



BIM – BEST THING SINCE SLICED BREAD?

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Mankind has been constructing dwellings since before the dawn of civilisation. The methods of construction used and the way in which buildings are designed have both changed dramatically with the passage of time. The latest advance to cause a stir in the construction industry is the adoption of *Building Information Modelling* (“BIM”).

WHAT IS BIM?

BIM is a 3D virtual representation of the building to be constructed. It provides a digital simulation of the structure to be built showing how it will be constructed and how it will allow the design to be tested before the construction phase begins. Although the technology has been around for a while, there are still questions and concerns regarding the legal and insurance issues in using BIM on construction projects.

The concerns:

- Who will own the model?
- What is the position on liability for design?
- What happens if there is a fault with the software?
- Will current professional indemnity insurance policies cover BIM activities?

Despite these concerns, the Government has expressed the desire to make BIM compulsory – on all public sector projects – by 2016. BIM will, therefore, become more widely used over the next few years.

ADVANTAGES

Using a 3D model to create a virtual simulation of the construction process will help detect potential clashes early on – clashes which, normally, are only discovered once construction has started on site and which would lead to cost and programme overruns. Avoiding these clashes means cost and time savings. In addition, better programming will allow for just-in-time delivery of materials and equipment to the site further reducing storage and related costs.

BIM can also be used to produce pricing schedules which would allow for a more accurate costing of changes to the works, as well as giving those involved in the project a better understanding of the work required. This should result in less risk being attached to the pricing of works packages and allow for cost savings.

The model may also be used to provide useful information to prospective tenants and purchasers of the building, to help planning consultations and to act as an instrument to assist facility management for the on-going maintenance and operation of the building.

DISADVANTAGES

For contractors and consultants who are required to use BIM, there will be an initial outlay to invest in software and training. This may lead to higher fees if their businesses are not willing to absorb the cost of the initial investment. There may also be some duplication of work if contractors are required to produce 2D drawings for smaller sub-contractors who do not work in 3D or for planning authorities who generally require paper copies of 2D drawings.

The use of BIM goes hand in hand with a more collaborative approach which requires a change from the current culture where each consultant has very separate responsibilities.

The ‘interoperability’ risk is also seen as one of the main disadvantages of BIM. Will different software programmes be compatible if consultants are using different products? How reliable is the software? As BIM becomes more widely used, and the software more standardised, ‘interoperability’ should become less of an issue.

WHAT SHOULD I DO?

The eventual cost and time savings which BIM can achieve will be of interest to employers and contractors. However, when using BIM, the contract documents and consultants’ appointments need to be reviewed carefully to ensure that they address all of the necessary legal and insurance issues. Contractors and consultants alike will also want to use BIM to take advantage of the potential benefits of using the technology and being competitive in the market whilst, at the same time, protecting themselves from potential additional liabilities.

LEGAL ISSUES

Some of the main concerns centre on whether using BIM will affect the design liability of the consultants and contractors involved in the project. Provided the documents are carefully drafted to ensure that the services capture all BIM related activities, and there is a clear notification and review procedure of the model as it develops with input from other designers, the design process will not be far removed from current practice.

Although designers will be anxious to protect the copyright in their designs, any copyright infringements can be policed through the enforcement of copyright law. It is not necessary for the employer to request ownership of the model where a

simple copyright licence would suffice allowing the employer and other persons authorised by him (for the purposes of the project) to use the model and, if required, for the employer to use the model for the purposes of facilities management and operation of the project once complete.

INSURANCE ISSUES

Alternative insurance options for construction projects are available, such as single project insurance, or are otherwise being discussed amongst insurance providers. However, the current practice of requiring consultants and contractors to maintain their own professional indemnity insurance and/or all risks insurance (as the case may be) and provide evidence that such insurance is being maintained evolved as the alternatives have, in the past, been subject to high premiums and proved unpopular. On the basis that BIM is just the latest development in the design process, it is not apparent why BIM related activities should not be covered by professional indemnity insurance policies. If construction professionals are to be employed on a project which requires the use of BIM, they will need to take steps to ensure that their professional indemnity insurance policies cover BIM related activities.

HOW CAN WE HELP?

We are engaging with our clients and their professionals in relation to BIM and how to get up to speed on the issues. Before Christmas, we hosted a conference organised by the *Construction Sector Network* (<http://www.constructionsectornetwork.org/>) which was attended by a broad cross section of construction industry professionals (including employers, contractors, insurance brokers, lawyers, consultants and sub-contractors).

The aim of the conference was to highlight the current barriers to BIM and propose answers regarding its use. This year, we plan to deliver workshops and seminars. If you would like to be on our events mailing list, please email oliver.kean@dlapiper.com.

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CONTACTS



Julie Morrissy
Partner
Engineering & Construction Group
T +44 (0)144 283 3003
julie.morrissy@dlapiper.com

Julie is a partner and Head of the Yorkshire and North East team. Her expertise extends to both non-contentious construction (including real estate development, engineering and PPP projects) as well as dispute management and resolution. Prior to entering the legal profession, Julie was a University lecturer and is a regular speaker on Construction matters.



Emily Mansfield
Solicitor
Engineering & Construction Group
T +44 (0)114 283 3156
emily.mansfield@dlapiper.com

Emily is a solicitor in our Engineering & Construction Group and deals with both construction procurement and disputes.

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