

# **BIM Regions West Midlands April 2018**

## **Contract Drafting and BIM**

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# Some background - BIM protocols

- Projects without BIM define, share and develop information about
    - the design, specification / methods of construction, and information about the building as constructed.
  - Existing standard forms of appointment and construction contracts manage that process.
  - If we add BIM do existing standard forms manage that process ?
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# BIM level 2

PAS 1192-2: 2013 states the fundamental principles for Level 2. These are;

- a) Originators produce definition information in models they control
  - b) Clear definition of employers information requirements [EIRs]
  - c) BIM execution plan
  - d) Provision of a single environment to store shared data
  - e) Data delivered to client in COBie format
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# British Standards

# BIM Overview

BS 1192:2007

BRITISH STANDARD

**Collaborative production of architectural, engineering and construction information – Code of practice**

BSI  
British Standards

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BS1192:2007

PAS 1192-2:2013  
*Incorporating Corrigendum No. 1*

Specification for information management for the capital/delivery phase of construction projects using building information modelling

PAS1192-2:2013

bsi.

PAS 1192-3:2014

Specification for information management for the operational phase of assets using building information modelling

PAS1192-3:2014

bsi.

BS 1192-4:2014

BSI Standards Publication

**Collaborative production of information**  
Part 4: Fulfilling employer's information exchange requirements using COBIE – Code of practice

BS1192-4:2014

bsi. *...making excellence a habit™*

PAS 1192-5:2015

Specification for security-minded building information modelling, digital built environments and smart asset management

PAS1192-5:2015

CPNI  
Centre for the Protection of National Infrastructure

bsi.

**BUILDING INFORMATION MODEL (BIM) PROTOCOL**

Standard Protocol for use in projects using Building Information Models

BIM Protocol

**Information Requirements**

This is a framework of generic Information Requirements. Parties may choose to include further detail if they require.

Information Requirements

- Standards
- Parties
- Employer's Information Requirements
- Project Procedures

**OUTLINE SCOPE OF SERVICES FOR THE ROLE OF INFORMATION MANAGEMENT**

Information Management

PAS 91:2013

**Construction prequalification questionnaires**

PQQ

HM Government

bsi.

# No single standard protocol – why ?

- The CIC BIM protocol
  - AEC (UK) CAD & BIM standards
  - Client specific protocols
  - The American Institute of Architects' E Series documents, which include its *E202-2008, Building Information Modeling Protocol Exhibit* and *E203–2013, Building Information Modeling and Digital Data Exhibit*
  - ConsensusDocs' Document 301 - Building Information Modelling Addendum
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# Background and current trends

- Many employers do not specify “information requirements” or understand the purpose of BIM.
  - FM and asset management is still dealt with in isolation of the construction phase.
  - Tier 1 suppliers do not limit their process to BIM level 2.
  - Where the BIM process is defined by tier 1 contractors they are not always responding to an employer demand.
  - The CIC protocol is not adopted in many cases.
  - There is no standard document that is used for BIM enabled contracts.
  - There is considerable diversity of approach among the existing standard forms of contract as to how BIM is documented and the extent to which existing documentation needs to be modified for the process.
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# CIC protocol first edition

- The current protocol has not gained wide industry support;
    - Risk transfer for failure to deliver BIM is too limited, in particular liability it may cause for delay to a project
    - The requirements in respect of the Employer's Information Requirements often not met at the tender stage on many single stage projects
    - The role of the BIM manager – possibly does not reflect relationship between data and design
    - Data corruption and data management liabilities not adequately dealt with
    - Concentrates on Models not information
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- Failed to deal with CDE
- Did not address security requirements
- Models took priority over other project information
- WAS prescriptive



# Research by the Centre for Construction Law and Dispute Resolution at Kings College

- **“ENABLING BIM THROUGH PROCUREMENT AND CONTRACTS: A Research Report by the Centre of Construction Law and Dispute Resolution, King’s College London”**
  - Published July 2016 – research a combination of interviews / workshops and conference.
  - Interviewees were cautious about progression to BIM Level 3 and considered that more work needed to be done first to embed BIM Level 2.
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# Progress since 2016

- The research carried out by King's College showed that the existing standard forms were not very well equipped to deliver BIM and suggested more collaborative structures could be used.
  - Since then there have been a number of new editions of contracts and new contracts
    - JCT 2016 DB
    - NEC 4 option X10 information modelling
    - ACA FAC – Framework Alliance Contract
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# So where had we got to ?

- The JCT DB contract albeit a standard contract and now “BIM enabled” has left us in a halfway house.
  - It has abandoned the structures and documentation developed for BIM level 2.
  - It makes no assumptions about the BIM requirements which means from a drafting perspective you cannot really address the drafting issues until you have settled the content of the BIM requirements and where they will be set out.
  - It does not really seek to provide drafting that addresses the underlying tensions in a BIM enabled project.
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# NEC 4

- The devil is in the detail – a lot of work for client to do in the Scope in setting its Information Model Requirements
  - Supply chain have to consider Scope to assess extent of obligations – could extend beyond BIM level 2
  - Limits of liability and insurance will need to be reviewed with PI insurers
  - Clients need to be aware that poor Information Model Requirements will give rise to CE's under usual NEC principles
  - Other party needs to be aware of ownership / use of the Model and Project Information
  - Also be aware of X9 – transfer of rights
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# ACA FAC – Framework Alliance Contract

- Frameworks can deal with BIM issues without a protocol as the issues can be addressed and developed in the context of the framework

see FAC-1



# CIC protocol 2<sup>nd</sup> Edition

- Assumes that the Client is specifying a BIM Level 2 work method (no change from 1st Edition)
  - Modifies its Appendices to more closely reflect the PAS 1192-2 process
  - Responsibility Matrix – replaces the Model Production and Delivery Table – and now includes programming
  - Information Particulars – not just Models
  - Provides more detail on how information is to be used
    - Level of Definition
    - The status code of information
    - The functional state
    - The purpose for which the information was prepared
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# CIC protocol 2<sup>nd</sup> Edition

- Common Data Environment Process (CDE – Process)  
– Project Team Members must share and publish information using the CDE – Employer must arrange CDE can be used
  - “ Interoperability” the exclusion of liability for the integrity of electronic data has been removed and the limitation is now about compatibility of the software
  - Security – Security requirements are to be set out in Appendix 3
  - Built Asset Manager role taken from PAS 1192-5:2015
  - Employer’s Information Manger replaces the
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# CIC protocol 2<sup>nd</sup> Edition

- The Protocol now only takes precedence over the underlying contract / appointment ( the Agreement) if there is a conflict between clauses 3 and 4 and Appendices 1 or 2 of the Protocol and the Agreement
  - Models no longer take precedence over other information and a new “Co-ordination and Resolution of Conflicts” process has been introduced
    - It concerns the Project Information and any information extracted from the Project Information
    - Project Information is quite broadly defined but is governed by the Responsibility Matrix and the Information Particulars
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# CIC protocol 2<sup>nd</sup> Edition

- The effect of these provisions is that it will be important to consider the relationship between the Protocol and the underlying Agreement
  - The application of the rules is quite complex e.g.
    - Specific guidance is given about incorporating the protocol and it is noted that for some contracts e.g. JCT contracts the standard incorporation clause will need modifying
  - Where the Protocol and the Agreement are in conflict quite often the solution is not clear i.e.
  - See clause 6.1 “Use of information”
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# CIC BIM Protocol 2<sup>nd</sup> Edition

## 6. Use of Information

6.1 The Employer and the Project Team Member agree that:

6.1.1 if there are any provisions in the Agreement in relation to copyright (or any other rights) in material, information or documents prepared and/or provided by the Project Team Member, clauses 6.2 to 6.4 shall not apply, and such provisions of the Agreement are hereby varied so far as is necessary to:

(a) apply to the Material and any proprietary work contained in or extracted from the Material; and

(b) enable the Employer to grant licences or sub-licences to the Other Project Team Members in respect of the Material on terms substantially the same as clause 6.5 and/or 6.6 of this Protocol;

6.1.2 if there are no such provisions, clauses 6.2 to 6.4 shall apply.

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# So where does that leave us ?

- Don't just do BIM.
  - Document what you want to do.
  - If you are following the BIM level 2 process as envisaged in documentation such as PAS 1192-2 your starting point is to draft your Employer's Information Requirements.
  - Then review the documentation with someone who knows about contracts and BIM so that the BIM process and requirements can be properly included in the contract.
  - JCT DB 2016 / NEC 4 do not provide a standard solution. Much depends on the information requirements
  - The CIC BIM protocol gives a structure for considering and documenting the relationship between the BIM documentation and other aspects of the underlying agreements
  - It addresses some of the criticisms of the 1st Edition
  - It is more flexible – but it does not provide a standard risk allocation
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# Contact

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