Contracts playing catch up in digital revolution

Construction has lagged in the digital revolution and the industry’s contracts still generally do not reflect Building Information Modelling, which sits at the revolution’s heart. Andrew Croft of Beale & Co Solicitors LLP and May Winfield of Buro Happold examine efforts being made to help the industry catch up.

Building Information Modelling (BIM) sits at the heart of the UK construction industry’s digital revolution. BIM, at its most basic level, could be described as a process by which 3D models and a common data environment are used to access and share information across the supply chain in order to increase the efficiency of delivering and operating projects.

The 2011 UK Government Construction Strategy included a mandate to use BIM Level 2 on all centrally procured government projects by April 2016. Part of the strategy to encourage the adoption of BIM was the publication of standard documents, including the Publicly Available Specifications (PAS) 1192 series of standards, in particular PAS 1192-2, the specification for information management for the capital/delivery phase of construction projects using building information modelling. The Construction Industry Council’s (CIC) BIM Protocol (the CIC Protocol) was also published in 2013 to assist BIM being reflected contractually.

Since the 2011 mandate, BIM processes have been increasingly adopted on UK projects and internationally. The CIC Protocol was updated in 2018 to reflect the current practices. The Second Edition was well received and is being incorporated into contracts. Nonetheless, surveys, reports and informal feedback suggest that BIM is still often not reflected in detail (or at all) in contracts, with provisions in relation to BIM non-existent or unclear and frequently inconsistent with the project team’s approach.

For example, in February 2018, May Winfield and Sarah Rock in partnership with the UK BIM Alliance published The Winfield Rock Report: Overcoming the legal and contractual barriers of BIM, considering the current understanding of BIM’s legal and contractual issues among the legal community and their clients. The Winfield Rock Report noted that there was much confusion as to what ‘BIM Level 2’ comprised of, especially amongst lawyers.

**Standard form contracts**

Standard form construction contracts do include some provisions in relation to BIM. For example, the JCT 2016 suite of contracts contain references to BIM documents and anticipate that a BIM Protocol be included in the Contract Documents, and the NEC4 contracts published in June 2017 included a Secondary Option X10, ‘Information Modelling’. However, there are notable differences between the two.
JCT allows for the use of a BIM Protocol whereas NEC4 refers to an Information Execution Plan, Information Model Requirements and includes stand-alone provisions in relation to BIM. NEC4 Option X10 can be used with a BIM Protocol (such as the CIC Protocol) as set out in the ‘How to’ guide to using the CIC Protocol with NEC4. However, this is not particularly straightforward.

The inclusion of the BIM provisions within the standard forms has been generally appreciated by the sector. However, the lack of a unified approach and clear guidance has added to the confusion and frustration, resulting in ambiguous or ineffective approaches to BIM. For example, obligations to achieve BIM Level 2 with no detail as to what is actually required.

BS EN ISO19650
Some of the UK BIM standards have recently been superseded following the introduction of BS EN ISO 19650-1 and 2, following four years of development.

PAS 1192-1 and 2 were replaced by BS EN ISO19650-1 and 2 in January 2019. ISO 19650-1 deals with concepts and principles applicable to the whole suite of BS EN ISO standards, whilst BS EN ISO 19650-2 covers the delivery phase of a project. The next part of the BS EN ISO 19650 series, Part 3 (asset management), intended to replace PAS 1192-3, is in the process of being drafted. The final version is expected to be released for publication sometime in 2021.

To support the implementation of these two new international standards, the British Standards Institution (BSI) published a National Annex to BS EN ISO 19650-2 to aid execution in the UK and assist the adoption of BIM within the context of the ISO framework, as well as a National Foreword and a UK Transition Guidance.

Whilst there are a number of similarities between the PAS and ISO standards, there are some key changes under the new regime. BS EN ISO 19650-1 requires an ‘information protocol’ to be included in all appointments on every project. The BS EN ISO 19650 documents utilise different terminology in order to use terms that are acceptable internationally when translated from English, such as ‘employer’ being substituted for ‘appointing party’ and ‘client’ being substituted for ‘appointed party’.

The introduction of BS EN 19650-1 and 2 marks the next stage in the development of an international approach to BIM. Although the structure and processes outlined in the ISO documents are logical and comprehensive and should be familiar to anyone used to the existing BIM processes, it is very important that those drafting or preparing contract documents are familiar with the BS EN ISO 19650 processes.

BS EN ISO19650 Guidance
To assist the industry understand the implications of ISO 19650-1 and 2, Information Management according to BS EN ISO 19650 – Guidance Part 1: Concepts (Guidance) was published in April 2019 by the UK BIM Alliance, Centre for Digital Built Britain and the BSI Group. The Guidance can be downloaded for free from www.ukbimalliance.org.

Construction professionals should note that BS EN ISO 19650 sets out various key supporting documentation to be prepared under any appointment. These include the following (in addition to an information protocol):

- Project Information Requirements.
- Exchange Information Requirements.
- Responsibility Matrix; Assignment Matrix.
- Master Information Delivery Plan.
- BIM Execution Plan.

Refer to the Guidance Framework for further clarification on this.

Section 3.0 and Annex C of the Guidance consider the contractual and legal implications of the introduction of BS EN ISO 19650; Section 3.0 provides a general summary and Annex C considers the key legal and contractual points to take into account at each stage of the ISO19650 process.

BS EN ISO 19650-1 and 2 do not contain specific or prescriptive details or requirements on the form of the BIM contractual arrangements or documents. Nevertheless, the requirement for an information protocol underpins BS EN ISO 19650-1. In establishing the information protocol the appointing party is required to consider:

1. the obligations relating to the management or production of information, including the use of the common data environment;
2. warranties or liabilities associated to the project information model;
3. intellectual property rights; and
4. use of existing asset information, shared resources and information during the project and following termination.
The CIC Protocol reflects the PAS 1192-2 terminology and processes not BS EN ISO 19650. If the CIC Protocol is used on a project to which BS EN ISO 19650 applies, amendments should be made to be consistent with BS EN ISO 19650. A BS EN ISO 19650 Information Protocol is currently being produced as part of the next stage of the Guidance Framework and will be published shortly.

Annex C of the Guidance is intended to encourage those involved in preparing tender and contractual documents to take into account the ISO 19650 processes when doing so by running through some of the BS EN ISO 19650-1-2 processes step by step.

The Guidance is not a substitute for reading BS EN ISO 19650-1-2 and it is important that these documents are reviewed carefully. The Guidance and the ISO 19650 Information Protocol (when published) should provide clarity in relation to the contractual approach to BIM and encourage consistency between contractual arrangements and the approach to BIM.

**BIM and JCT**

In 2016 the JCT also published the *Building Information Modelling (BIM), Collaborative and Integrated Team Working* practice note as a guide to assist practitioners gain a greater understanding of BIM. This note provided information on the integration of BIM and collaborative working within the contract process. It gave an overview of how BIM methodologies and principles are applied, provided standard definitions and explained the BIM maturity. It also explained how BIM is more than software, it is a technology-assisted way of working utilising interoperable software to encourage collaboration in the design, manufacture, construction and operation of a project.

The 2016 JCT Practice Note was not intended to be a detailed guide to integrating BIM into a JCT contract and so did not include commentary on the implications of the adoption of BIM processes on the JCT forms.

The JCT recently released a further practice note, *BIM and JCT Contracts*, providing up-to-date guidance for using JCT contracts on construction projects where BIM is to be used. The objective of the practice note is to further the construction sector’s understanding of the legal and contractual issues surrounding BIM, as well as suggest ways of approaching these issues in collaborative and efficient way to project participants and their professional advisers.

As design and build contracts are the most popular form of contract on projects utilising BIM, *BIM and JCT Contracts* focuses on the use of BIM with the JCT Design & Build Contract (D&B). It provides general guidance on key points to consider when using the D&B alongside BIM processes and highlights the key provisions under the D&B that may be most impacted by, or relevant to, a project using BIM. This is with a view to encouraging those preparing the D&B to consider the implications the approach to BIM has on the contract and encourage consistency.

*BIM and JCT Contracts* also includes guidance on incorporating a BIM Protocol into the D&B and a checklist of key points to consider when preparing a BIM Protocol. Further, *BIM and JCT Contracts* includes a checklist of common contents of an Exchange Information Requirements to assist employers specify their requirements in relation to BIM at tender stage and enable these requirements (and the tender responses) to be reflected in the contract.

*BIM and JCT Contracts* uses terminology from BS EN ISO 19650-1 and 2 and generally reflects the new standards. It is the first contractual guidance note in relation to BIM to do so.

**Contractual clarity in relation to BIM**

The introduction of BS EN ISO 19650 is a key development in relation to the adoption of BIM and increases the importance of reflecting BIM processes in the contractual arrangements. The Guidance published to date and the BS EN ISO 19650 Information Protocol when published will assist those preparing contracts to do so. The Guidance in particular is a very important document for all those involved in the preparation and negotiation of construction contracts.

*BIM and JCT Contracts* also provides useful pointers as to key contractual issues to take into account when specifying the Exchange Information Requirements, when preparing a JCT contract and when preparing and completing a BIM Protocol.

It is hoped that these key developments in the BIM contractual landscape encourage further clarity to the contractual approach and lead to increased consistency between the contractual position and the BIM processes being adopted.

Readers wanting to stay up to date on BIM legal and contractual developments can contact BIM4legal@gmail.com. **CL**