explains who does what work, when and how. A typical protocol document should contain:

- The priority of the BIM protocol in the contract documents
- The obligations of the Employer – e.g. appointment of the BIM Manager
- Details of the BIM Manager and their obligations
- Obligations of the project team members
- Use of the model
  - Who by
  - Copyright
  - Licenses
  - Limitations on liability

There are several template Protocols out there to assist with determining what this Protocol is to include – for example, the UK's CIC Protocol.

The Implementation Plan should be a project specific document that provides the detail, such as:

- Model origin
- File naming convention (i.e. using the same terms and abbreviations)
- Templates

- Authorisation process
- Software version

We agree with Barnes and Davies that the BIM Protocol and the BIM Implementation Plan are two key documents. A lot needs to be said about the implementation of BIM software on a project and the most appropriate place to do so is in an additional contract document so as not to clutter the general conditions. Contracting parties must ensure that these documents are referred to in the list of applicable contract documents.

We suggest that the particular conditions of contract include:

- A definition for the BIM Protocol
- A clause stating that the parties are to comply with the BIM Protocol
- A clause stating the BIM Protocol's precedence
- Provision for finalisation of the BIM Protocol prior to commencement of the works

Aside from this, the Protocol and Implementation Plan can include the rest of the requisite terms in respect of BIM. Some important ones include:

- Collaboration – BIM relies on the parties collaborating so this should be an obligation, the extent of which should be defined.
- Administration – The system / version to be used and the management processes to be adopted. The process for delivering contractual notices – via BIM or more traditional means.

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<sup>1</sup> Peter Barnes and Nigel Davies, *"BIM in Principle and in Practice"*, ICE Publishing (2014), p59.

- Copyright and intellectual property – As BIM software essentially involves the uploading of information by various parties, who owns what needs to be defined. Also, restrictions on the use of that information
- Risk allocation – Whilst BIM software may churn out results automatically, it is totally reliant on the information that is plugged into it. Thus, it is important to address who is liable for the uploading of incorrect information or the mismanagement / misuse of the software. You may consider exclusions or limitation on professional liability in respect of the actions of others. It is also important to address liability in the event of a cyber-attack and down time in the software.
- Project Information = Information provided by the Contractor which is used to create or change the Information Model
- Information Providers = People or organisations who contribute to the Information Model and are identified in the Information Model Requirements.
- Information Model Requirements = The requirements identified in the Scope for creating or changing the Information Model

Option X10 also provides for an Information Execution Plan. It is not clear what this is from the definition provided. Details of the format and inclusions in the Information Execution Plan should be included in the Information Model Requirements. Provision is made for the preparation of this Plan by the Contractor, acceptance by the Project Manager, as well as the updating of the Plan by the Contractor.

Let us consider how the standard forms are handling this.

#### NEC4

NEC4 includes an Option X10 for “*Information modelling*”.

Option X10 includes five additional defined terms, including additional documents.

Option X10 provides for an Information Model – An electronic integration of Project Information and similar information provided by the Client and other Information Providers and is in the form stated in the Information Model Requirements.

Compensation events – When the Information Execution Plan is altered by a compensation event, the Contractor is to include these alterations in its quotation.

Rights of use – The Client owns the Information Model and the Contractor’s rights over Project Information, unless stated otherwise in the Information Model Requirements. The Contractor is to provide the Client with the documents which transfer these rights to the Client.

Liability – The Client is liable for:

- a fault / error in the Information Model other than a Defect in the Project Information
- a fault in information provided by Information Providers other than the Contractor

The Contractor's liability is limited in that it is not liable for a fault / error in the Project Information unless it failed to provide it using the skill and care normally required by professionals providing such information. The Contractor is to provide insurance for claims made against it arising out of its failure to do so.

#### FIDIC

FIDIC on the other hand does not contain any clauses addressing BIM in the general conditions and does not provide a suggested particular condition. It merely includes a reference to BIM as a Guidance Note.

It states therein that co-ordinating BIM is essentially achieved via a BIM Protocol and BIM Execution Plan.

At the end of the Guidance Note it states that FIDIC intends to publish further guidelines.

So, it appears that FIDIC hasn't quite made up its mind yet on its approach to BIM insofar as the contract conditions are concerned, or, it intends to leave it up to the parties to deal with.

#### Conclusion

In our view, it is possible to use BIM with the standard forms of contracts as they are and to adequately address the use of BIM in the Protocol and Implementation Plan. But one must bear in mind that lengthy documents attached to the contract are often overlooked by parties and their terms are frequently not properly considered during the negotiations stage. Given that there is minimal common law on BIM and its use on construction projects, it is important to ensure that the obligations, entitlements and liabilities of the parties are correctly defined in the contract documents.