

# BIM: The Legal and Contractual Risks and How to Deal With Them



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# Risks and Opportunities of BIM

61.7% of respondents:

*“Do believe that BIM will help support the delivery of Facilities Management”*

BIM4FM 2013 Survey Results

(3% said ‘no’)

# NEW RISKS OF BIM

- Lack of understanding (particularly the client)
- Lack of established principles or standard forms
- Lack of established case law
- Lack of standardised practices
- Lack of uniform standards
- New processes and procurement methods
- Lead to confusion, inconsistencies, misunderstandings, gaps in liability

# NEW OPPORTUNITIES OF BIM (...BUT?)

- Save time, reduce cost, improve quality
- Quality of data = Reliance? Liability?
- Accuracy of data = Checks? Responsibility?
- Format of data = Specified? Varied?
- Use of data = Relevant data provided?
- Updating data = Extent? Outdated?
- Storage of data = Security? Ownership?

# SOME WAYS TO MANAGE THE RISKS

- Clear contract terms
  - Avoid gaps in liability
  - Clear allocation of risk
  - Clear understanding of parties' roles
  - Minimizes misunderstandings
  - Certainty of binding contract terms - *Birse Construction v St David* illustrates risks of non-binding collaboration
  - Clarity of relationship - “*When main contractors were asked for the reasons for the negative and unfriendly practices...definite that the nature and conditions of contracts are a key influence*”

- Agreed standards (e.g. BS1000, PAS1192, bespoke)
- Early contractor involvement
- Technology (including hardware & file sizes)
- Training and compliance checks (of processes & data)
- Open discussions and regular meetings/updates
- Appropriate insurance cover (e.g. to cover BIM electronic deliverables (e.g. models) and data loss whilst in the professional's control over the course of the project)
- Cost-benefit perceptions

# Contract Framework

“Development of open standards will help [overcome obstacles to BIM implementation] as will clients that introduce true collaborative working clauses”

David Philp, Head of BIM Implementation, Cabinet Office

# ARE OUR CONTRACTS READY FOR BIM?

- **JCT Public Sector Supplement and the NEC Guidelines:**
  - Rely on insertion of a comprehensive BIM Protocol
  - Do not address consequential impact of amendments
  - Side-stepping the issues
- **AEC (UK) BIM Protocol:** “Legal Stuff - Not included in this release” (Clause 4.3)
- **CIC BIM Protocol:** Useful, but incomplete/inconsistencies (e.g. fails to address collaborative information sharing in common data environment; contradictory terms e.g. with NEC3; revocable copyright licence; no clear risk allocation)

*“The publishers of standard form contracts seem to be playing down the impact of BIM”*

- David Mosey (Construction Law, May 2012)



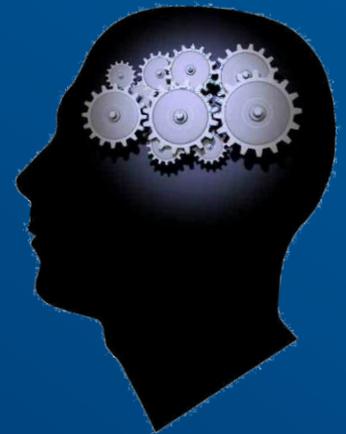
# CLAUSES FOR CLARITY OF PROCESS & DATA

- What models/data to be received and what models/data to be issued (information in models; level of detail)
- What status (contract deliverables -v- contract documents)
- What authorised use and by whom
- When to be provided (timetable for production and delivery)
- Who will oversee implementation/notification of changes/variations (e.g. BIM Co-ordinator)
- Format and location of storage (including security measures against degradation, corruption and hacking)
- Exclusions and limitations of responsibility for unauthorised use and data loss

# CLAUSES DEALING WITH INTEROPERABILITY, STANDARDISATION AND CONSISTENCY

- Specified Standardisation (uniformity, reduce interoperability, avoid miscommunication):
  - Common standards (e.g. PAS1192)
  - Data exchange formats (e.g. IFCs and COBie)
  - BIM Library (e.g. NBS National BIM Library c.f. insufficient objects) and data dictionary (e.g. buildingSMART)
  - Consistent terminology/definitions (e.g. CIC BIM Protocol take precedence)
  - Information exchange/sharing processes
  - Forms of testing, assessment and/or inspection of models and data to confirm integrity and accuracy

- Priority of contract documents (to deal with conflicts)
- Back-to-back down supply chain and across team
- Employer obliged to comply with BIM processes as well
- Type of software:
  - Agreed set of compatible software and/or
  - Checking procedures to cater for known interoperability issues



# E.g. Importance of interoperability and standardisation

- US case of *Mortenson Company v Timberline Software Corporation* (1999) 93 Wash.App 819
- A software error resulted in a contractor's bid being £2m too low, and the software provider's wide limitation clause excluding liability for “any damages of any type” was held to be enforceable



# CLAUSES ON COPYRIGHT

- Who owns what elements of the models = Retain the copyright in design contribution within the models and elements
- Who owns the models outputs (e.g. FM data)
- Who owns the models (c.f. designs) = Employer/end-user will want ownership; acceptable as joint ownership would lead to delays as approval would be needed from each party for use of the model post-completion
- Suitable licences must be granted for permitted purposes = Non-exclusive licences (to all relevant team members) for the purposes of the project, and to enable use for ongoing maintenance and related future matters

# CLAUSES ON RISK ALLOCATION

- Limitations on use and reliance on data and models provided (e.g. excluding liability for changes by third parties and any use for other projects)
- Consistent level of duty in all contract documents
- Clear allocation of responsibility/risk allocation for:
  - Each BIM element/output
  - Loss of information (e.g. due to software defects)
- Warranties/Indemnities/Duty of care for integrity of data or checking integrity of data
- Expressly exclude SOGA and SGSA implied terms (fitness for purpose and quality)

# Standard of Care

- Must be consistent in all contractual documents (e.g. the main body of the contract and the Protocol) to avoid unnecessary disputes or need for judicial interpretation
- E.g. “*reasonable endeavours*” (as per the CIC Protocol) -v- ‘reasonable skill and care’ -v- ‘best endeavours’
- Should it include indemnities or assurances:
  - As to the integrity of the data in the model, or at least compliance with checks to the data integrity
  - Indemnities from other team members

# Collaboration: Integral to BIM

*“The greater obstacle [between interoperability and collaboration] is a lack of collaborative behaviour...to overcome this will require radical measures.”*

Rudi Klein, Chief Executive of SEC

# Why Is Collaboration Important?

- Improve time, cost, quality (Latham and Egan Reports)
- *“It is not uncommon to see main contractors treat the same subcontractors differently on the different projects they are both engaged on as it is the contract that determines the flow of things.”*
- BIM is *“all about real time collaboration”* (69% of respondents in NBS International BIM Report 2013)
- 72% of the respondents to an industry survey anticipated encountering (or had encountered) disputes resulting from a lack of collaborative mindset/blame culture in BIM projects
- Existing construction contracts fail to adequately address achieving collaborative contracting (Pinsent Masons BIM Survey 2014)
- **BIM needs effective collaborative working!**

# Does Collaboration Bring Risks?

- Apportionment of liability
- Risk allocation
- Lack of uniform compliance/collaborative mindset
- Misunderstandings
- Insurance

= Can be overcome with same methods as BIM risks (contract, clear processes, training, discussion)

# The Future of BIM?

*“The future of BIM and the construction industry is very bright”*

Dale Sinclair, editor of the RIBA Plan of Work 2013

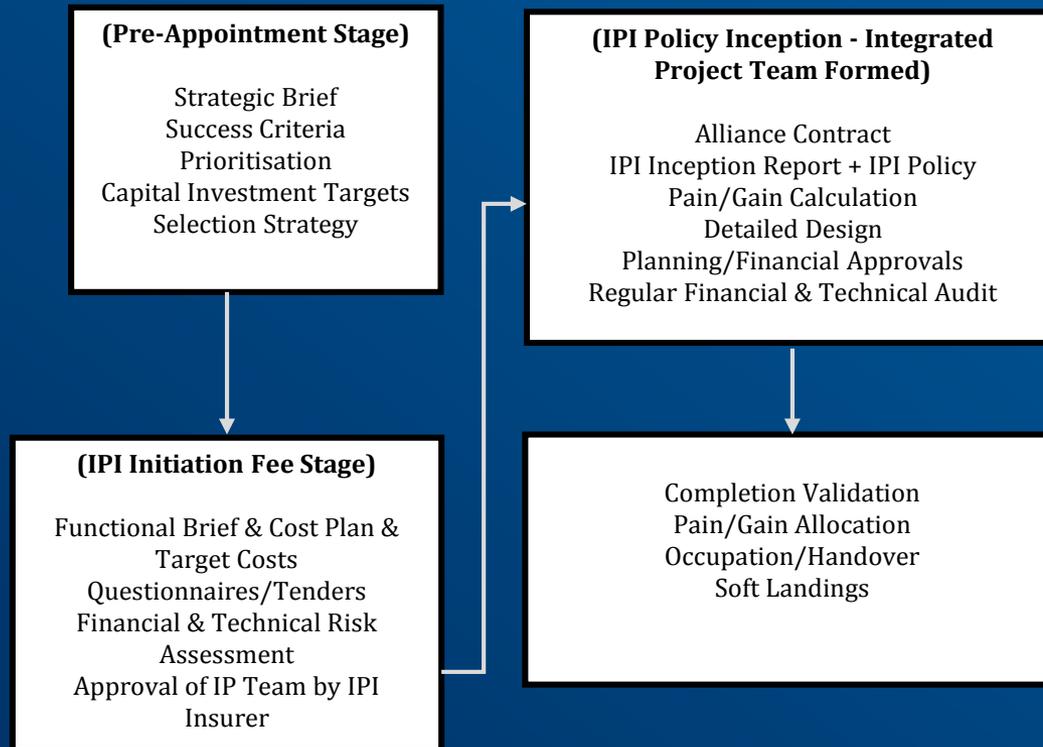
# The “Digital” Future of Contracts

- 3A: Performance-based contracting model
- 3B: Data-enabled contracts
- 3C: Paperless contracts
- 3D: International contract models
  
- Open book and transparency of data
- Systems for data transfer/management
- Capture of performance intelligence; project feedback; digital briefing

“Closing the loop between performance and the creation and adaption of assets”

- Digital Built Britain

# A Look To The Future - Insurance



Integrated Project Insurance Flowchart

## QUESTIONS?



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