

The Legal Landscape in a BIM World

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The Legal Landscape in a BIM world

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Introduction

- What is BIM?
- Why?
- Practical issues
- Legal issues
- Conclusion

What is BIM?

- A virtual model of an entire construction project
- A digital representation of physical and functional characteristics of a facility
- A shared knowledge resource for information about the facility
- A reliable basis for decisions during its life cycle, from earliest conception to demolition



Levels of BIM

- BIM Level 0 is 2D drawings that may be created using a CAD system
- BIM Level 1 uses CAD to create 2D or 3D drawings that use a uniform approach in displaying data
- BIM Level 2 displays data in discrete BIM databases but there is not one single database for all information
- BIM Level 3 occurs where all the data is incorporated into one web-based system and can be accessed by all construction team members





BIM Dimensions

- 2D is 2 dimensional drawings
- 3D - uses 3D CAD
- 4D – uses 3D CAD and a database including programming information
- 5D – adds cost information to 4D BIM
- 6D – adds facility management information for use post-construction





Why?

- Projects still late and over budget
- Inaccurate design
- Changes add to cost
- Sustainability and carbon reduction
- Economic climate
- Political drive





Why?

England

- BIM Level 2 on central government projects by 2016

Scotland

- BIM Level 2 by April 2017





Why?

Wales

- CEW BIM Task Group has issued its report
- Construction Procurement Strategy Steering Group
 - All Welsh Government Department projects – Level 2 by 2015
 - All Welsh Government funded projects – Level 2 by 2016





Why?

Benefits of BIM

- Construction build times are reduced as well as costs
- Changes to drawings can be incorporated straight into the 3D model
- If entire team involved early with model less scope for design errors or clashes within the design
- Ability to “build it twice”





Why?

Benefits of BIM

- Long Term efficiencies – BIM Models facilitate the re-use of processes and information
- Post construction maintenance and facilities management
- Decommissioning at the end of its life cycle
- Government Soft Landings





Practical Issues

Software and Clouds

- No single BIM software package and the Government has not selected one
- Interoperability issues
- File corruption and security of the cloud
- Investment and training required





Practical Issues

BIM Approach – Where do I start?

- Client BIM strategy
- BIM Execution Plan
- BIM Protocol

Practical Issues

New Consultant Role – the BIM Model Manager/the Information Manager

- The role will include organising access to data and ensuring security of data
- Experience required?
- Control over the supply chain to request information?
- Liability?
- Sole responsibility for building and coordination of the model?
- Who?

Legal Issues

Copyright IP

Current position

- Copyright dealt with under section 1(1)(a) of the Copyright Designs and Patents Act 1988
- Majority of documents produced in construction of a building will be protected as artistic works and attract copyright
- Ownership of copyright generally rests with the author but in a construction project eventually typically vests in the employer by way of a licence
- Copyright ownership resides with the building design team



Legal Issues

Copyright in a BIM world

- Level 2 – Licence may have to be wider – extension
- Level 2 – licences being granted in terms of design included in BIM model and the BIM model itself
- Level 3 – unclear where copyright ownership will reside in terms of the whole BIM model. Collaborative working raises the issue of joint ownership of copyright
- Levels 2 and 3 – Employer will need to ensure it obtains adequate licences or assignment of copyright in the BIM model



Legal Issues

Insurance in a BIM world

- Level 2 – PI Insurers will be cautious
- CIC Best Practice Guide for Professional Indemnity Insurance (Feb 2013):
 - “there are no issues with level 2 BIM which are sufficiently serious to require coverage restrictions for consultants....”
- Level 3 – may see move towards integrated project insurance





Legal Issues

Procurement in a BIM world

- Requirement for a BIM skilled team in OJEU notices
- BIM capability – at PQQ stage?
- BIM process envisages early contractor involvement





Legal Issues

Health and Safety in a BIM world

- Early design encouraged
- Real time compilation of health and safety file
- Tool for keeping health and safety file up to date post construction
- BIM model can show construction process



Legal Issues

Design Responsibility in a BIM world

- Current practice - each consultant has identified role and design responsibility matrix
- BIM will drive greater design integration
- Greater design integration the greater potential for uncertainty?
- Level 2 – some changes required to design responsibility
- Level 3 – significant changes required to design responsibility



Legal Issues

Construction Documents in a BIM world

- BIM will need to be addressed in:
 - Building contracts
 - Subcontracts
 - Consultant appointments
 - All construction related copyright licences
- Deal with it contractually and early on in the project
- A BIM protocol will be referred to in the construction documentation





Legal Issues

Construction Documents in a BIM world

- How does the BIM protocol interact with the underlying contract?
 - Terminology
 - No risk transfer
 - No contractual uncertainty created
 - Where does the BIM protocol sit in the contractual chain?





Legal Issues

Construction Documents in a BIM world

- Extent of amendment depends on BIM Level
- And depends on
 - Precise form of contract being used
 - Scale, value and complexity of the project
 - Extent to which relevant information is already included in the BIM protocol





CIC BIM Protocol

Overview

- Very short – 8 clauses
- Seeking to establish itself as the industry norm
- Requires careful consideration
- Level 2 Focus – Specified Models and Federated Model





CIC BIM Protocol

Specified Model

“Specified Model means a Model or Models which the Project Team Member is to produce and deliver as specified in the Model Production and Delivery Table”

Federated Model

“Federated Model means a Model consisting of connected but distinct individual Models”





CIC BIM Protocol

Overview

- Incorporated into contracts
- Assumes Employer appointed
 - Traditional contracting
 - Design and Build
- Subcontracts





CIC BIM Protocol

Overview

- Takes precedence over other docs (Clause 2)
- Two party contracts – Bilateral approach
- No direct contractual relationships
- Onus on employer to enforce (Clause 3)
- Skill and care / reasonable endeavours



CIC BIM Protocol

Obligations of the Project Team Member (Clause 4)

- Produce the Specified Models to the Level of Detail specified in the Model Production and Delivery Table
- Appendices are key
 - Simple pro forma
 - Use industry standard
 - Does require input and completion
- Data Drops





CIC BIM Protocol

Electronic Data Exchange (Clause 5)

- No warranty with regard to the integrity of any electronic data
- Excludes liability for any corruption or unintended amendment/alteration once the data has been transmitted





CIC BIM Protocol

Intellectual Property Rights (Clause 6)

Permitted Purpose

“Permitted Purpose means a purpose related to the Project (or construction, operation and maintenance of the Project) which is consistent with the applicable Level of Detail of the relevant Model (including a Model forming part of a Federated Model) and the purpose for which the relevant Model was prepared”



CIC BIM Protocol

Intellectual Property Rights (Clause 6)

Material

“Material means all information in any electronic medium prepared by or on behalf of the Project Team Member comprised in:

- a) the Specified Models; and*
- b) the Federated Models, to the extent that these comprise Specified Models or to the extent that the Project Team Member owns any additional rights in any Federated Model,*

excluding any material forming part thereof which is provided to the Project Team Member by or on behalf of the Employer”



CIC BIM Protocol

Intellectual Property Rights

- Any rights in the Material remain vested in the Project Team Member (Clause 6.2)
- Modelling output is licensed or subcontracted to the Employer (Clause 6.3)
- Licence is suspended or revoked in the event of non-payment (Clause 6.4)
- Consent required to amend or modify the Material (Clause 6.5)
- Consent required to reproduce any proprietary work in the Material for any extension of the Project (Clause 6.5.2)



CIC BIM Protocol

Intellectual Property Rights

- Employer grants sub-licences to other Project Team Members (Clause 6.6 / 6.7)
- Sub licences under Clauses 6.6 / 6.7 do not allow amendment or modification of a Model or use for an extension (Clause 6.8).
- Obligations on Project Team Member (Clause 6.9) and Employer (Clause 6.10) that they have the rights to grant the various licences / sub-licences
- IP may be amended by some Employers



CIC BIM Protocol

Liability / Termination

- Liability for the use of modelling to which modelling is put is limited to the uses for which the modelling is specified (Clause 7)
- All clauses bar clause 4 survive termination (Clause 8)



CIC BIM Protocol

Role of the Information Manager

- CIC has published an Outline Scope of Services
- 4 Key services
 - Common Data Environment Manager
 - Project Information Manager
 - Collaborative working, information exchange and project team management
 - Additional services
- No Design role
- “Add on” to existing appointments





Legal Issues

Construction Documents in a BIM World – Where are we?

Building Contracts

- JCT
- NEC
- PPC
- CIOB



JCT

- JCT Public Sector Supplement 2011
- Example wording for Schedule of Amendments



NEC

NEC April 2013 How to use BIM with NEC3 contracts

Approach is as follows:

- Technical Requirements – Works Information
- Right and Liabilities – Additional Conditions of Contract (z Clauses)
- NEC BIM Protocol Example



Bespoke Building Contract – likely considerations:

- Express obligation to comply with BIM Protocol?
- Supply chain to comply with BIM provisions?
- BIM Protocol – Priority of Documents?
- Interaction between BIM Protocol and Contract Terms.



Legal Issues

Construction Documents in a BIM World – Where are we?

Consultant Appointments

- RIBA latest version (October 2012). No BIM amendments
- CIC is revising its scopes of services
- ACE – under review
- NEC –
 - Technical requirements in the Scope
 - Rights and liabilities in Z clauses
 - Example Wording





Legal Issues

Construction Documents in a BIM World – Where are we?

Other Relevant Documents

- RIBA Plan of Work 2013
- RICS statement in relation to the New Rules of Measurement





Legal Issues

Construction Documents in a BIM World – Where are we?

Relevant Industry Standards

- PAS 1192-2 – Core requirements for BIM Level 2
- PAS1192-3 – not yet published – operational phase of a project
- BS 1192:2007 – Collaborative production of architectural, engineering and construction information





Conclusion

- BIM is here
- Clear policy guidance in England, Scotland and Wales
- Level 2 legal effect is quite manageable
- Level 3 legal effect will be significant
- A lever to further push collaborative working agenda
- Good opportunity to finally link build with maintenance

Resources

- BIM Task Group/BIM Regional Hubs – www.bimtaskgroup.org.uk
- CEW BIM Task Group – www.cewales.org.uk
- CIC BIM Protocol and Insurance Guidance – www.cic.org.uk
- PAS 1192-2 – www.shop.bsigroup.com
- CITB – www.citb.co.uk
- BIM4SME – www.bim4sme.org





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