

Update

A brief legal guideline: Where BIM is implemented on a project

BIM is increasingly being used in the Australian construction and infrastructure industry. As more and more projects adopt BIM to manage design and construction, parties need to consider the various legal implications relating to the allocation of risk, intellectual property, insurance and traceability.

At a recent Society of Construction Law seminar, Beth Cubitt of Clyde & Co discussed the legal implications of Building Information Modelling (BIM) set out below.

“BIM”

buildingSMART defines BIM as follows:

“BIM is a digital representation of physical and functional characteristics of a building. As such it serves as a shared knowledge resource for information about a building forming a reliable basis for decisions during a life-cycle from inception onward”

Uniquely, BIM offers a fourth dimension to digital modelling which records the timeline of events on a project (for example, changes to design made by an architect, and variations instructed by a principal).

BIM developments in Australia

The United States and the United Kingdom are quickly adopting BIM into their construction industries, evidenced by the push at governmental and industry levels for the technology to be widely used. In Australia, governmental and industry bodies are not far behind, with a number of significant developments recently introduced.

For example, a co-funded report was released in June 2012 for the Commonwealth Department of Industry, Innovation, Science,

Research and Tertiary Education titled the ‘*National Building Information Modelling Initiative for the ‘focussed adoption of building information modelling and related digital technologies and processes for the built environment sector’* (buildingSMART Australasia 2012). Another example in Australia stems from Consult Australia and the Institute of Architects Legal and Procurement working group, who are preparing guidelines, procedures and forms of agreement to assist stakeholders to deal with BIM contractually.

As the Australian construction industry more frequently adopts BIM for large scale projects, stakeholders must consider how using BIM will alter their contractual documents. For example, how will a principal’s standard form contract address the novel roles played by a BIM manager or the like on a project? Or, on completion of a project, who owns what in BIM?

Some legal implications

Before entering a project, parties should be wary of the legal implications arising from using BIM in order to effectively protect their rights under a contract and manage risk that may manifest during a project.

Procurement and tendering

The existing legal frameworks in the construction industry have remained largely unchanged for decades, and do not address the dynamics

of e-processes and allied digital innovations that are becoming more common in the industry. Projects using BIM would focus more on collaboration in early stages, and may be more suited to alliancing contractual arrangements.

The ability to de-risk projects through greater efficiency in the design-build-manage-own process-building lifecycle is relatively short compared to the operations and asset management phase of a facility's life.

Allocation of risk

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- Apportionment of liability schemes are likely to play a significant role in allocating BIM risk to deal with the implications of multiple contributors using the program. Parties may seek to rely upon proportionate liability schemes under the construction contracts legislation, or otherwise to consider inserting a proportionate liability regime in the relevant contract.
- A cause for concern is the “knock on” effects that may be caused by errors made in BIM, including the delay and costs implications of those effects. Allocating risk and pinpointing fault will undoubtedly cause difficulties unless systems are properly managed. Parties may wish to incorporate “knock for knock” indemnities which remove the need to establish fault.
- Parties need to give consideration to the warranties and indemnities provided in the contract, which should be appropriately drafted to distinguish between the risks of those involved.

- As more commonly found in the United States, parties address potential risk by inserting broad disclaimers in respect to the potential failures of electronic programs like BIM.
- The definition of quality standards may require amendments to address the standardisation of BIM guidelines.
- It is likely that construction contracts will require a BIM protocol to be annexed to the contract. However, it may be necessary to manage liability and responsibility more comprehensively than through, for example, an “order of precedence” clause (for example, in the event of a conflict between the contract and the BIM protocol, the BIM protocol will prevail).

Traceability

Building professionals are not always concerned with tracking changes or the concept of traceability – their focus is more geared towards efficiency and improving design. However, when it all goes wrong, proving who did what to whom, and when, becomes significant. Proving a factual matrix in a court or arbitration is complex and requires a completely different mindset.

Parties may wish to employ systems to trace work carried out in BIM to assist in proving what occurred and establishing causation in the event a dispute arises; for example, at a practical level, parties may agree on “freeze framing” BIM at different intervals to record, and later demonstrate, changes in BIM.

Intellectual property and ownership

BIM raises complicated intellectual property rights and ownership issues. It is possible for multiple parties to make different contributions to BIM raising difficulties in determining the true author of a part of work, an output or an end result. When numerous contributors are involved in a project, contracts must deal with the rights of each contributor.

Further information

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A contract must consider appropriate licensing requirements for those applying BIM, for example, a license for a principal permitting access to the BIM to track the progress of a project.

Traditionally, design documents are paper-based and a party would have copyright in those documents. BIM offers a virtual design platform which will be subject to intellectual property rights, arguably encompassing either or both copyright and design.

Insurance

A party should consider the implications on its insurance requirements for cover in respect to works undertaken on BIM. Parties should look to ensure that BIM designers and other relevant parties have professional indemnity insurance to cover failures due to BIM design. Generally speaking, most professional indemnity policies do not commonly express specific exclusions in relation to the use of BIM.

Further, for the purposes of discharging any duty to disclose material facts, parties should ensure that they disclose to its insurer that BIM is implemented on a project.

Further complications may arise in respect to the operation of various parties' insurance in respect to their work in BIM (for example, issues of cross-liability and waiver of subrogation).

Confidentiality

The operation of BIM on a project may inadvertently allow parties to access information which is otherwise confidential. Parties may consider restricting access to different areas of BIM.

Conclusion

The increasing adoption of BIM in Australian projects raises a wide range of legal issues that parties must consider before signing a contract. A failure to do so will increase the risk of costly and protracted litigation in the event a dispute arises on the project. In addition to parties contemplating the various insertions and amendments to their contracts to accommodate BIM, parties should consider adopting appropriate management systems to ensure work carried out on BIM is traceable.